

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200310149	Networks	PI0416125-4		BR	Verfahren, Funkstation und Computerprogrammprodukt zum Zugriff auf Funkressourcen in einem Adhoc-Funkkommunikationssystem	09.09.2004
200310149	Networks	04766751.4	1678887	GB	Verfahren, Funkstation und Computerprogrammprodukt zum Zugriff auf Funkressourcen in einem Adhoc-Funkkommunikationssystem	09.09.2004
200310149	Networks	2006-7010119	1048249	KR	Verfahren, Funkstation und Computerprogrammprodukt zum Zugriff auf Funkressourcen in einem Adhoc-Funkkommunikationssystem	09.09.2004
200310149	Networks	200480032436.3	600881	CN	Verfahren, Funkstation und Computerprogrammprodukt zum Zugriff auf Funkressourcen in einem Adhoc-Funkkommunikationssystem	09.09.2004
200310149	Networks	04766751.4	1678887	PL	Verfahren, Funkstation und Computerprogrammprodukt zum Zugriff auf Funkressourcen in einem Adhoc-Funkkommunikationssystem	09.09.2004
200398035	Networks	10/690,832	7539207	US	Method and base station for controlling link adaptation and packet scheduling in high speed downlink packet access (HSDPA) radio system	23.10.2003
199898032	Networks	09/774998	7231028	US	METHOD AND SYSTEM FOR THE MANAGEMENT OF SUBSCRIBER FUNCTIONS	27.07.1999
199898032	Networks	99936633.9	69929209,3	DE	METHOD AND SYSTEM FOR THE MANAGEMENT OF SUBSCRIBER FUNCTIONS	27.07.1999
199898032	Networks	99936633.9	1104632	GB	METHOD AND SYSTEM FOR THE MANAGEMENT OF SUBSCRIBER FUNCTIONS	27.07.1999
200521101	Networks	11/600,812	7817594	US	Verfahren zum Betrieb einer Vorrichtung in einem Funkzugangnetz eines Funkkommunikationssystems sowie Funkzugangnetz und Vorrichtung	17.11.2006
200521101	Networks	05025230.3	50 2005 006 619.7	DE	Verfahren zum Betrieb einer Vorrichtung in einem Funkzugangnetz eines Funkkommunikationssystems sowie Funkzugangnetz und Vorrichtung	18.11.2005
200521101	Networks	05025230.3	1788748	FR	Verfahren zum Betrieb einer Vorrichtung in einem Funkzugangnetz eines Funkkommunikationssystems sowie Funkzugangnetz und Vorrichtung	18.11.2005
200521101	Networks	05025230.3	1788748	GB	Verfahren zum Betrieb einer Vorrichtung in einem Funkzugangnetz eines Funkkommunikationssystems sowie Funkzugangnetz und Vorrichtung	18.11.2005
199998021	Networks	09/937577	7110484	US	METHOD AND ARRANGEMENT FOR CHANGING PARALLEL CLOCK SIGNALS IN A DIGITAL DATA TRANSMISSION	31.03.2000
199998030	Networks	10/009443	7408942	US	An element for a communications system	02.06.2000
200414507	Networks	2007-7005047	1249424	KR	Method to decentralize the counting of abnormal call release events on a per cell base in digital cellular communication networks	24.08.2005
200414507	Networks	11/661,338	7953404	US	Method to Decentralize the Counting of Abnormal Call Release Events on a Per Cell Base in Digital Cellular Communication Networks	24.08.2005
199998112	Networks	09/715,839	6987974	US	METHOD FOR ESTABLISHING A CALL IN THE PRESENCE OF OUTBAND INDICATION OF PSTN INVOLVEMENT AT MULTIMEDIA CALL SETUP	17.11.2000
199998145	Networks	09/727889	6839545	US	Transmission method of reception information on communication connection	01.12.2000
199902756	Networks	09/656,708	6757378	US	Schaltungsanordnung zur Erkennung von Verbindungswuenschen an einer analogen Teilnehmerleitung	07.09.2000
199801057	Networks	2318082	2318082	CA	VORRICHTUNG UND VERFAHREN ZUR STEUERUNG VON PROZESSEN AUF EINEM COMPUTERSYSTEM	04.11.1998
199801057	Networks	98963317.7	1047990	GB	VORRICHTUNG UND VERFAHREN ZUR STEUERUNG VON PROZESSEN AUF EINEM COMPUTERSYSTEM	04.11.1998
199801057	Networks	98963317.7	59801723,2	DE	VORRICHTUNG UND VERFAHREN ZUR STEUERUNG VON PROZESSEN AUF EINEM COMPUTERSYSTEM	04.11.1998
199801439	Networks	99911616.3	59900635,8	DE	VERFAHREN ZUM WEITERLEITEN DIGITALER, IN EINEM TDMA-SYSTEM ERZEUGTEN INFORMATION UEBER EINE ATM-UEBERTRAGUNGSTRECKE	23.02.1999
199801439	Networks	99911616.3	1066734	GB	VERFAHREN ZUM WEITERLEITEN DIGITALER, IN EINEM TDMA-SYSTEM ERZEUGTEN INFORMATION UEBER EINE ATM-UEBERTRAGUNGSTRECKE	23.02.1999

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0196
NETAPP EXHIBIT 1002

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
199801439	Networks	99804489.X	139641	CN	VERFAHREN ZUM WEITERLEITEN DIGITALER, IN EINEM TDMA-SYSTEM ERZEUGTEN INFORMATION UEBER EINE ATM-UEBERTRAGUNGSSTRECKE	23.02.1999
199801439	Networks	12-538535	3472264	JP	VERFAHREN ZUM WEITERLEITEN DIGITALER, IN EINEM TDMA-SYSTEM ERZEUGTEN INFORMATION UEBER EINE ATM-UEBERTRAGUNGSSTRECKE	23.02.1999
200298064	Networks	02411/CHENP/2004	220915	IN	Method and Apparatus for Compressing Log Record Information	26.03.2002
200298064	Networks	10/507,907	7778979	US	Method and Apparatus for Compressing Log Record Information	26.03.2002
200298073	Networks	10/231191	7130614	US	MOBILE UNIT ATTACHMENT/UPDATE TO A CELLULAR COMMUNICATION NE TWORK	30.08.2002
200298073	Networks	03791102.1	60310417,7	DE	MOBILE UNIT ATTACHMENT/UPDATE TO A CELLULAR COMMUNICATION NE TWORK	28.08.2003
200298073	Networks	03791102.1	1535488	GB	MOBILE UNIT ATTACHMENT/UPDATE TO A CELLULAR COMMUNICATION NE TWORK	28.08.2003
200298073	Networks	03791102.1	1535488	SE	MOBILE UNIT ATTACHMENT/UPDATE TO A CELLULAR COMMUNICATION NE TWORK	28.08.2003
199905111	Networks	10/111,718	7171395	US	Verfahren zum Betreiben eines Zweitrechners, Vermittlungseinrichtungen fuer den ausfallsicheren Betrieb und zugehoeriges Programm	27.10.2000
199898094	Networks	09/566271	6308081	US	TRANSMISSION METHOD AND RADIO SYSTEM	06.09.1999
199998019	Networks	09/889125	6538613	US	ARRANGEMENT FOR AIMING A RADIO LINK ANTENNA	20.01.2000
199998019	Networks	00901642.9	1145375	IT	ARRANGEMENT FOR AIMING A RADIO LINK ANTENNA	20.01.2000
199898074	Networks	09/212608	6556820	US	MOBILITY MANAGEMENT FOR TERMINALS WITH MULTIPLE SUBSCRIPTION S	16.12.1998
199898075	Networks	09/365320	6456849	US	APPARATUS AND ASSOCIATED METHOD, FOR ALLOCATING RESOURCES IN A RADIO COMMUNICATION SYSTEM TO PERFORM A COMMUNICATION SERVICE	30.07.1999
199898085	Networks	09/646226	6600924	US	CELL HANDOVER METHOD AND CELLULAR RADIO SYSTEM	16.03.1999
199898085	Networks	99804055.X	ZL99804055.X	CN	CELL HANDOVER METHOD AND CELLULAR RADIO SYSTEM	16.03.1999
199898085	Networks	99907651.6	1064809	IT	CELL HANDOVER METHOD AND CELLULAR RADIO SYSTEM	16.03.1999
199898085	Networks	99907651.6	1064809	WE	CELL HANDOVER METHOD AND CELLULAR RADIO SYSTEM	16.03.1999
199698010	Networks	09/875414	6895051	US	Video data encoder and decoder	06.06.2001
199998068	Networks	PCI/PI0013104-0	PI0013104-0	BR	Method for handling a call when destined subscriber is unable to answer	11.08.2000
199998068	Networks	10/049437	6983145	US	Method for handling a call when destined subscriber is unabl e to answer	11.08.2000
199998068	Networks	00953201.1	600 39 174.4	DE	Method for handling a call when destined subscriber is unabl e to answer	11.08.2000
199998068	Networks	00953201.1	1203503	FR	Method for handling a call when destined subscriber is unabl e to answer	11.08.2000
199998068	Networks	00953201.1	1203503	GB	Method for handling a call when destined subscriber is unabl e to answer	11.08.2000
200112914	Networks	10143228.3	10143228	DE	Verfahren zum Routen von Verbindungen in einem funkgestuetzten Ad-hoc-Netz und Netzstation zum Durchfuehren eines solchen Verfahrens	04.09.2001
200301426	Networks	02425565.5	60209208,6	DE	Uplink power adjustment for a point-to-multipoint wireless communication system	20.09.2002
200612716	Networks	12/308,712	8311000	US	Method for maintaining synchronisation in a radio communications system	18.06.2007
200612716	Networks	07786757.0		WE	Method for maintaining synchronisation in a radio communications system	18.06.2007
200113385	Networks	10145490.2	10145490	DE	Verfahren zum Austausch von Nachrichten in einer Chatgruppe	14.09.2001
200113385	Networks	02818047.X	393086	CN	Verfahren zum Austausch von Nachrichten in einer Chatgruppe	30.08.2002
200115401	Networks	01823869.6	1293733	CN	Verfahren zur Übertragung von Daten von Applikationen mit unterschiedlichen Anforderungen an die Qualität eines Übertragungsdienstes in einem paketvermittelnden Datenkommunikationsnetz	10.12.2001
200115401	Networks	01995603.6	50115595,3	DE	Verfahren zur Übertragung von Daten von Applikationen mit unterschiedlicher Qualität	10.12.2001
200115401	Networks	01995603.6	1451980	ES	Verfahren zur Übertragung von Daten von Applikationen mit unterschiedlicher Qualität	10.12.2001
200115401	Networks	01995603.6	1451980	FR	Verfahren zur Übertragung von Daten von Applikationen mit unterschiedlicher Qualität	10.12.2001
200115401	Networks	01995603.6	1451980	GB	Verfahren zur Übertragung von Daten von Applikationen mit unterschiedlicher Qualität	10.12.2001
200115401	Networks	01995603.6	1451980	IT	Verfahren zur Übertragung von Daten von Applikationen mit unterschiedlicher Qualität	10.12.2001
200115401	Networks	2004-7008922	632529	KR	Verfahren zur Übertragung von Daten von Applikationen mit unterschiedlichen Anforderungen an die Qualität eines Übertragungsdienstes in einem paketvermittelnden Datenkommunikationsnetz	10.12.2001

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200115401	Networks	PI0117193-3	PI0117193-3	BR	Verfahren zur Übertragung von Daten von Applikationen mit unterschiedlichen Anforderungen an die Qualität eines Übertragungsdienstes in einem paketvermittelnden Datenkommunikationsnetz	10.12.2001
200115401	Networks	01995603.6	TR201009313T4	TR	Verfahren zur Übertragung von Daten von Applikationen mit unterschiedlicher Qualität	10.12.2001
200115401	Networks	01995603.6	1451980	PT	Verfahren zur Übertragung von Daten von Applikationen mit unterschiedlicher Qualität	10.12.2001
199702069	Networks	09/485,032	6810419	US	Bedieneinrichtung zur Bedienung eines Netz-Management-Systems	30.07.1998
199798023	Networks	09/380701	6799021	US	METHOD AND ARRANGEMENT FOR FORMING AN ADDRESS	13.03.1998
200608913	Networks	06013609.0		EP	Verfahren zum Bereitstellen von Daten über einen Pilotkanal eines Funk-Kommunikationssystems	30.06.2006
200608913	Networks	11/822,158	8019341	US	Verfahren zum Bereitstellen von Daten über einen Pilotkanal eines Funk-Kommunikationssystems	02.07.2007
200311302	Networks	200410055664.4	590966	CN	Common radio resource management method in a multi-rat cellular telephone network	02.08.2004
200311302	Networks	03425514.1	60319975,5	DE	Common radio resource management method in a multi-rat cellular telephone network	31.07.2003
200311302	Networks	03425514.1	1503606	GB	Common radio resource management method in a multi-rat cellular telephone network	31.07.2003
200311302	Networks	03425514.1	1503606	FR	Common radio resource management method in a multi-rat cellular telephone network	31.07.2003
200311302	Networks	10/884,924	7224977	US	Common radio resource management method in a multi-rat cellular telephone network	07.07.2004
200219852	Networks	10305091.4	10305091	DE	Verfahren zur Positionsbestimmung eines Teilnehmers in einem Funkkommunikationssystem	07.02.2003
200219852	Networks	10/773,364	7020473	US	Verfahren zur Positionsbestimmung eines Teilnehmers in einem Funkkommunikationssystem	09.02.2004
200619955	Networks	10 2006 055 959.2	10 2006 055 959	DE	Verfahren und Vorrichtung zum Austausch von Daten	24.11.2006
200520330	Networks	05024343.5	50 2005 006 615.4	DE	Verfahren zum Kodieren von Sprachdaten in einem Funkzugangnetz sowie Vorrichtung	08.11.2005
200520330	Networks	05024343.5	1784029	FR	Verfahren zum Kodieren von Sprachdaten in einem Funkzugangnetz sowie Vorrichtung	08.11.2005
200520330	Networks	05024343.5	1784029	GB	Verfahren zum Kodieren von Sprachdaten in einem Funkzugangnetz sowie Vorrichtung	08.11.2005
199701941	Networks	09/120,792	6269478	US	Ueberwachungsverfahren zur Erkennung von Endlos-schleifen und blockierten Prozessen in einem Rechnersystem	22.07.1998
199904749	Networks	19947114.2	19947114	DE	Verfahren zum Uebertragen eines hochbitratigen Digitalsignals	30.09.1999
199904749	Networks	00129227.7	170787	CN	Verfahren zum Uebertragen eines hochbitratigen Digitalsignals	30.09.2000
199798074	Networks	09/099487	6131040	US	Langaton viestin	17.06.1998
199798084	Networks	98937585.2	1013125	GB	VOICE MAIL SERVICE OF A CLOSED USER GROUP IN A MOBILE COMMUNICATION SYSTEM	07.08.1998
199798084	Networks	98809278.6	ZL98809278.6	CN	VOICE MAIL SERVICE OF A CLOSED USER GROUP IN A MOBILE COMMUNICATION SYSTEM	07.08.1998
199798084	Networks	98937585.2	1013125	FR	VOICE MAIL SERVICE OF A CLOSED USER GROUP IN A MOBILE COMMUNICATION SYSTEM	07.08.1998
199798084	Networks	98937585.2	1013125	NL	VOICE MAIL SERVICE OF A CLOSED USER GROUP IN A MOBILE COMMUNICATION SYSTEM	07.08.1998
199798084	Networks	98937585.2	69833765,4	DE	VOICE MAIL SERVICE OF A CLOSED USER GROUP IN A MOBILE COMMUNICATION SYSTEM	07.08.1998
199798084	Networks	2000-506788	4149656	JP	VOICE MAIL SERVICE OF A CLOSED USER GROUP IN A MOBILE COMMUNICATION SYSTEM	07.08.1998
199798084	Networks	09/485495	6628937	US	VOICE MAIL SERVICE OF A CLOSED USER GROUP IN A MOBILE COMMUNICATION SYSTEM	07.08.1998
200801181	Networks	12/252,166	8045926	US	MULTI-TRANSCIVER ARCHITECTURE FOR ADVANCED Tx ANTENNA MONITORING AND CALIBRATION IN MIMO AND SMART ANTENNA COMMUNICATION SYSTEMS	15.10.2008
200001740	Networks	01921187.9	50106321,8	DE	Verfahren zur Bereitstellung von Ortsinformation	14.03.2001
200001740	Networks	01921187.9	1275263	FI	Verfahren zur Bereitstellung von Ortsinformation	14.03.2001
200001740	Networks	01921187.9	1275263	GB	Verfahren zur Bereitstellung von Ortsinformation	14.03.2001
200314136	Networks	03026763.7	503 15 374.5	DE	Verfahren und Anordnung zur Unterdrückung von Störsignalen in einem Nutzsignal-Frequenzbereich eines analogen Ausgangssignals	21.11.2003
200314136	Networks	03026763.7	1533962	GB	Verfahren und Anordnung zur Unterdrückung von Störsignalen in einem Nutzsignal-Frequenzbereich eines analogen Ausgangssignals	21.11.2003

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200313559	Networks	200480026688.5	538022	CN	Verfahren und Kommunikationsanordnung zur Detektion zumindest einer weiteren mit zumindest einer Teilnehmeranschlussleitung verbindbaren Kommunikationseinrichtung	05.08.2004
200313559	Networks	04766432.1		WE	Verfahren und Kommunikationsanordnung zur Detektion zumindest einer weiteren mit zumindest einer Teilnehmeranschlussleitung verbindbaren Kommunikationseinrichtung	05.08.2004
200313559	Networks	04766432.1		DE	Verfahren und Kommunikationsanordnung zur Detektion zumindest einer weiteren mit zumindest einer Teilnehmeranschlussleitung verbindbaren Kommunikationseinrichtung	05.08.2004
200313559	Networks	04766432.1		ES	Verfahren und Kommunikationsanordnung zur Detektion zumindest einer weiteren mit zumindest einer Teilnehmeranschlussleitung verbindbaren Kommunikationseinrichtung	05.08.2004
200313559	Networks	04766432.1		FR	Verfahren und Kommunikationsanordnung zur Detektion zumindest einer weiteren mit zumindest einer Teilnehmeranschlussleitung verbindbaren Kommunikationseinrichtung	05.08.2004
200313559	Networks	04766432.1		GB	Verfahren und Kommunikationsanordnung zur Detektion zumindest einer weiteren mit zumindest einer Teilnehmeranschlussleitung verbindbaren Kommunikationseinrichtung	05.08.2004
200313559	Networks	04766432.1		IT	Verfahren und Kommunikationsanordnung zur Detektion zumindest einer weiteren mit zumindest einer Teilnehmeranschlussleitung verbindbaren Kommunikationseinrichtung	05.08.2004
200002011	Networks	10026741.6	10026741	DE	Verfahren und Einrichtung zur Kanalzuteilung in einem Funk-Kommunikationssystem	30.05.2000
200002011	Networks	01949218.0	1285553	FR	Verfahren zur Kanalzuteilung in einem Funk-Kommunikationssystem	30.05.2001
200002011	Networks	01949218.0	1285553	GB	Verfahren zur Kanalzuteilung in einem Funk-Kommunikationssystem	30.05.2001
200002011	Networks	01949218.0	1285553	IT	Verfahren zur Kanalzuteilung in einem Funk-Kommunikationssystem	30.05.2001
200507410	Networks	200510080220.0	865777	CN	Trusy network storage	30.06.2005
199904749	Networks	09/669,003	6628762	US	Verfahren zum Uebertragen eines hochbitratigen Digitalsignals	25.09.2000
200202329	Networks	10/159,207	6819745	US	Method And Apparatus For Testing A POTS Circuit And DSL Circuit Through A Splitter	30.05.2002
200198035	Networks	10/032300	7120207	US	Tranmission method and radio receiver	31.12.2001
199701056	Networks	98907839.9	59804797,2	DE	Verfahren zur Administrierung zusaetzlicher Dienste in einem Kommunikationsnetz	21.01.1998
199701056	Networks	98907839.9	954937	GB	Verfahren zur Administrierung zusaetzlicher Dienste in einem Kommunikationsnetz	21.01.1998
199701056	Networks	98802000.9	150840	CN	Verfahren zur Administrierung zusaetzlicher Dienste in einem Kommunikationsnetz	21.01.1998
199701056	Networks	09/360,359	6363144	US	Verfahren zur Administrierung zusaetzlicher Dienste in einem Kommunikationsnetz	23.07.1999
200001740	Networks	01921187.9	1275263	FR	Verfahren zur Bereitstellung von Ortsinformation	14.03.2001
200198144	Networks	10/154592	7450951	US	METHOD AND ARRANGEMENT FOR LOCATING A MOBILE STATION IN A PACKET-SWITCHED NETWORK AND A MOBILE STATION UTILIZING SAID METHOD	23.05.2002
200198153	Networks	10/183314	7062280	US	Space Identification system	25.06.2002
200198157	Networks	10/693261	6876925	US	two-stage interacting multiple models filter for use in a gl obal positioning system	24.10.2003
199701925	Networks	09/463,076	6747952	US	VERFAHREN ZUM OPTIMIEREN DER AUSLASTUNG AUF VERBINDUNGSABSCHNITTENBEI ABR VERKEHR.	03.06.1998
200698011	Networks	11/698,126	7831273	US	POWER EFFICIENT WIRELESS TRANSMISSION	26.01.2007
200402834	Networks	200580005740.3	790835	CN	Verfahren zum Übertragen von Daten innerhalb einer Basisstation eines Mobilfunksystems sowie entsprechende Basisstation	03.01.2005
200402834	Networks	05701422.7	50 2005 007 562.5	DE	Verfahren zum Übertragen von Daten innerhalb einer Basisstation eines Mobilfunksystems sowie entsprechende Basisstation	03.01.2005
200402834	Networks	05701422.7	1719366	ES	Verfahren zum Übertragen von Daten innerhalb einer Basisstation eines Mobilfunksystems sowie entsprechende Basisstation	03.01.2005
200402834	Networks	05701422.7	1719366	GB	Verfahren zum Übertragen von Daten innerhalb einer Basisstation eines Mobilfunksystems sowie entsprechende Basisstation	03.01.2005

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
199701652	Networks	09/082,915	6798770	US	Verfahren zur Abwicklung von Fernspreverbindungen ueber wenigstens ein Fernsprechnetz unter Ausnutzung des Internet	21.05.1998
200604871	Networks	10 2006 011 287.3	10 2006 011 287	DE	Verfahren, Anordnung und Einrichtung zum Überwachen von zumindest einer über ein Kommunikationsnetz geführten Kommunikationsbeziehung	10.03.2006
199702501	Networks	19741703.5	19741703	DE	Verfahren zum Laden von Betriebssoftware sowie Mobiltelefon hierfuer	22.09.1997
199701525	Networks	98925407.3	E328453	AT	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	98925407.3	978217	BE	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	98925407.3	59813573,1	DE	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	98925407.3	978217	ES	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	98925407.3	978217	FI	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	98925407.3	978217	GB	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	98925407.3	978217	IT	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	98925407.3	978217	SE	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	77560/98	745134	AU	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	98925407.3	978217	CH	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	98925407.3	978217	FR	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	2288291	2288291	CA	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
199701525	Networks	98804518.4	124561	CN	VERFAHREN ZUM ERSATZSCHALTEN VON UEBERTRAGUNGSEINRICHTUNGEN ZUR BIDIREKTIONALEN UEBERTRAGUNG VON ATM-ZELLEN.	18.03.1998
200302092	Networks	200480004284.6	584251	CN	Zugangskontrolle für ein paketorientiertes Netz unter Berücksichtigung von Resilience Anforderungen	06.02.2004
200302092	Networks	04708742.4	50 2004 004 941.9	DE	Zugangskontrolle für ein paketorientiertes Netz unter Berücksichtigung von Resilience Anforderungen	06.02.2004
200302092	Networks	04708742.4	1593241	ES	Zugangskontrolle für ein paketorientiertes Netz unter Berücksichtigung von Resilience Anforderungen	06.02.2004
200302092	Networks	04708742.4	1593241	FR	Zugangskontrolle für ein paketorientiertes Netz unter Berücksichtigung von Resilience Anforderungen	06.02.2004
200302092	Networks	04708742.4	1593241	GB	Zugangskontrolle für ein paketorientiertes Netz unter Berücksichtigung von Resilience Anforderungen	06.02.2004
200004811	Networks	0001600.6	2358765	GB	COMMUNICATIONS SYSTEM AND METHOD OF DOWNLOADING DATA	25.01.2000
200513971	Networks	11/997,893	8706891	US	Method and communication device for transmitting packet-oriented information	31.07.2006
200318280	Networks	200410037432.6	606999	CN	A method to decrease the interference of UpPCH receiving in TD-SCDMA system	30.04.2004
199702323	Networks	09/508,296	6704323	US	Verfahren und Anordnung zum automatischen Konfigurieren einer Teilnehmereinrichtung mit Netzschnittstelleneinheiten	08.09.1998
200020636	Networks	02804907.1	586377	CN	Verfahren und Anordnung zum Ermitteln der Internetprotokolladresse einer Endgeräteanordnung	23.01.2002
200020636	Networks	02706624.0	50212142,4	DE	Verfahren und Anordnung zum Ermitteln der Internetprotokolladresse einer Endgeräteanordnung	23.01.2002
200020636	Networks	02706624.0	1360821	GB	Verfahren und Anordnung zum Ermitteln der Internetprotokolladresse einer Endgeräteanordnung	23.01.2002

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0200

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200020636	Networks	02706624.0	1360821	ES	Verfahren und Anordnung zum Ermitteln der Internetprotokolladresse einer Endgeräteeinrichtung	23.01.2002
200020636	Networks	02706624.0	1360821	IT	Verfahren und Anordnung zum Ermitteln der Internetprotokolladresse einer Endgeräteeinrichtung	23.01.2002
200020636	Networks	10/450,087	7313610	US	Verfahren und Anordnung zum Ermitteln der Internetprotokolladresse einer Endgeräteeinrichtung	23.01.2002
200112020	Networks	02754934.4	50204340,7	DE	Verfahren zum schnellen und lokalen Fehlerbeheben beim Ausfall einzelner physikalischer Verbindungen in gebündelten Kommunikationsverbindungen und Kommunikationssystem-Vorrichtung zum Durchführen des Verfahrens	24.07.2002
200112020	Networks	02754934.4	1415492	FR	Verfahren zum schnellen und lokalen Fehlerbeheben beim Ausfall einzelner physikalischer Verbindungen in gebündelten Kommunikationsverbindungen und Kommunikationssystem-Vorrichtung zum Durchführen des Verfahrens	24.07.2002
200112020	Networks	02754934.4	1415492	GB	Verfahren zum schnellen und lokalen Fehlerbeheben beim Ausfall einzelner physikalischer Verbindungen in gebündelten Kommunikationsverbindungen und Kommunikationssystem-Vorrichtung zum Durchführen des Verfahrens	24.07.2002
200521773	Networks	12/095,581	7961597	US	Verfahren und Vorrichtung zum Selbstkonfigurieren eines virtuellen Vermittlungssystems	24.08.2006
200019722	Networks	01811137.8	203735	CN	Strahlformungsverfahren	12.10.2001
200019722	Networks	10/399,108	7158793	US	Strahlformungsverfahren	12.10.2001
200019722	Networks	01987973.3	50115520,1	DE	Strahlformungsverfahren	12.10.2001
200022732	Networks	02100116.9	1235442	GB	Verfahren zum Betrieb eines privaten Telekommunikationsnetzes	08.02.2002
200022732	Networks	02100116.9	1235442	FI	Verfahren zum Betrieb eines privaten Telekommunikationsnetzes	08.02.2002
200022732	Networks	02100116.9	1235442	FR	Verfahren zum Betrieb eines privaten Telekommunikationsnetzes	08.02.2002
200022732	Networks	02100116.9	50208565,7	DE	Verfahren zum Betrieb eines privaten Telekommunikationsnetzes	08.02.2002
200022732	Networks	10/082,827	6834105	US	Verfahren zum Betrieb eines privaten Telekommunikationsnetzes	20.02.2002
200500729	Networks	05000936.4	50 2005 005 521.7	DE	Wahlfreies Logging	18.01.2005
200500729	Networks	05000936.4	1681798	GB	Wahlfreies Logging	18.01.2005
199702087	Networks	09/500,281	7072953	US	Verfahren zur Einrichtung und/oder Bearbeitung eines Dienstes eines intelligenten Netzes	22.07.1998
199701984	Networks	09/123,219	6279120	US	Verfahren zur Speicherung von Rechner-Zustandsdaten bei einem Störfall, der ein anschließendes Wieder-Hochfahren des Rechners erfordert	27.07.1998
200301544	Networks	04702294.2	1590935	GB	Verfahren zur Übertragung von Daten in einem Mehrträger-Funkkommunikationssystem	15.01.2004
200301544	Networks	04702294.2	1590935	IT	Verfahren zur Übertragung von Daten in einem Mehrträger-Funkkommunikationssystem	15.01.2004
200202335	Networks	10/159,209	6986146	US	Method And Apparatus For Providing A State Machine Operating On A Real-time Operating System	30.05.2002
200398122	Networks	10/621257	7263067	US	METHOD AND APPARATUS FOR ACCELERATING THROUGHPUT IN A WIRELESS OR OTHER TELECOMMUNICATION SYSTEM	15.07.2003
200602663	Networks	2227/MUMNP/2008		IN	Verfahren zur Synchronisation von Baugruppen einer Basisstation	30.03.2007
200602663	Networks	2008146506	2438247	RU	Verfahren zur Synchronisation von Baugruppen einer Basisstation	30.03.2007
200602663	Networks	12/226,724	8244304	US	Verfahren zur Synchronisation von Baugruppen einer Basisstation	30.03.2007
200602663	Networks	2008/08899	2008/08899	ZA	Verfahren zur Synchronisation von Baugruppen einer Basisstation	30.03.2007
200198059	Networks	09/815738	6748223	US	Apparatus, and associated method, for providing a digital im age generated at a mobile station to an assistance center	23.03.2001
200601763	Networks	200710109744.7	1043711	CN	METHOD TO IMPROVE THE CHANNEL ESTIMATE IN BROADBAND SIMO/MIMO CELLULAR RADIO NETWORKS DURING ABRUPT INTERFERENCE VARIATIONS	16.02.2007
200601763	Networks	12/224,096	7756007	US	METHOD TO IMPROVE THE CHANNEL ESTIMATE IN BROADBAND SIMO/MIMO CELLULAR RADIO NETWORKS DURING ABRUPT INTERFERENCE VARIATIONS	13.02.2007
200101554	Networks	01110876.8	50106784,1	DE	Verfahren und Anordnung zur Vergebührung eines Dienstes	04.05.2001
200101554	Networks	01110876.8	1255399	GB	Verfahren und Anordnung zur Vergebührung eines Dienstes	04.05.2001
200198150	Networks	02700496.9	1356692	FR	METHOD AND SYSTEM FOR INTER-OPERATOR HANDOVER BETWEEN WCDMA AND GSM	25.01.2002
199602588	Networks	P970105760	AR008708B1	AR	Basisstation fuer ein Funk-Kommunikationssystem	09.12.1997
199602588	Networks	09/319,412	6360106	US	Basisstation fuer ein Funk-Kommunikationssystem	20.11.1997

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
199706538	Networks	10-544666	3330618	JP	Verfahren und Netzkomponente eines Kommunikationsnetzes zur Vermittlung von niederbitratigen Verbindungen zwischen Eingangsbaugruppen und Ausgangsbaugruppen	11.03.1998
199706538	Networks	2257035	2257035	CA	Verfahren und Netzkomponente eines Kommunikationsnetzes zur Vermittlung von niederbitratigen Verbindungen zwischen Eingangsbaugruppen und Ausgangsbaugruppen	21.12.1998
199706538	Networks	98923992.6	2209144	ES	Verfahren und Netzkomponente eines Kommunikationsnetzes zur Vermittlung von niederbitratigen Verbindungen zwischen Eingangsbaugruppen und Ausgangsbaugruppen	11.03.1998
199706538	Networks	98923992.6	972423	GB	Verfahren und Netzkomponente eines Kommunikationsnetzes zur Vermittlung von niederbitratigen Verbindungen zwischen Eingangsbaugruppen und Ausgangsbaugruppen	11.03.1998
199706538	Networks	98805437.X	133834	CN	Verfahren und Netzkomponente eines Kommunikationsnetzes zur Vermittlung von niederbitratigen Verbindungen zwischen Eingangsbaugruppen und Ausgangsbaugruppen	11.03.1998
199706538	Networks	76369/98	733507	AU	Verfahren und Netzkomponente eines Kommunikationsnetzes zur Vermittlung von niederbitratigen Verbindungen zwischen Eingangsbaugruppen und Ausgangsbaugruppen	11.03.1998
199706538	Networks	98923992.6	972423	FR	Verfahren und Netzkomponente eines Kommunikationsnetzes zur Vermittlung von niederbitratigen Verbindungen zwischen Eingangsbaugruppen und Ausgangsbaugruppen	11.03.1998
199706538	Networks	59809720.1	59809720,1	DE	Verfahren und Netzkomponente eines Kommunikationsnetzes zur Vermittlung von niederbitratigen Verbindungen zwischen Eingangsbaugruppen und Ausgangsbaugruppen	11.03.1998
199706538	Networks	09/158,061	6331981	US	Verfahren und Netzkomponente eines Kommunikationsnetzes zur Vermittlung von niederbitratigen Verbindungen zwischen Eingangsbaugruppen und Ausgangsbaugruppen	22.09.1998
199706538	Networks	9904553-6	68106	SG	Verfahren und Netzkomponente eines Kommunikationsnetzes zur Vermittlung von niederbitratigen Verbindungen zwischen Eingangsbaugruppen und Ausgangsbaugruppen	11.03.1998
200198150	Networks	02700496.9	1356692	GB	METHOD AND SYSTEM FOR INTER-OPERATOR HANDOVER BETWEEN WCDMA AND GSM	25.01.2002
199798081	Networks	08/980942	6163711	US	Method and apparatus for interfacing a mobile phone with a car phone	01.12.1997
199898012	Networks	98814344.5	ZL98814344.5	CN	METHOD AND APPARATUS FOR DIRECTIONAL RADIO COMMUNICATION	04.11.1998
199898012	Networks	09/838874	6392595	US	METHOD AND APPARATUS FOR DIRECTIONAL RADIO COMMUNICATION	04.11.1998
199898012	Networks	98954487.9	1129591	GB	METHOD AND APPARATUS FOR DIRECTIONAL RADIO COMMUNICATION	04.11.1998
200198138	Networks	10/327674	7027798	US	Electronic terminal having an emergency message function and insurance system using the same	20.12.2002
200198150	Networks	09/776234	6836471	US	METHOD AND SYSTEM FOR INTER-OPERATOR HANDOVER WCDMA AND GSM	02.02.2001
199898028	Networks	09/795379	6574241	US	MESSAGE MONITORING IN A NETWORK ELEMENT	14.10.1999
200517465	Networks	200680036043.9	1060014	CN	Verfahren zur Überprüfung der Funktion zur Invertierung der Polarität auf einer mehrere Adern umfassenden Teilnehmeranschlussleitung	18.09.2006
200517465	Networks	12/088,063	8107615	US	Verfahren und Einrichtung zur Überprüfung der Funktion zur Invertierung der Polarität auf einer mehrere Adern umfassenden Teilnehmeranschlussleitung	18.09.2006
200298097	Networks	10/655537	7042294	US	POWER AMPLIFIER SYSTEM	05.09.2003
200512932	Networks	10/039,292	7444665	US	Interactive Television System	03.01.2002
200106870	Networks	10/738,536	7168011	US	Error-Tolerant Connection Test	22.05.2002
199998022	Networks	09/937,588	7366091	US	METHOD AND ARRANGEMENT FOR CHANGING PARALLEL SIGNALS IN A DIGITAL DATA TRANSMISSION	30.03.2000
199998022	Networks	00917095.2		WE	METHOD AND ARRANGEMENT FOR CHANGING PARALLEL SIGNALS IN A DIGITAL DATA TRANSMISSION	30.03.2000
200308997	Networks	03425412.8	1501326	IT	Medium access control method in point-to-multipoint radio systems adopting peripheral stations with adaptive phy mode	25.06.2003
200308997	Networks	03425412.8	1501326	FR	Medium access control method in point-to-multipoint radio systems adopting peripheral stations with adaptive phy mode	25.06.2003
200308997	Networks	03425412.8	1501326	GB	Medium access control method in point-to-multipoint radio systems adopting peripheral stations with adaptive phy mode	25.06.2003
200308997	Networks	03425412.8	60304312,7	DE	Medium access control method in point-to-multipoint radio systems adopting peripheral stations with adaptive phy mode	25.06.2003
199998075	Networks	99965551.7	1245129	GB	THE DELIVERY OF TIMERS AND PHASE METERS TO THE SERVICE SPECIFIC CONVERGENCE SUBLAYER (SCS) OF THE SIGNALLING ATM ADAPTATION LAYER (SAAL) AT THE NETWORK NODE INTERFACE (NNI) AND AT THE USER NETWORK INTERFACE (UNI)	23.12.1999
200398166	Networks	10/729,669	7224959	US	Mobile phone business administration tool	05.12.2003

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200398174	Networks	10/744240	7149503	US	SYSTEM AND METHOD FOR ASSOCIATING POSTMARK INFORMATION WITH DIGITAL CONTENT	23.12.2003
200511530	Networks	10 2005 030 598.9	10 2005 030 598	DE	Verfahren und Einrichtung zur Überprüfung des Zuschaltens einer positiven Versorgungsspannung auf eine mehrere Adern umfassende Teilnehmeranschlussleitung	30.06.2005
200511530	Networks	200680023502.X	958857	CN	Verfahren und Einrichtung zur Überprüfung des Zuschaltens einer positiven Versorgungsspannung auf eine mehrere Adern umfassende Teilnehmeranschlussleitung	14.06.2006
200511530	Networks	2007-7030860	1301280	KR	Verfahren und Einrichtung zur Überprüfung des Zuschaltens einer positiven Versorgungsspannung auf eine mehrere Adern umfassende Teilnehmeranschlussleitung	14.06.2006
200511530	Networks	11/994,283	8948347	US	Verfahren und Einrichtung zur Überprüfung des Zuschaltens einer positiven Versorgungsspannung auf eine mehrere Adern umfassende Teilnehmeranschlussleitung	14.06.2006
199998058	Networks	10/000242	6909895	US	SGSN semi anchoring during the inter SGSN SRNC relocation procedure	30.04.1999
199998066	Networks	10/151,318	7277535	US	Controlling connection processing	30.11.2000
199998075	Networks	99965551.7	69936945,2	DE	THE DELIVERY OF TIMERS AND PHARMETERS TO THE SERVICE SPECIFIC CONVERGENCE SUBLAYER (SCS) OF THE SIGNALLING ATM ADAPTATION LAYER (SAAL) AT THE NETWORK NODE INTERFACE (NNI) AND AT THE USER NETWORK INTERFACE (UNI)	23.12.1999
199998075	Networks	99817057.7	ZL99817057.7	CN	THE DELIVERY OF TIMERS AND PHARMETERS TO THE SERVICE SPECIFIC CONVERGENCE SUBLAYER (SCS) OF THE SIGNALLING ATM ADAPTATION LAYER (SAAL) AT THE NETWORK NODE INTERFACE (NNI) AND AT THE USER NETWORK INTERFACE (UNI)	23.12.1999
199802423	Networks	09/763,287	6947473	US	Receiver and method of recovering data from radio signals	03.08.1999
199802403	Networks	09/786,063	7286567	US	Telekommunikationssystem sowie Verfahren zum Synchronisieren desselben und zum Senden von Daten	26.08.1999
200412415	Networks	05815729.8	50 2005 013 973.9	DE	Schaltungsanordnung und Verfahren zum Erfassen des Zustandes eines Schaltungsschutzelementes	28.11.2005
200412415	Networks	200580048516.2	892434	CN	Schaltungsanordnung und Verfahren zum Erfassen des Zustandes eines Schaltungsschutzelementes	28.11.2005
200412415	Networks	2007-7016966	1186304	KR	Schaltungsanordnung und Verfahren zum Erfassen des Zustandes eines Schaltungsschutzelementes	28.11.2005
200412415	Networks	11/794,079	7742267	US	Circuit Arrangement and Method for Detecting the State of a Circuit Protection Element	28.11.2005
200400843	Networks	10 2004 003 548.2	10 2004 003 548	DE	Optimierung der Verkehrsverteilung bei Mehrwegrouting	23.01.2004
200400843	Networks	05701478.9		DE	Optimierung der Verkehrsverteilung bei Mehrwegrouting	11.01.2005
200400843	Networks	05701478.9		ES	Optimierung der Verkehrsverteilung bei Mehrwegrouting	11.01.2005
200400843	Networks	05701478.9		FR	Optimierung der Verkehrsverteilung bei Mehrwegrouting	11.01.2005
200400843	Networks	05701478.9		GB	Optimierung der Verkehrsverteilung bei Mehrwegrouting	11.01.2005
200400843	Networks	200580002930.X	914991	CN	Optimierung der Verkehrsverteilung bei Mehrwegrouting	11.01.2005
200400843	Networks	05701478.9		WE	Optimierung der Verkehrsverteilung bei Mehrwegrouting	11.01.2005
200400638	Networks	04425031.4	1557820	GB	Voice activity detection operating with compressed speech signal parameters	22.01.2004
200098015	Networks	2396287	2396287	CA	COMMUNICATIONS SYSTEM HAVING ENHANCED FAULT TOLERANCE	12.01.2001
200098015	Networks	10/169944	7170865	US	COMMUNICATIONS SYSTEM HAVING ENHANCED FAULT TOLERANCE	12.01.2001
200098015	Networks	11/604,755	7656830	US	COMMUNICATIONS SYSTEM HAVING ENHANCED FAULT TOLERANCE	28.11.2006
200098015	Networks	01901236.8	60135730,2	DE	COMMUNICATIONS SYSTEM HAVING ENHANCED FAULT TOLERANCE	12.01.2001
200698009	Networks	11/679,096	8331266	US	LAN TOPOLOGY DETECTION AND ASSIGNMENT OF ADDRESSES	26.02.2007
200107893	Networks	02776724.3	50202255,8	DE	Verfahren und Vorrichtungen zur Header-Kompression in paketorientierten Netzwerken	25.09.2002
200107893	Networks	02776724.3	2233866	ES	Verfahren und Vorrichtungen zur Header-Kompression in paketorientierten Netzwerken	25.09.2002
200107893	Networks	02776724.3	1438825	GB	Verfahren und Vorrichtungen zur Header-Kompression in paketorientierten Netzwerken	25.09.2002
200414965	Networks	04787099.3	60 2004 047 769.9	DE	Simple and resource-efficient resilient network Systems	03.09.2004
200414965	Networks	04787099.3	1661337	GB	Simple and resource-efficient resilient network Systems	03.09.2004
200498028	Networks	10/853,819	8788265	US	SYSTEM AND METHOD FOR BABBLE NOISE DETECTION	25.05.2004
200298033	Networks	03396108.7	1434451	GB	RECONFIGURATION OF A MOBILE TELECOMMUNICATIONS NETWORK ELEMENT	26.11.2003
200298060	Networks	10/101900	6898729	US	Methods and apparatus for transmitting MIDI data over a lossy communications channel	19.03.2002
200298033	Networks	10/329,361	7260397	US	RECONFIGURATION OF A MOBILE TELECOMMUNICATIONS NETWORK ELEMENT	27.12.2002

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200298033	Networks	03396108.7	1434451	FR	RECONFIGURATION OF A MOBILE TELECOMMUNICATIONS NETWORK ELEMENT	26.11.2003
200298033	Networks	200310124317.8	452096	CN	RECONFIGURATION OF A MOBILE TELECOMMUNICATIONS NETWORK ELEMENT	26.12.2003
200298033	Networks	03396108.7	60318933.4-08	DE	RECONFIGURATION OF A MOBILE TELECOMMUNICATIONS NETWORK ELEMENT	26.11.2003
199898091	Networks	09/555876	6580747	US	Method and generator for generating orthogonal spreading code in CDMA radio system	08.10.1999
199998002	Networks	11/316,955	7466744	US	PARALLEL INTERFERENCE CANCELLATION ARCHITECTURE FOR A MULTISER CDMA RECEIVER	27.12.2005
199998018	Networks	09/949588	6882683	US	MONITORING METHOD AND MONITORING ARRANGEMENT	10.03.2000
199801748	Networks	09/716,899	6792526	US	Steuerungssystem zur Steuerung der Inbetriebnahme eines verteilten Systems	20.11.2000
200702316	Networks	07013104.0		EP	Method and device for data processing and communication system comprising such device	04.07.2007
199798070	Networks	09/015574	6185417	US	System for saving and reading text messages	30.01.1998
200802078	Networks	12/229,079	8116278	US	SPECTRUM SHARING BETWEEN OFDM AND NON-OFDM RADIOS	20.08.2008
200802405	Networks	08105479.3		EP	Improved probe calibration for an active antenna	02.10.2008
200300641	Networks	04702693.5	1586206	GB	Verfahren zur Synchronisation in heterogenen Netzen	16.01.2004
199798037	Networks	09/568,927	7340246	US	TRANSMISSION OF INFORMATION DURING CALL ESTABLISHMENT	16.11.1998
200511910	Networks	200680032873.4	101258715	CN	Optimized bandwidth allocation for guaranteed bandwidth services	21.08.2006
200511910	Networks	11/991,721	8320237	US	Optimized bandwidth allocation for guaranteed bandwidth services	21.08.2006
199998136	Networks	09/913953	6600454	US	ANTENNA RADIATOR	22.02.2000
200098031	Networks	20001531	112024	FI	CONTROLLING ROAMING IN A MOBILE SYSTEM	28.06.2000
200098031	Networks	01951740.8	1308063	AT	CONTROLLING ROAMING IN A MOBILE SYSTEM	27.06.2001
200098031	Networks	01951740.8	1308063	CH	CONTROLLING ROAMING IN A MOBILE SYSTEM	27.06.2001
200098031	Networks	01811960.3	ZL01811960.3	CN	CONTROLLING ROAMING IN A MOBILE SYSTEM	27.06.2001
200098031	Networks	10/327,962	7409210	US	CONTROLLING ROAMING IN A MOBILE SYSTEM	27.06.2001
200098031	Networks	2413719	2413719	CA	CONTROLLING ROAMING IN A MOBILE SYSTEM	27.06.2001
200098031	Networks	01951740.8	1308063	FR	CONTROLLING ROAMING IN A MOBILE SYSTEM	27.06.2001
199798090	Networks	09/485268	6587693	US	E-MAIL TRAFFIC IN A MOBILE COMMUNICATIONS SYSTEM	31.08.1998
200512937	Networks	09/945,350	7363643	US	Real-Time Audience Monitoring Content Rating and Content Enhancing	31.08.2001
200512937	Networks	11/894,416	8006259	US	Real-Time Audience Monitoring Content Rating and Content Enhancing	31.08.2001
200310258	Networks	10350909.7	10350909	DE	Verfahren zur Signalisierung eines Pfades an Funkstationen eines Funkkommunikationssystems	31.10.2003
200310258	Networks	200480032541.7	805872	CN	Verfahren zur Signalisierung eines Pfades an Funkstationen eines Funkkommunikationssystems	21.10.2004
200310258	Networks	1854/DELNP/2006		IN	Verfahren zur Signalisierung eines Pfades an Funkstationen eines Funkkommunikationssystems	21.10.2004
200310258	Networks	2006-7010703	1068365	KR	Verfahren zur Signalisierung eines Pfades an Funkstationen eines Funkkommunikationssystems	21.10.2004
200310258	Networks	10/577,664	8971899	US	Verfahren zur Signalisierung eines Pfades an Funkstationen eines Funkkommunikationssystems	21.10.2004
200183138	Networks	02732577.8	1384344	GB	Method of link adaptation in enhanced cellular systems to discriminate between high and low variability	08.04.2002
200183138	Networks	PI0209278-6	PI0209278-6	BR	Method of link adaptation in enhanced cellular systems to discriminate between high and low variability	08.04.2002
200183138	Networks	10/680,122	7289574	US	Method of link adaptation in enhanced cellular systems to discriminate between high and low variability	08.10.2003
200213336	Networks	10/637,044	7257215	US	Load Sharing in SS7-Netzen	08.08.2003
200600240	Networks	10 2006 043 701.2	10 2006 043 701	DE	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	18.09.2006
200801927	Networks	10/201,852	7093027	US	Fast connection protection in a virtual local area network based stack environment	23.07.2002
200703831	Networks	11/976,743	7778247	US	Cross Layer Network Optimization for OFDMA Systems using the Beta-Min-Sum Belief Propagation Algorithm	26.10.2007
200298095	Networks	10/427,997	8223769	US	METHOD AND CIRCUITRY FOR PROCESSING DATA	02.05.2003
199905295	Networks	10/130,703	6970550	US	Verfahren zur Ansteuerung von Servern	22.11.2000
200183138	Networks	02732577.8	3055021	GR	Method of link adaptation in enhanced cellular systems to discriminate between high and low variability	08.04.2002
200183138	Networks	02732577.8	1384344	PT	Method of link adaptation in enhanced cellular systems to discriminate between high and low variability	08.04.2002
200510856	Networks	200680022358.8	893130	CN	Verfahren und Einrichtung zur Bestimmung des Leckwiderstands von zumindest einer Ader einer mehrere Adern aufweisenden Teilnehmeranschlusssleitung in einem Kommunikationsnetz	07.06.2006

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200510856	Networks	2007-7030904	1287008	KR	Verfahren und Einrichtung zur Bestimmung des Leckwiderstands von zumindest einer Ader einer mehrere Adern aufweisenden Teilnehmeranschlussleitung in einem Kommunikationsnetz	07.06.2006
200510856	Networks	11/993,654	8358743	US	Verfahren und Einrichtung zur Bestimmung des Leckwiderstands von zumindest einer Ader einer mehrere Adern aufweisenden Teilnehmeranschlussleitung in einem Kommunikationsnetz	07.06.2006
199902033	Networks	09/594,909	6442257	US	Anordnung zur Gebührenerhebung in einem Telefonnetz und Verfahren zum Betrieb einer solchen	15.06.2000
200001784	Networks	01936024.7	50115558,9	DE	Koordinierte netzwerkweite Administration von Vermittlungsstellen	02.05.2001
200001784	Networks	01936024.7	1279300	ES	Koordinierte netzwerkweite Administration von Vermittlungsstellen	02.05.2001
200001784	Networks	01936024.7	1279300	FR	Koordinierte netzwerkweite Administration von Vermittlungsstellen	02.05.2001
200001784	Networks	01936024.7	1279300	GB	Koordinierte netzwerkweite Administration von Vermittlungsstellen	02.05.2001
200001784	Networks	01936024.7	1279300	IT	Koordinierte netzwerkweite Administration von Vermittlungsstellen	02.05.2001
200001784	Networks	10/221,490	7218726	US	Koordinierte netzwerkweite Administration von Vermittlungsstellen	02.05.2001
200600240	Networks	200780001402.1	683411	CN	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007
200600240	Networks	2008-7012342	10-0987875	KR	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007
200198007	Networks	10/028344	7180915	US	APPARATUS, AND AN ASSOCIATED METHOD, FOR FACILITATING SYNCHRONIZATION IN A WIRELESS MESH NETWORK	21.12.2001
199901185	Networks	00101963.7	50008793,8	DE	Vorrichtung und Verfahren zur Vergebühung von Diensten in einem intelligenten Netzwerk	01.02.2000
199901185	Networks	00101963.7	1035723	GB	Vorrichtung und Verfahren zur Vergebühung von Diensten in einem intelligenten Netzwerk	01.02.2000
199802608	Networks	09/787,520	6581156	US	Verfahren zur Erfassung des Datenzustandes	01.09.1999
200598027	Networks	2008107416	2385549	RU	METHOD AND ARRANGEMENT FOR RADIO RESOURCE CONTROL	31.08.2006
200598027	Networks	2008/1879	2008/1879	ZA	METHOD AND ARRANGEMENT FOR RADIO RESOURCE CONTROL	31.08.2006
200208725	Networks	10/219,776	7113794	US	WLAN DEVICE POSITIONING	15.08.2002
199701068	Networks	09/014,113	6198923	US	VERFAHREN ZUR UEBERTRAGUNG VON INFORMATIONEN ZWISCHEN MOBILSTATIONEN UND EINEM KOMMUNIKATIONSNETZ	27.01.1998
200507498	Networks	05425269.7	1718003	FR	Method to overcome the strict metric scope of the RIP Protocol without having impact on existing installations	29.04.2005
200507498	Networks	05425269.7	60 2005 011 252.9	DE	Method to overcome the strict metric scope of the RIP Protocol without having impact on existing installations	29.04.2005
200507498	Networks	05425269.7	1718003	GB	Method to overcome the strict metric scope of the RIP Protocol without having impact on existing installations	29.04.2005
200507498	Networks	05425269.7	1718003	IT	Method to overcome the strict metric scope of the RIP Protocol without having impact on existing installations	29.04.2005
200698008	Networks	11/452,752	7471247	US	ANTENNA ARRAY AND UNIT CELL USING AN ARTIFICIAL MAGNETIC LAYER	13.06.2006
200698008	Networks	200780029679.5	1098025	CN	ANTENNA ARRAY AND UNIT CELL USING AN ARTIFICIAL MAGNETIC LAYER	11.06.2007
200698008	Networks	2615/MUMNP/2008	274588	IN	ANTENNA ARRAY AND UNIT CELL USING AN ARTIFICIAL MAGNETIC LAYER	11.06.2007
200404121	Networks	200580030368.1	688417	CN	Verfahren zum Übertragen von Telekommunikationsdaten von einem Zugangsnetzwerk zu einem Media Gateway Controller	26.07.2005
200404121	Networks	2007-7005481	10-0870348	KR	Verfahren zum Übertragen von Telekommunikationsdaten von einem Zugangsnetzwerk zu einem Media Gateway Controller	26.07.2005
200404121	Networks	05776202.3	1719329	IT	Verfahren zum Übertragen von Telekommunikationsdaten von einem Zugangsnetzwerk zu einem Media Gateway Controller	26.07.2005
200404121	Networks	05776202.3	50 2005 001 529.0	DE	Verfahren zum Übertragen von Telekommunikationsdaten von einem Zugangsnetzwerk zu einem Media Gateway Controller	26.07.2005
200404121	Networks	05776202.3	2294734	ES	Verfahren zum Übertragen von Telekommunikationsdaten von einem Zugangsnetzwerk zu einem Media Gateway Controller	26.07.2005
200404121	Networks	05776202.3	1719329	FR	Verfahren zum Übertragen von Telekommunikationsdaten von einem Zugangsnetzwerk zu einem Media Gateway Controller	26.07.2005
200404121	Networks	05776202.3	1719329	GB	Verfahren zum Übertragen von Telekommunikationsdaten von einem Zugangsnetzwerk zu einem Media Gateway Controller	26.07.2005
200198093	Networks	02803159.8	ZL02803159,8	CN	RECEIVER TO DETERMINE MODULATION TYPE	30.09.2002
200109403	Networks	10/152,799	6 795 018	US	Beamforming methods for smart circular antenna arrays	23.05.2002
200109403	Networks	02076880.0	60206842,8	DE	Improvements in or relating to smart antenna arrays	13.05.2002

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200800607	Networks	08103819.2	2117078	EP	Patch antenna element array	05.05.2008
199901734	Networks	09/408,686	6535741	US	Verfahren und Kommunikationsnetz zum Routen von Verbindungen	30.09.1999
199901680	Networks	10/030,375	7043003	US	Vorrichtung und Verfahren zur Verbesserung einer Lastverteilung in einem Signalisierungsnetz	17.04.2000
200212306	Networks	10/522,824	7961713	US	Efficient Connection of ISDN Private Branch Exchanges to a Packet-Switched Network	11.06.2003
200305691	Networks	03425240.3	60324766	DE	Microwave duplexer comprising dielectric filters, a T-junction, two coaxial ports and one waveguide port	18.04.2003
200305691	Networks	03425240.3	1469548	GB	Microwave duplexer comprising dielectric filters, a T-junction, two coaxial ports and one waveguide port	18.04.2003
200305691	Networks	03425240.3	1469548	IT	Microwave duplexer comprising dielectric filters, a T-junction, two coaxial ports and one waveguide port	18.04.2003
200201088	Networks	10213882.6	10213882	DE	Verfahren zur Decodierung einer mit Hilfe eines binären Faltungscodes verschlüsselten Datenfolge	27.03.2002
200201088	Networks	2004-7015128	10-0973097	KR	Verfahren zur Decodierung einer mit Hilfe eines binären Faltungscodes verschlüsselten Datenfolge	20.03.2003
200201088	Networks	10/509,038	7143334	US	Verfahren zur Decodierung einer mit Hilfe eines binären Faltungscodes verschlüsselten Datenfolge	20.03.2003
200098091	Networks	2002-505715	3880516	JP	Capacity changes in transceiver apparatus	01.06.2001
200304768	Networks	10/834,358	7333775	US	Verfahren zur Detektion von Funkkommunikationsendgeräten	29.04.2004
200105700	Networks	02735014.9	50212228,5	DE	Verfahren zur Zuordnung eines mobilen Kommunikationsendgerätes zu einem Corenetzwerkknoten	21.03.2002
200105700	Networks	02735014.9	E394886	AT	Verfahren zur Zuordnung eines mobilen Kommunikationsendgerätes zu einem Corenetzwerkknoten	21.03.2002
200105700	Networks	2442535	2442535	CA	Verfahren zur Zuordnung eines mobilen Kommunikationsendgerätes zu einem Corenetzwerkknoten	21.03.2002
200105700	Networks	02807760.1	608858	CN	Verfahren zur Zuordnung eines mobilen Kommunikationsendgerätes zu einem Corenetzwerkknoten	21.03.2002
200105700	Networks	02735014.9	1374626	ES	Verfahren zur Zuordnung eines mobilen Kommunikationsendgerätes zu einem Corenetzwerkknoten	21.03.2002
200105700	Networks	02735014.9	1374626	FR	Verfahren zur Zuordnung eines mobilen Kommunikationsendgerätes zu einem Corenetzwerkknoten	21.03.2002
200105700	Networks	02735014.9	1374626	GB	Verfahren zur Zuordnung eines mobilen Kommunikationsendgerätes zu einem Corenetzwerkknoten	21.03.2002
200105700	Networks	02735014.9	1374626	IT	Verfahren zur Zuordnung eines mobilen Kommunikationsendgerätes zu einem Corenetzwerkknoten	21.03.2002
200105700	Networks	02735014.9	1374626	SE	Verfahren zur Zuordnung eines mobilen Kommunikationsendgerätes zu einem Corenetzwerkknoten	21.03.2002
200105700	Networks	10/473,257	7577430	US	Verfahren zur Zuordnung eines mobilen Kommunikationsendgerätes zu einem Corenetzwerkknoten	21.03.2002
200598025	Networks	11/201,123	7640036	US	METHOD FOR PERFORMING INTER-SYSTEM HANDOVERS IN A MOBILE COMMUNICATION SYSTEM	11.08.2005
199801418	Networks	99919089.5	59902040,7	DE	Verfahren und Funk-Kommunikationssystem zur Verbindungssteuerung bei Anrufen von/zu Funkteilnehmern	16.03.1999
199801418	Networks	99919089.5	2180298	ES	Verfahren und Funk-Kommunikationssystem zur Verbindungssteuerung bei Anrufen von/zu Funkteilnehmern	16.03.1999
199801418	Networks	99919089.5	1064798	FR	Verfahren und Funk-Kommunikationssystem zur Verbindungssteuerung bei Anrufen von/zu Funkteilnehmern	16.03.1999
199801418	Networks	99919089.5	1064798	GB	Verfahren und Funk-Kommunikationssystem zur Verbindungssteuerung bei Anrufen von/zu Funkteilnehmern	16.03.1999
199801418	Networks	99804413.X	400142	CN	Verfahren und Funk-Kommunikationssystem zur Verbindungssteuerung bei Anrufen von/zu Funkteilnehmern	16.03.1999
199801418	Networks	09/646,812	7047013	US	Verfahren und Funk-Kommunikationssystem zur Verbindungssteuerung bei Anrufen von/zu Funkteilnehmern	16.03.1999
200012791	Networks	01956270.1	50111981,7	DE	Digital/Analog-Wandler	13.06.2001
200012791	Networks	01956270.1	1393449	GB	Digital/Analog-Wandler	13.06.2001
200012791	Networks	10/312,761	6888485	US	Digital/Analog-Wandler	13.06.2001
200014810	Networks	01955251.2	50114393,9	DE	Vorrichtung und Verfahren zur Anrufumlenkung in Telekommunikationsnetzen	16.07.2001
200014810	Networks	10/221,507	7822013	US	Vorrichtung und Verfahren zur Anrufumlenkung in Telekommunikationsnetzen	16.07.2001
200014810	Networks	01806500.7	260334	CN	Vorrichtung und Verfahren zur Anrufumlenkung in Telekommunikationsnetzen	16.07.2001
199902135	Networks	00945585.8	50013519,3	DE	Verfahren und Telekommunikationsendgeraet zur automatisierten Datenkomprimierung in Funkkommunikationssystemen	30.05.2000
199902135	Networks	00945585.8	1121790	GB	Verfahren und Telekommunikationsendgeraet zur automatisierten Datenkomprimierung in Funkkommunikationssystemen	30.05.2000

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0206

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
199902135	Networks	00945585.8	1121790	ES	Verfahren und Telekommunikationsendgeraet zur automatisierten Datenkomprimierung in Funkkommunikationssystemen	30.05.2000
199902135	Networks	00945585.8	1121790	FR	Verfahren und Telekommunikationsendgeraet zur automatisierten Datenkomprimierung in Funkkommunikationssystemen	30.05.2000
199902135	Networks	00945585.8	1121790	IT	Verfahren und Telekommunikationsendgeraet zur automatisierten Datenkomprimierung in Funkkommunikationssystemen	30.05.2000
199601822	Networks	09/230,221	6697328	US	Verfahren zur Optimierung der Auslastung von Verbindungsabschnitten in Systemen, in denen Informationen in Datenpaketen uebertragen werden.	16.07.1997
200013546	Networks	10065564.5	10065564	DE	Vorrichtung und Verfahren zur Kompensation von impulsartigen Störungen in xDSL-Systemen	28.12.2000
200412824	Networks	10 2005 005 278.9	10 2005 005 278	DE	Verfahren zum Betrieb eines Netzknoten eines Kommunikationsnetzes und Netzknoten eines Kommunikationsnetzes	04.02.2005
200001400	Networks	01805778.0	339482	CN	Schaltungsanordnung zum Ersatzschalten von Uebertragungseinrichtungen in MPLS-Pakete führende Ringarchitekturen	12.01.2001
200314230	Networks	10350890.2	10350890	DE	Verfahren zum Betreiben zweier Funkkommunikationssysteme	31.10.2003
200314230	Networks	200480032573.7	535409	CN	Verfahren zum Betreiben zweier Funkkommunikationssysteme	19.10.2004
200314230	Networks	04791255.5	1678975	FR	Verfahren zum Betreiben zweier Funkkommunikationssysteme	19.10.2004
200314230	Networks	04791255.5	1678975	GB	Verfahren zum Betreiben zweier Funkkommunikationssysteme	19.10.2004
200314230	Networks	2048/DELNP/2006	264501	IN	Verfahren zum Betreiben zweier Funkkommunikationssysteme	19.10.2004
200314230	Networks	04791255.5	1678975	IT	Verfahren zum Betreiben zweier Funkkommunikationssysteme	19.10.2004
200314230	Networks	2006-7010757	1096134	KR	Verfahren zum Betreiben zweier Funkkommunikationssysteme	19.10.2004
200314230	Networks	04791255.5	1678975	PL	Verfahren zum Betreiben zweier Funkkommunikationssysteme	19.10.2004
199698043	Networks	09/233650	6134234	US	MASTER-SLAVE SYNCHRONIZATION	03.07.1997
200219634	Networks	02028256.2	50204558,2	DE	Verfahren zur Reduzierung der Strahlenbelastung einer Antenne	16.12.2002
200406901	Networks	04425299.7	60 2004 017 572.2	DE	Analog predistortion linearizer with fixed in advance intermodulation power, method and device	29.04.2004
200406901	Networks	04425299.7	1592127	FR	Analog predistortion linearizer with fixed in advance intermodulation power, method and device	29.04.2004
200406901	Networks	04425299.7	1592127	GB	Analog predistortion linearizer with fixed in advance intermodulation power, method and device	29.04.2004
200406901	Networks	04425299.7	1592127	IT	Analog predistortion linearizer with fixed in advance intermodulation power, method and device	29.04.2004
200406685	Networks	04425300.3	60 2004 024 169.5	DE	Microstrip to waveguide transition for millimetric waves embodied in a multilayer printed circuit board	29.04.2004
200406685	Networks	04425300.3	1592081	ES	Microstrip to waveguide transition for millimetric waves embodied in a multilayer printed circuit board	29.04.2004
200406685	Networks	04425300.3	1592081	FR	Microstrip to waveguide transition for millimetric waves embodied in a multilayer printed circuit board	29.04.2004
200406685	Networks	04425300.3	1592081	GB	Microstrip to waveguide transition for millimetric waves embodied in a multilayer printed circuit board	29.04.2004
200406685	Networks	04425300.3	1592081	IT	Microstrip to waveguide transition for millimetric waves embodied in a multilayer printed circuit board	29.04.2004
199707884	Networks	10/178,693	7406084	US	Flexible Software Architecture for a call processing systems	17.06.2002
199807521	Networks	09/249,924	6324212	US	Apparatus Using Low Spectrum Selectively For Providing Both ADSL And POTS Service	07.05.1998
199807521	Networks	09/249,925	6404774	US	Method Using Low Spectrum Selectively for Providing Both ADSL and POTS Service	07.05.1998
199998135	Networks	09/914211	6542131	US	APPARATUS FOR SUPPRESSING MUTUAL INTERFERENCE BETWEEN ANTENNAS	22.02.2000
199801502	Networks	99916805.7	1068765	GB	Verfahren und Vorrichtung zur Ankopplung einer ATM-Kommunikationsschicht an mehrere Zeitmultiplex-Kommunikationsanschluesse	19.03.1999
200801928	Networks	10/218,284	7289538	US	Clock reconstruction for time division multiplexed traffic transported over asynchronous ethernet networks	14.08.2002
199701388	Networks	98912204.9	E220279	AT	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998
199701388	Networks	98912204.9	59804669	DE	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998
199701388	Networks	98912204.9	2180153	ES	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998
199701388	Networks	98912204.9	972411	FR	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998
199701388	Networks	98912204.9	972411	GB	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0207

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
199701388	Networks	98912204.9	972411	IE	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998
199701388	Networks	98912204.9	972411	IT	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998
199701388	Networks	98803720.3	110207	CN	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998
199701388	Networks	10-544660	3457009	JP	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998
199701388	Networks	7008708/99	343875	KR	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998
199701388	Networks	09/381,764	6622027	US	VERFAHREN ZUM AUFBAU EINER KOMMUNIKATIONSVERBINDUNG	12.02.1998
199998106	Networks	09/570881	6850501	US	METHOD AND ARRANGEMENT FOR ENHANCING PRE-SYNCHRONIZATION RE LIABILITY IN A CELLULAR RADIO SYSTEM	15.05.2000
199802312	Networks	09/762,839	6785362	US	Verfahren und Einrichtung zur Ueberpruefung der Funktionsfaehigkeit einer Vermittlungsstelle	06.08.1999
199801502	Networks	09/647,431	7110410	US	Verfahren und Vorrichtung zur Ankopplung einer ATM-Kommunikationsschicht an mehrere Zeitmultiplex-Kommunikationsanschluesse.	19.03.1999
200198156	Networks	02396070.1	1267498	GB	A METHOD AND APPARATUS FOR CONTROLLING THE OPERATION OF A POSITIONING RECEIVER	17.05.2002
200198165	Networks	10/156885	7209459	US	TRANSMITTING CONTROL MESSAGES ON CONTROL CHANNELS OF PACKET DATA NETWORK	28.05.2002
200298008	Networks	10/098335	7058409	US	PERSONAL SAFETY NET	18.03.2002
199905231	Networks	10/130,079	6940961	US	Verfahren und Anordnung zur Uebermittlung von dienstrelevanten Informationen zwischen mehreren Verbindungs-Steuerungen	09.11.2000
199801836	Networks	99924677.0	59914822,5	DE	Verfahren und Mobil-Kommunikationssystem zur Steuerung eines Kurznachrichtendienstes	24.03.1999
199801836	Networks	99924677.0	1082864	FR	Verfahren und Mobil-Kommunikationssystem zur Steuerung eines Kurznachrichtendienstes	24.03.1999
199801836	Networks	99924677.0	1082864	SE	Verfahren und Mobil-Kommunikationssystem zur Steuerung eines Kurznachrichtendienstes	24.03.1999
199801836	Networks	12-552862	4248146	JP	Verfahren und Mobil-Kommunikationssystem zur Steuerung eines Kurznachrichtendienstes	24.03.1999
199801836	Networks	99924677.0	1082864	GB	Verfahren und Mobil-Kommunikationssystem zur Steuerung eines Kurznachrichtendienstes	24.03.1999
199801836	Networks	99924677.0	1082864	ES	Verfahren und Mobil-Kommunikationssystem zur Steuerung eines Kurznachrichtendienstes	24.03.1999
199801836	Networks	99924677.0	E403341	AT	Verfahren und Mobil-Kommunikationssystem zur Steuerung eines Kurznachrichtendienstes	24.03.1999
199801836	Networks	09/729,065	6850768	US	Verfahren und Mobil-Kommunikationssystem zur Steuerung eines Kurznachrichtendienstes	04.12.2000
200800669	Networks	12/081,187	7817559	US	NETWORK NODE POWER CONSERVATION APPARATUS, SYSTEM, AND METHOD	11.04.2008
200504717	Networks	05007984.7	1713221	GB	Verfahren zur Reduzierung einer Intersymbol-Interferenzenergie	12.04.2005
200504717	Networks	05007984.7	1713221	IT	Verfahren zur Reduzierung einer Intersymbol-Interferenzenergie	12.04.2005
199602259	Networks	08/932,704	7139577	US	Verfahren zur Verbindungssteuerung von drahtlos an Kommunikationsnetze angeschlossenen Kommunikationsendgeraeten	18.09.1997
199708088	Networks	09/486,248	6625179	US	Verfahren zur Datenuebertragung in einem digitalen Uebertragungssystem bei paketvermitteltem Dienst	29.07.1998
200801062	Networks	12/151,723	7864117	US	WIDEBAND OR MULTIBAND VARIOUS POLARIZED ANTENNA	07.05.2008
200800645	Networks	08104576.7		EP	Method and device for processing data and communication sys-tem comprising such device	27.06.2008
200098088	Networks	10/181173	6879642	US	METHOD OF CLIPPING SIGNAL AMPLITUDES IN A MODULATION SYSTEM	14.12.2000
200098118	Networks	09/699863	7801958	US	CONTENT CONVERTER PORTAL	30.10.2000
200112813	Networks	01118546.9	50108779,6	DE	Verfahren zur Strahlungsdiagrammformung in einem Funkkommunikationssystem.	01.08.2001
200112813	Networks	10/209,667	7054663	US	Verfahren zur Strahlungsdiagrammformung in einem Funkkommunikationssystem.	01.08.2002
200198072	Networks	10/472821	7191354	US	CLOCK SYNCHRONIZATION EXECUTED BY AN INACCURATE ELEMENT	29.03.2001
199698026	Networks	09/117318	6173302	US	DECIMATION METHOD AND DECIMATION FILTER	03.12.1997
200109890	Networks	10/159,210	7349385	US	Integrated Access Platform	30.05.2002
200118019	Networks	10/491,075	7940745	US	Flexible and Economical Provision of Service Characteristics for Voice Transmission in a Packet Network	12.09.2002

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200398006	Networks	10/360216	7012185	US	Method and Apparatus for Combining Processing Power of Mid-Enabled Mobile Stations to Increase Polyphony	07.02.2003
200398017	Networks	04251703.7	1469648	ES	Signal Manipulation	24.03.2004
200398017	Networks	04251703.7	1469648	GB	Signal Manipulation	24.03.2004
199898049	Networks	980992	107499	FI	METHOD AND SYSTEM FOR DETERMINING OF OPERATING MODELS OF USE RS OF A TELECOMMUNICATION SYSTEM	05.05.1998
199898049	Networks	10/018502	7734297	US	METHOD AND SYSTEM FOR DETERMINING OF OPERATING MODELS OF USE RS OF A TELECOMMUNICATION SYSTEM	10.05.1999
199898049	Networks	99923617.7	69932858,6	DE	METHOD AND SYSTEM FOR DETERMINING OF OPERATING MODELS OF USE RS OF A TELECOMMUNICATION SYSTEM	10.05.1999
199898049	Networks	99923617.7	1177703	IT	METHOD AND SYSTEM FOR DETERMINING OF OPERATING MODELS OF USE RS OF A TELECOMMUNICATION SYSTEM	10.05.1999
199898049	Networks	99923617.7	1177703	GB	METHOD AND SYSTEM FOR DETERMINING OF OPERATING MODELS OF USE RS OF A TELECOMMUNICATION SYSTEM	10.05.1999
199898049	Networks	99923617.7	1177703	FR	METHOD AND SYSTEM FOR DETERMINING OF OPERATING MODELS OF USE RS OF A TELECOMMUNICATION SYSTEM	10.05.1999
199898049	Networks	99923617.7	1177703	WE	METHOD AND SYSTEM FOR DETERMINING OF OPERATING MODELS OF USE RS OF A TELECOMMUNICATION SYSTEM	10.05.1999
199898049	Networks	99923617.7	1177703	ES	METHOD AND SYSTEM FOR DETERMINING OF OPERATING MODELS OF USE RS OF A TELECOMMUNICATION SYSTEM	10.05.1999
200109267	Networks	10154644.0	10154644	DE	Verfahren und Vorrichtung zur optimierten ADSL-Datenübertragung	07.11.2001
200109267	Networks	02781149.6		WE	Verfahren und Vorrichtung zur optimierten ADSL-Datenübertragung	04.11.2002
200109267	Networks	02781149.6		DE	Verfahren und Vorrichtung zur optimierten ADSL-Datenübertragung	04.11.2002
200109267	Networks	02781149.6		ES	Verfahren und Vorrichtung zur optimierten ADSL-Datenübertragung	04.11.2002
200109267	Networks	02781149.6		FR	Verfahren und Vorrichtung zur optimierten ADSL-Datenübertragung	04.11.2002
200109267	Networks	02781149.6		GB	Verfahren und Vorrichtung zur optimierten ADSL-Datenübertragung	04.11.2002
200109267	Networks	02781149.6		IT	Verfahren und Vorrichtung zur optimierten ADSL-Datenübertragung	04.11.2002
200111598	Networks	10136661.2	10136661	DE	Verfahren zur Erhöhung der Bündelverträglichkeit durch Variation des Abtasttaktes bei xDSL-Verfahren	27.07.2001
199798052	Networks	09/525181	6181211	US	AUTOMATIC TUNING OF AN INTEGRATED OSCILLATOR	24.09.1998
199798059	Networks	98808542.9	ZL98808542.9	CN	AUTOMATIC CONDITIONAL CROSS-CONNECTION	26.08.1998
199798083	Networks	08/982957	6233450	US	Method and apparatus for employing extension number dialing and calling number identification for a radiotelephone operating within a public or autonomous syst.	14.11.2000
199798096	Networks	08/932305	6175565	US	Serial telephone adapter	17.09.1997
199898084	Networks	99806871.3	99806871,3	CN	ITERATIVE PROJECTION WITH INITIALISATION USING A NETWORK USE R IDENTIFIER	08.06.1999
199898003	Networks	09/263402	7031663	US	A system for performing environmental measurements and for transferring measurement results	05.03.1999
199898024	Networks	09/698881	7075952	US	MULTIPLEXING IN A PDH TELECOMMUNICATIONS NETWORK	27.05.1999
199698059	Networks	08/963007	5953675	US	Method for processing information in a wireless local loop terminal and a terminal	03.11.1997
200301001	Networks	200480003057.1	591053	CN	Zuordnung von Verteilungsgewichten zu Verbindungsabschnitten in einem Paketnetz mit Verkehrsverteilung	21.01.2004
200301001	Networks	04703766.8	50 2004 004 504.9	DE	Zuordnung von Verteilungsgewichten zu Verbindungsabschnitten in einem Paketnetz mit Verkehrsverteilung	21.01.2004
200301001	Networks	04703766.8	1588234	FR	Zuordnung von Verteilungsgewichten zu Verbindungsabschnitten in einem Paketnetz mit Verkehrsverteilung	21.01.2004
200301001	Networks	04703766.8	1588234	GB	Zuordnung von Verteilungsgewichten zu Verbindungsabschnitten in einem Paketnetz mit Verkehrsverteilung	21.01.2004
200008061	Networks	10/296,546	7096041	US	Strahlformungsverfahren	17.05.2001
200316444	Networks	10/577,319	8306194	US	Method for Reducing Costs During the Transfer of Unidirectional Information Flows	22.10.2004
200408831	Networks	102 004 025 734.5	102 004 025 734	DE	Verfahren zur Optimierung von Rekonfigurationsprozessen in Mobilfunknetzwerken mit rekonfigurierbaren Endgeräten durch Sammlung und Bereitstellung geeigneter Messdaten sowie eine entsprechende Anordnung	26.05.2004
200307326	Networks	04730873.9	50 2004 004 514.6	DE	Verfahren zur Bestimmung von Kanalkoeffizienten eines Datenübertragungskanal mit variabler Anzahl von Koeffizienten	03.05.2004

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200307326	Networks	04730873.9	1632070	GB	Verfahren zur Bestimmung von Kanalkoeffizienten eines Datenübertragungskanal mit variabler Anzahl von Koeffizienten	03.05.2004
200004120	Networks	09/877,875	7050457	US	Verfahren zur Kommunikation zwischen Kommunikationsnetzen	08.06.2001
200305324	Networks	10320420.2	10320420	DE	Anordnung und Verfahren zur digitalen Vorverzerrung eines komplexen Basisband-Eingangssignals	07.05.2003
200305324	Networks	10/555,811	7415252	US	Anordnung und Verfahren zur digitalen Vorverzerrung eines komplexen Basisband-Eingangssignals	02.04.2004
200207758	Networks	2004-7021318	10-0987572	KR	Verfahren zur Ermittlung von Nutzsignalparametern und Störsignalparametern aus einem Empfangssignal eines Funkkommunikationssystems	04.06.2003
200616428	Networks	10 2006 036 566.6	10 2006 036 566	DE	Vorabinformation von Managern über die Itf-N Schnittstelle	04.08.2006
200398023	Networks	10/630975	7035601	US	Data transmission method, base station and transmitter	31.07.2003
200398023	Networks	04714811.9	6,02004E+11	DE	Data transmission method, base station and transmitter	26.02.2004
200398023	Networks	04714811.9	1597822	FR	Data transmission method, base station and transmitter	26.02.2004
200398023	Networks	04714811.9	1597822	GB	Data transmission method, base station and transmitter	26.02.2004
200398073	Networks	10/635,205	7539741	US	SYSTEM, APPARATUS AND METHOD FOR SUPPORTING CONSTRAINT BASED ROUTING FOR MULTI-PROTOCOL LABEL SWITCHING TRAFFIC ENGINEERING IN POLICY-BASED MANAGEMENT	05.08.2003
200621967	Networks	10 2006 050 354.6		DE	Verfahren und Anordnung zur Leistungssteuerung	25.10.2006
200414292	Networks	11/791,689	7739542	US	Process for Detecting the Availability of Redundant Communication System Components	11.10.2005
199905053	Networks	00938549.3	50015241,1	DE	Verfahren zur Anrufsignalisierung und Kommunikationsendgeraet	12.05.2000
199905053	Networks	00938549.3	1221254	GB	Verfahren zur Anrufsignalisierung und Kommunikationsendgeraet	12.05.2000
199905053	Networks	00814295.5	828098	CN	Verfahren zur Anrufsignalisierung und Kommunikationsendgeraet	12.05.2000
200101681	Networks	02001786.9	50200582,3	DE	Verfahren und Kommunikationsanordnung zum drahtlosen Übermitteln von Informationen	25.01.2002
200101681	Networks	02001786.9	1229670	GB	Verfahren und Kommunikationsanordnung zum drahtlosen Übermitteln von Informationen	25.01.2002
200101681	Networks	02001786.9	1229670	IT	Verfahren und Kommunikationsanordnung zum drahtlosen Übermitteln von Informationen	25.01.2002
200101681	Networks	02001786.9	1229670	FR	Verfahren und Kommunikationsanordnung zum drahtlosen Übermitteln von Informationen	25.01.2002
199301432	Networks	08/272,590	6158006	US	VERFAHREN ZUR KOORDINATION VON PARALLELEN ZUGRIFFEN MEHRERER PROZESSOREN AUF RESOURCENKONFIGURATIONEN	11.07.1994
199801027	Networks	19801495.3	19801495	DE	Funkstation zur Datenuebertragung in einem Funk-Kommunikationssystem	16.01.1998
199798043	Networks	98910754.5	69839669,3	DE	MOBILE NETWORKS USING ATM SWITCHING	19.03.1998
199798043	Networks	98910754.5	2310005	ES	MOBILE NETWORKS USING ATM SWITCHING	19.03.1998
199798043	Networks	98910754.5	983698	FR	MOBILE NETWORKS USING ATM SWITCHING	19.03.1998
199798043	Networks	10-545068	4114955	JP	MOBILE NETWORKS USING ATM SWITCHING	19.03.1998
199798043	Networks	2283757	2283757	CA	MOBILE NETWORKS USING ATM SWITCHING	19.03.1998
199798043	Networks	98910754.5	983698	GB	MOBILE NETWORKS USING ATM SWITCHING	19.03.1998
199798043	Networks	98910754.5	983698	IT	MOBILE NETWORKS USING ATM SWITCHING	19.03.1998
199905053	Networks	00938549.3	1221254	FR	Verfahren zur Anrufsignalisierung und Kommunikationsendgeraet	12.05.2000
200398102	Networks	10/618,266	7193979	US	METHOD AND APPARATUS FOR USE BY A GPRS DEVICE IN RESPONDING TO CHANGE IN SAPI CONNECTION	11.07.2003
199798025	Networks	09/550186	6229391	US	ADAPTATION METHOD AND AMPLIFIER ARRANGEMENT	27.10.1998
200505444	Networks	11/910,444	8365234	US	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
200503953	Networks	185587	185587	IL	Priority-sensitive reallocation of buffer space	24.02.2006
200023943	Networks	10110679.3	10110679	DE	Verfahren zur Übertragung einer Signalisierungsnachricht im SS#7-Netz	06.03.2001
200023943	Networks	02706646.3	1366628	GB	Verfahren zur Übertragung einer Signalisierungsnachricht im SS 7-Netz	29.01.2002
200023943	Networks	02706646.3	1366628	FR	Verfahren zur Übertragung einer Signalisierungsnachricht im SS 7-Netz	29.01.2002
200023943	Networks	02806041.5	434163	CN	Verfahren zur Übertragung einer Signalisierungsnachricht im SS#7-Netz	29.01.2002
200023943	Networks	02706646.3	502 15 904.9	DE	Verfahren zur Übertragung einer Signalisierungsnachricht im SS 7-Netz	29.01.2002
200503953	Networks	2006222038	2006222038	AU	Priority-sensitive reallocation of buffer space	24.02.2006
200503953	Networks	200680006816.9	628546	CN	Priority-sensitive reallocation of buffer space	24.02.2006
199798075	Networks	09/070956	6167283	US	Cell selection based on user profile in cellular radio system	01.05.1998
200505444	Networks	2602614	2602614	CA	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200505444	Networks	200680010157.6	101151893	CN	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
200309911	Networks	200480022176.1	896189	CN	ARRANGEMENT AND METHOD FOR CONTROLLING TRANSMISSION AND/OR RECEPTION OF SIGNALS IN A RADIO COMMUNICATIONS SYSTEM	21.06.2004
200309911	Networks	04741851.2	60 2004 029 896.4	DE	ANTENNAS ARRAY CALIBRATION ARRANGEMENT AND METHOD	21.06.2004
200309911	Networks	04741851.2	1649614	FR	ANTENNAS ARRAY CALIBRATION ARRANGEMENT AND METHOD	21.06.2004
200309911	Networks	04741851.2	1649614	GB	ANTENNAS ARRAY CALIBRATION ARRANGEMENT AND METHOD	21.06.2004
200309911	Networks	2006-7001260	1109630	KR	ARRANGEMENT AND METHOD FOR CONTROLLING TRANSMISSION AND/OR RECEPTION OF SIGNALS IN A RADIO COMMUNICATIONS SYSTEM	21.06.2004
200309911	Networks	2006106199	2364029	RU	ARRANGEMENT AND METHOD FOR CONTROLLING TRANSMISSION AND/OR RECEPTION OF SIGNALS IN A RADIO COMMUNICATIONS SYSTEM	21.06.2004
200309911	Networks	A200600514	84705	UA	ARRANGEMENT AND METHOD FOR CONTROLLING TRANSMISSION AND/OR RECEPTION OF SIGNALS (VARIANTS), BASE STATION	21.06.2004
200309911	Networks	10/566,357	7423586	US	ANTENNAS ARRAY CALIBRATION ARRANGEMENT AND METHOD	21.06.2004
200219354	Networks	200380104243.X	360313	CN	Verfahren zum automatischen Konfigurieren von Kommunikationsbeziehungen zwischen in einem paketorientierten Kommunikationsnetz angeordneten Kommunikationseinheiten	25.11.2003
200219354	Networks	03785537.6	50302681,6	DE	Verfahren zum automatischen Konfigurieren von Kommunikationsbeziehungen zwischen in einem paketorientierten Kommunikationsnetz angeordneten Kommunikationseinheiten	25.11.2003
199901048	Networks	19901204.0	19901204	DE	Verfahren zur Realisierung von Mehrfach-Punktcodes in einer Vermittlungsstelle	14.01.1999
199901048	Networks	00802819.2	473634	CN	Verfahren zur Realisierung von Mehrfach-Punktcodes in einer Vermittlungsstelle	14.01.2000
200098083	Networks	10/219823	6647403	US	Laskutoimitusten suorittaminen digitaalisessa signaalinkäsitelylaitteessa	16.02.2001
200098095	Networks	10/343047	6809685	US	CALIBRATION APPARATUS AND METHOD FOR USE WITH ANTENNA ARRAY	30.07.2001
200219354	Networks	10/536,065	8094581	US	Method for the Automatic Configuration of Communication Relationships Between Communication Units Situated in a Packet-Oriented Communications Network	25.11.2003
200219354	Networks	03785537.6	1566018	GB	Verfahren zum automatischen Konfigurieren von Kommunikationsbeziehungen zwischen in einem paketorientierten Kommunikationsnetz angeordneten Kommunikationseinheiten	25.11.2003
200098010	Networks	10/296,004	7496372	US	ACCESSING NUMBERS OUTSIDE A CLOSED USER GROUP IN A MOBILE CO MMUNICATION SYSTEM	31.05.2000
200417900	Networks	11/667,426	7890429	US	Method for Managing a Time-Limited License on a Computer Application that can be Run on a Network Component	27.10.2005
200315035	Networks	200480028412.0	671848	CN	Verfahren zum Einstellen der Übertragungsparameter von in einer Gruppe zusammengefassten, breitbandigen Übertragungskanä-len	30.09.2004
200315035	Networks	04787260.1	50 2004 009 154.7	DE	Verfahren zum Einstellen der Übertragungsparameter von in einer Gruppe zusammengefassten, breitbandigen Übertragungskanälen	30.09.2004
200315035	Networks	04787260.1	1668857	ES	Verfahren zum Einstellen der Übertragungsparameter von in einer Gruppe zusammengefassten, breitbandigen Übertragungskanälen	30.09.2004
200315035	Networks	04787260.1	1668857	FR	Verfahren zum Einstellen der Übertragungsparameter von in einer Gruppe zusammengefassten, breitbandigen Übertragungskanälen	30.09.2004
200315035	Networks	04787260.1	1668857	GB	Verfahren zum Einstellen der Übertragungsparameter von in einer Gruppe zusammengefassten, breitbandigen Übertragungskanälen	30.09.2004
200315035	Networks	04787260.1	1668857	IT	Verfahren zum Einstellen der Übertragungsparameter von in einer Gruppe zusammengefassten, breitbandigen Übertragungskanälen	30.09.2004
200315035	Networks	10/574,336	7782889	US	Method for Regulating the Transmission Parameters of Broadband Transmission Channels Assembled to Form a Group	30.09.2004
200507603	Networks	200680015010.6	850978	CN	Verfahren zur Codierung von Datenblöcken	25.04.2006
200507603	Networks	11/919,872	8054740	US	Verfahren zur Codierung von Datenblöcken	25.04.2006
200013955	Networks	01960127.7	50101567,1	DE	Verfahren zur Bereitstellung von Software in funkbasierten zellulären Kommunikationsnetzen sowie Kommunikationsnetz zur Durchführung des Verfahrens	19.07.2001

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200013955	Networks	01960127.7	1302088	FR	Verfahren zur Bereitstellung von Software in funkbasierten zellulären Kommunikationsnetzen sowie Kommunikationsnetz zur Durchführung des Verfahrens	19.07.2001
200013955	Networks	10/333,248	7336947	US	Verfahren zur Bereitstellung von Software in funkbasierten zellulären Kommunikationsnetzen sowie Kommunikationsnetz zur Durchführung des Verfahrens	19.07.2001
199702059	Networks	09/485,437	6741560	US	Verfahren zum statistischen Multiplexen von ATM-Verbindungen.	14.07.1998
199905895	Networks	09/736,710	6785269	US	Steuerschnittstelleneinheit zur Realisierung einer zeitgleichen Ansteuerung von zumindest zwei logischen Einheiten sowie dazugehöriges Verfahren	13.12.2000
200598008	Networks	200680001920.9	919638	CN	Clipping of transmission signal	05.01.2006
200598008	Networks	11/074,006	7643801	US	Clipping of transmission signal	08.03.2005
199902791	Networks	00965837.8	50016149	DE	Verfahren zur Realisierung eines Rueckruf-Dienstes in einem Mobilfunknetz	06.09.2000
199902791	Networks	09/831,440	6876860	US	Verfahren zur Realisierung eines Rueckruf-Dienstes in einem Mobilfunknetz	06.09.2000
199902791	Networks	13-522792	4608164	JP	Verfahren zur Realisierung eines Rueckruf-Dienstes in einem Mobilfunknetz	06.09.2000
200598008	Networks	2007-549926	4642863	JP	Clipping of transmission signal	05.01.2006
200303716	Networks	04787266.8	1668940	PL	Rekonfigurierbares Funksystem mit Fehlerfallerkennung und -behandlung	30.09.2004
200303716	Networks	04787266.8	1668940	PT	Rekonfigurierbares Funksystem mit Fehlerfallerkennung und -behandlung	30.09.2004
200013955	Networks	01960127.7	1302088	GB	Verfahren zur Bereitstellung von Software in funkbasierten zellulären Kommunikationsnetzen sowie Kommunikationsnetz zur Durchführung des Verfahrens	19.07.2001
200801312	Networks	08104870.4		EP	P2P overlay network for administrative services in a digital network	24.07.2008
200412652	Networks	10 2004 054 370.4	10 2004 054 370	DE	Anordnung zum Anschalten von zumindest einer Sendeeinheit an eine Sende-Empfangsantenne	10.11.2004
200412652	Networks	200580046168.5	719544	CN	Anordnung zum Anschalten von zumindest einer Sendeeinheit an eine Sende-Empfangsantenne	13.10.2005
200505445	Networks	2006228112	2006228112	AU	Method and arrangement for storing and playing back TV programmes	28.03.2006
200505445	Networks	200680019056.5	682736	CN	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
200505445	Networks	2008-503495	4630369	JP	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
200505445	Networks	11/887,312	8904454	US	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
200505445	Networks	06725343.5	1867154	WE	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
200505172	Networks	11/885,646	8755368	US	Netzunabhängige Bereitstellung und Registrierung für Dienste	15.03.2006
199801246	Networks	09/622,970	6807153	US	Verfahren zum Testen der Erreichbarkeit von Signalisierungspunkten eines Vermittlungsnetzes	05.02.1999
200298047	Networks	10/079373	6996104	US	Rate Allocation and Control for Multicast Services in Wireless Networks	20.02.2002
200298050	Networks	10/185,225	7444152	US	Signaling and Routing Protocols for an Integrated Cellular and Relaying System	28.06.2002
199801046	Networks	19801992.0	19801992	DE	Verfahren zur Verbesserung der Systemverfügbarkeit nach dem Ausfall von Prozessoren einer Prozessorplattform	20.01.1998
199801046	Networks	99932437.9	1049978	GB	Verfahren zur Verbesserung der Systemverfügbarkeit nach dem Ausfall von Prozessoren einer Prozessorplattform	19.01.1999
199801046	Networks	09/600,715	6625752	US	Verfahren zur Verbesserung der Systemverfügbarkeit nach dem Ausfall von Prozessoren einer Prozessorplattform	19.01.1999
200198126	Networks	09/932464	7089298	US	NAMING DISTRIBUTION METHOD FOR AD HOC NETWORKS	20.08.2001
200703435	Networks	12/231,792	8693439	US	REDUCED PING PONG OCCURRENCE DURING HANDOVER	03.09.2008
200306170	Networks	10/555,535	7593363	US	Verfahren zur Datenübertragung	21.04.2004
200213127	Networks	03793696.0	50308702,5	DE	Verfahren zur Vergabe von Funkressourcen in einem selbstorganisierenden Funkkommunikationssystem	06.08.2003
200213127	Networks	03793696.0	1530855	ES	Verfahren zur Vergabe von Funkressourcen in einem selbstorganisierenden Funkkommunikationssystem	06.08.2003
200213127	Networks	160/DELNP/2005		IN	Verfahren zur Vergabe von Funkressourcen in einem selbstorganisierenden Funkkommunikationssystem	06.08.2003
199998020	Networks	09/870000	6582147	US	AN ADJUSTMENT JOINT, FASTENING ELEMENTS AND A METHOD FOR INS TALLATION AND POSITION SETTING USING AN ADJUSTMENT JOINT	20.01.2000
199998020	Networks	00802984.9	ZL00802984.9	CN	AN ADJUSTMENT JOINT, FASTENING ELEMENTS AND A METHOD FOR INS TALLATION AND POSITION SETTING USING AN ADJUSTMENT JOINT	20.01.2000

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
199998020	Networks	00901641.1	1145370	IT	AN ADJUSTMENT JOINT, FASTENING ELEMENTS AND A METHOD FOR INS TALLATION AND POSITION SETTING USING AN ADJUSTMENT JOINT	20.01.2000
200515160	Networks	10 2005 046 935.3	10 2005 046 935	DE	Netzwerkzugangsknotenrechner zu einem Kommunikationsnetzwerk, Kommunikationssystem und Verfahren zum Zuweisen einer Schutzvorrichtung	30.09.2005
200515160	Networks	200680035930.4	1235976	CN	Netzwerkzugangsknotenrechner zu einem Kommunikationsnetzwerk, Kommunikationssystem und Verfahren zum Betreiben eines Kommunikationssystem	28.08.2006
200515160	Networks	06778371.2		WE	Netzwerkzugangsknotenrechner zu einem Kommunikationsnetzwerk, Kommunikationssystem und Verfahren zum Betreiben eines Kommunikationssystem	28.08.2006
200411357	Networks	11/658,963	7853247	US	Verfahren zum Konfigurieren eines Mobilterminals, konfigurierbares Mobilterminal bzw. Mobilfunknetz dafür	15.04.2005
200411085	Networks	0422630.4	2419258	GB	A method of operating a communication system	13.10.2004
200411085	Networks	05794771.5	60 2005 008 480.0	DE	A method of operating a communication system	04.10.2005
200411085	Networks	05794771.5	1851986	FR	A method of operating a communication system	04.10.2005
200298102	Networks	10/495013	7098756	US	ARRANGEMENT AND METHOD FOR COMBINING ELECTRIC SIGNALS	17.09.2002
200213127	Networks	03793696.0	1530855	NL	Verfahren zur Vergabe von Funkressourcen in einem selbstorganisierenden Funkkommunikationssystem	06.08.2003
200522942	Networks	10 2006 015 328.6	10 2006 015 328	DE	Vorrichtung und Verfahren zur Aufzeichnung und zeitversetzten Wiedergabe von Sendungen	03.04.2006
200522942	Networks	200780010911.0	895755	CN	Vorrichtung und Verfahren zur Aufzeichnung und zeitversetzten Wiedergabe von Sendungen	30.03.2007
200522942	Networks	12/295,736	8233771	US	Vorrichtung und Verfahren zur Aufzeichnung und zeitversetzten Wiedergabe von Sendungen	30.03.2007
200703839	Networks	12/246,475	8122313	US	ACKNOWLEDGMENT PACKET	06.10.2008
200302704	Networks	2004-568630	4309851	JP	Verfahren zur Separierung von zu spezifischen Gruppen zuordenbaren IP-Paketen und IP-Paket	25.02.2003
200302704	Networks	2005-7015089	697422	KR	Verfahren zur Separierung von zu spezifischen Gruppen zuordenbaren IP-Paketen und IP-Paket	25.02.2003
200302704	Networks	2003221595	2003221595	AU	Verfahren zur Separierung von zu spezifischen Gruppen zuordenbaren IP-Paketen und IP-Paket	25.02.2003
200302704	Networks	2005129726	2314650	RU	Verfahren zur Separierung von zu spezifischen Gruppen zuordenbaren IP-Paketen und IP-Paket	25.02.2003
200302704	Networks	03717131.1	50313606,9	DE	Verfahren zur Sparierung von zu spezifischen Gruppen zuordenbaren IP-Paketen und das entsprechende Netzwerkelement	25.02.2003
200302704	Networks	03717131.1	1597858	FR	Verfahren zur Sparierung von zu spezifischen Gruppen zuordenbaren IP-Paketen und das entsprechende Netzwerkelement	25.02.2003
200302704	Networks	03717131.1	1597858	GB	Verfahren zur Sparierung von zu spezifischen Gruppen zuordenbaren IP-Paketen und das entsprechende Netzwerkelement	25.02.2003
200803088	Networks	12/433,984	8160647	US	FILTER SYSTEM FOR USE IN CO-SITE AND CONTROL METHOD THEREOF	01.05.2009
199798023	Networks	98909524.5	968571	FR	METHOD AND ARRANGEMENT FOR FORMING AN ADDRESS	13.03.1998
199798023	Networks	98909524.5	968571	GB	METHOD AND ARRANGEMENT FOR FORMING AN ADDRESS	13.03.1998
199798023	Networks	98909524.5	968571	SE	METHOD AND ARRANGEMENT FOR FORMING AN ADDRESS	13.03.1998
200702705	Networks	12/027,999	7778978	US	Embedded Retransmissions Scheme with Cross- Packet Coding for Turbo and Low Density Parity Check Codes	07.02.2008
200621866	Networks	200780045601.2	1091158	CN	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007
200803125	Networks	09100110.7		EP	Method and device for data processing	12.02.2009
200620763	Networks	07820385.8		WE	Verfahren und Anordnung zur Konfiguration zumindest einer einem Netzknoten zugeordneten Netzeinheit	20.09.2007
200406578	Networks	2007104352	2406219	RU	Verfahren und Anordnung zur Linearisierung einer Leistungsverstärkerkennlinie	08.04.2005
200702614	Networks	12/522,277	8978062	US	Apparatus and method for processing audio and/or video data	26.10.2007
200702614	Networks	07821906.0	2156439	WE	APPARATUS AND METHOD FOR PROCESSING AUDIO AND/OR VIDEO DATA	26.10.2007
200406578	Networks	05739924.8	1776754	GB	Verfahren und Anordnung zur Linearisierung einer Leistungsverstärkerkennlinie	08.04.2005
200406578	Networks	05739924.8	50 2005 008 065.3	DE	Verfahren und Anordnung zur Linearisierung einer Leistungsverstärkerkennlinie	08.04.2005
200621527	Networks	200780050028.4	1115392	CN	VORRICHTUNG UND VERFAHREN ZUM ERZEUGEN EINES SIGNALS UM DAS PAR IN EINEM MEHRTRÄGERSYSTEM ZU REDUZIEREN	24.10.2007

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200621527	Networks	12/312,578	8467463	US	VORRICHTUNG UND VERFAHREN ZUM ERZEUGEN EINES SIGNALS UM DAS PAR IN EINEM MEHRTRÄGERSYSTEM ZU REDUZIEREN	24.10.2007
200701633	Networks	200780052451.8	1115923	CN	Method and apparatus for dynamic bandwidth management in an IP-network	10.12.2007
200701633	Networks	12/525,872	8375414	US	Method, apparatus, and computer program product for dynamic bandwidth management in an IP-network	10.12.2007
200801970	Networks	12/499,621	8432870	US	HANDOVER TECHNIQUES BETWEEN LEGACY AND UPDATED WIRELESS NETWORKS	08.07.2009
200613983	Networks	06425481.6	60 2006 007 600.2	DE	PARALLEL PHASE AND AMPLITUDE ANALOG PREDISTORSION LINEARIZER WITH FIXED IN ADVANCE INTERMODULATION POWER AND GAIN STABILIZATION	11.07.2006
200613983	Networks	06425481.6	1936799	FR	PARALLEL PHASE AND AMPLITUDE ANALOG PREDISTORSION LINEARIZER WITH FIXED IN ADVANCE INTERMODULATION POWER AND GAIN STABILIZATION	11.07.2006
200613983	Networks	06425481.6	1936799	GB	PARALLEL PHASE AND AMPLITUDE ANALOG PREDISTORSION LINEARIZER WITH FIXED IN ADVANCE INTERMODULATION POWER AND GAIN STABILIZATION	11.07.2006
200613983	Networks	06425481.6	1936799	IT	PARALLEL PHASE AND AMPLITUDE ANALOG PREDISTORSION LINEARIZER WITH FIXED IN ADVANCE INTERMODULATION POWER AND GAIN STABILIZATION	11.07.2006
200802389	Networks	12/511,673	8031714	US	Using a cache of outgoing packet identifiers to recover from a protocol error in GTP-u	29.07.2009
200800600	Networks	12/463,191	9148100	US	Parallel amplifier architecture with feedback control based on reflected signal strength	08.05.2009
200621967	Networks	200780048117.5	101689915	CN	Verfahren und Anordnung zur Leistungssteuerung	22.10.2007
200621967	Networks	12/312,072	8738064	US	Verfahren und Anordnung zur Leistungssteuerung	22.10.2007
200701965	Networks	12/450,269	8463263	US	Method for providing an identity to a user equipment and Apparatus thereof	17.03.2008
200517465	Networks	06806777.6	50 2006 006 196.1	DE	Verfahren und Einrichtung zur Überprüfung der Funktion zur Invertierung der Polarität auf einer mehrere Adern umfassenden Teilnehmeranschlussleitung	18.09.2006
200517465	Networks	06806777.6	1932332	FR	Verfahren und Einrichtung zur Überprüfung der Funktion zur Invertierung der Polarität auf einer mehrere Adern umfassenden Teilnehmeranschlussleitung	18.09.2006
200517465	Networks	06806777.6	1932332	GB	Verfahren und Einrichtung zur Überprüfung der Funktion zur Invertierung der Polarität auf einer mehrere Adern umfassenden Teilnehmeranschlussleitung	18.09.2006
200517465	Networks	06806777.6	1932332	SE	Verfahren und Einrichtung zur Überprüfung der Funktion zur Invertierung der Polarität auf einer mehrere Adern umfassenden Teilnehmeranschlussleitung	18.09.2006
200802337	Networks	12/554,557	8228860	US	OFFSET TIME FOR RANGING REQUEST MESSAGES	04.09.2009
200802521	Networks	388080394	62990	IR	Service access control	04.11.2009
200701684	Networks	12/450,188	8442148	US	METHOD FOR OPTIMIZING SIGNALS WITH MULTIPLE SUBCARRIERS	13.03.2008
200802576	Networks	12/575,625	8311564	US	GUARD BAND UTILIZATION IN MULTI-CARRIER MODE FOR WIRELESS NETWORKS	08.10.2009
200701715	Networks	08750307.4		WE	Method and device for data processing and communication system comprising such device	15.05.2008
200414965	Networks	12/571,180	8279750	US	Simple and Resource-Efficient Resilient Network Systems	30.09.2009
200627042	Networks	12/656,281	8462857	US	Method and receiver for decoding digital information	20.03.2008
200701617	Networks	12/674,835	8605680	US	Method and apparatus for temporarily suspending a network connection	06.08.2008
200702316	Networks	200880105310.2	101796807	CN	Method and device for data processing and communication system comprising such device	24.06.2008
200702316	Networks	12/667,563	8634518	US	Method and device for a data processing and communication system comprising such device	24.06.2008
200802948	Networks	12/652,937	8423037	US	SINGLE USER MULTIPLE INPUT MULTIPLE OUTPUT USER EQUIPMENT	06.01.2010
200702790	Networks	12/669,870	8787178	US	Self monitoring of managed entities in a telecommunication network	17.07.2008
200702487	Networks	200880115594.3	1057939	CN	Load control for a television distribution system	03.09.2008
200521182	Networks	05425917.1	60 2005 019 443.6	DE	METHOD FOR DOWNLOADING SOFTWARE FROM A TELECOMMUNICATIONS MANAGEMENT NETWORK	27.12.2005
200521182	Networks	05425917.1	1804466	FR	METHOD FOR DOWNLOADING SOFTWARE FROM A TELECOMMUNICATIONS MANAGEMENT NETWORK	27.12.2005
200521182	Networks	05425917.1	1804466	GB	METHOD FOR DOWNLOADING SOFTWARE FROM A TELECOMMUNICATIONS MANAGEMENT NETWORK	27.12.2005
200700157	Networks	12/672,542	8264954	US	Method and device for operating a network and communication system comprising such device	04.08.2008
200198148	Networks	02722315.5	1396128	FR	ADAPTIVE SYMBOLABBILDUNG IN EINEM MOBILSYSTEM	07.05.2002

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200198148	Networks	02722315.5	1396128	GB	ADAPTIVE SYMBOLABBILDUNG IN EINEM MOBILSYSTEM	07.05.2002
200198148	Networks	02722315.5	60236932	DE	ADAPTIVE SYMBOLABBILDUNG IN EINEM MOBILSYSTEM	07.05.2002
200298064	Networks	02713116.8	60235503.6	DE	Method and Apparatus for Compressing Log Record Information	26.03.2002
200298064	Networks	02713116.8	1490769	FI	Method and Apparatus for Compressing Log Record Information	26.03.2002
200298064	Networks	02713116.8	1490769	FR	Method and Apparatus for Compressing Log Record Information	26.03.2002
200298064	Networks	02713116.8	1490769	GB	Method and Apparatus for Compressing Log Record Information	26.03.2002
200298064	Networks	02713116.8	1490769	IE	Method and Apparatus for Compressing Log Record Information	26.03.2002
200298064	Networks	02713116.8	1490769	NL	Method and Apparatus for Compressing Log Record Information	26.03.2002
200802162	Networks	12/702,394	8976704	US	Method, System and Nodes for Network Topology Detection in Communication Networks	09.02.2010
200700164	Networks	12/672,545	8717879	US	Method to be run in and device of a network as well as communication system comprising such device	04.08.2008
200505049	Networks	05425181.4	1708381	FR	Cross-polarization transmission system with asynchronous receivers	31.03.2005
200505049	Networks	05425181.4	1708381	GB	Cross-polarization transmission system with asynchronous receivers	31.03.2005
200505049	Networks	05425181.4	1708381	IT	Cross-polarization transmission system with asynchronous receivers	31.03.2005
200505049	Networks	05425181.4	60 2005 021 613.8	DE	Cross-polarization transmission system with asynchronous receivers	31.03.2005
200701619	Networks	12/678,563	8416791	US	Local break out in case of WiMAX roaming	17.09.2008
200703542	Networks	200880112080.2	101828355	CN	Method and device for transmitting or receiving a clock signal and communication system comprising such device	14.10.2008
200703542	Networks	12/738,741	8767807	US	Method and device for transmitting or receiving a clock signal and communication system comprising such device	14.10.2008
200703670	Networks	200880117379.7	101868963	CN	Method and device for processing data and to a communication system comprising such device	18.11.2008
200703670	Networks	12/744,108	8666059	US	Method and device for processing data and to a communication system comprising such device	18.11.2008
200703967	Networks	200880112829.3	101836390	CN	Method and device for data processing and communication system comprising such device	22.10.2008
200703967	Networks	2010-530440	5518724	JP	Method and device for data processing and communication system comprising such device	22.10.2008
200703967	Networks	12/739,470	8780739	US	Method and device for data processing and communication system comprising such device	22.10.2008
200703601	Networks	3327/DELNP/2010		IN	A METHOD FOR NEIGHBOR SET SELECTION FOR HANDOVER IN A HOME ACCESS ENVIRONMENT	29.10.2007
200703601	Networks	12/740,065	8750160	US	A METHOD FOR NEIGHBOR SET SELECTION FOR HANDOVER IN A HOME ACCESS ENVIRONMENT	29.10.2007
200703601	Networks	07852987.2	2206369	WE	A METHOD FOR NEIGHBOR SET SELECTION FOR HANDOVER IN A HOME ACCESS ENVIRONMENT	29.10.2007
200703652	Networks	PI0818627-8		BR	Impersonal Mobile Communication for Internet Communities	20.10.2008
200703652	Networks	12/682,995	8606305	US	Impersonal Mobile Communication for Internet Communities	20.10.2008
200803251	Networks	201010174785.6	101877701	CN	Verfahren und Vorrichtung zum berechtigungsabhängigen Zugriff auf Multimediainhalte sowie die Vorrichtung umfassendes System	28.04.2010
200803251	Networks	12/763,787	8539555	US	Verfahren und Vorrichtung zum berechtigungsabhängigen Zugriff auf Multimediainhalte sowie die Vorrichtung umfassendes System	20.04.2010
200704256	Networks	12/812,998	8600232	US	Method and device for data processing in an optical network and communication system	08.01.2009
200703978	Networks	200880125856.4	101933307	CN	Method and device for providing content information and system comprising such device	17.03.2008
200703629	Networks	200980104942.1	1174332	CN	Method for transmitting data to user equipments, communication system, base station and user equipment	11.02.2009
200703629	Networks	12/863,054	8856605	US	Method for transmitting data to user equipments, communication system, base station and user equipment	11.02.2009
200800205	Networks	12/811,624	8571091	US	SYSTEM AND METHOD FOR EFFICIENT HALF DUPLEX TRANSCEIVER OPERATION IN A PACKET-BASED WIRELESS COMMUNICATION SYSTEM	04.01.2008
200801150	Networks	12/867,779	8560408	US	MECHANISM FOR CONTROLLING CHARGING IN CASE OF CHARGING CLIENT RELOCATION	24.04.2008
200703625	Networks	12/919,288	8391151	US	Inter-network-nodes Flow Control	16.02.2009
200800694	Networks	12/990,374	8554255	US	METHOD AND APPARATUS FOR PROVIDING POWER CONTROL OF A WIRELESS TERMINAL	29.04.2008
200801436	Networks	2010-7029648	1287551	KR	ALLOCATING RESOURCES WITHIN A COMMUNICATION SYSTEM	30.05.2008
200801436	Networks	12/994,964	8687573	US	ALLOCATING RESOURCES WITHIN COMMUNICATION SYSTEM	30.05.2008
200801436	Networks	08760307.2		WE	ALLOCATING RESOURCES WITHIN A COMMUNICATION SYSTEM	30.05.2008
200801042	Networks	200880129621.2	102057609	CN	RECEIVING UNIT IN A WIRELESS COMMUNICATION NETWORK AND METHOD FOR GENERATING AN AUTOMATIC REPEAT REQUEST FEEDBACK MESSAGE	05.06.2008

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200801042	Networks	209461	209461	IL	RECEIVING UNIT IN A WIRELESS COMMUNICATION NETWORK AND METHOD FOR GENERATING AN AUTOMATIC REPEAT REQUEST FEEDBACK MESSAGE	05.06.2008
200801042	Networks	12/995,716	9698943	US	RECEIVING UNIT IN A WIRELESS COMMUNICATION NETWORK AND METHOD FOR GENERATING AN AUTOMATIC REPEAT REQUEST FEEDBACK MESSAGE	05.06.2008
200801141	Networks	2719841	2719841	CA	ADAPTIVE SCHEDULER FOR COMMUNICATION SYSTEMS APPARATUS, SYSTEM AND METHOD	22.05.2008
200801141	Networks	200880129351.5	102037689	CN	ADAPTIVE SCHEDULER FOR COMMUNICATION SYSTEMS APPARATUS, SYSTEM AND METHOD	22.05.2008
200801141	Networks	12/936,694	8462791	US	ADAPTIVE SCHEDULER FOR COMMUNICATION SYSTEMS APPARATUS, SYSTEM AND METHOD	22.05.2008
200801141	Networks	08759905.6		WE	ADAPTIVE SCHEDULER FOR COMMUNICATION SYSTEMS APPARATUS, SYSTEM AND METHOD	22.05.2008
200800669	Networks	200980121767.7	102057629	CN	NETWORK NODE POWER CONSERVATION APPARATUS, SYSTEM, AND METHOD	01.04.2009
200800669	Networks	7052/DELNP/2010		IN	NETWORK NODE POWER CONSERVATION APPARATUS, SYSTEM, AND METHOD	01.04.2009
200802074	Networks	13/058,600	8565807	US	Transmission of a synchronization signal within a cellular telecommunication network with temporarily increased transmitting power	13.08.2009
200800699	Networks	200980120346.2	102047577	CN	Method and device for SNR measurement	02.04.2009
200800607	Networks	200980116347.X	102017306	CN	Patch antenna element array	05.05.2009
200800607	Networks	12/990,663	8487816	US	Patch antenna element array	05.05.2009
200505123	Networks	06725199.1	60 2006 045 895.9	DE	Fast Synchronised Transparent Handover Method and System	21.03.2006
200505123	Networks	06725199.1	1864540	GB	Fast Synchronised Transparent Handover Method and System	21.03.2006
200800926	Networks	2011/1919	2011/1919	ZA	MATCH MAKER SERVICE	14.07.2009
200802520	Networks	200880131426.3	102171984	CN	Service Provider Access	06.10.2008
200802520	Networks	2011/003223	309266	MX	Service Provider Access	06.10.2008
200802520	Networks	13/121,015	8881248	US	Service Provider Access	06.10.2008
200800626	Networks	200980122905.3	102067541	CN	Method and device for processing data and communication system comprising such device	17.06.2009
200800626	Networks	13/000,065	9264166	US	Method and device for processing data and communication system comprising such device	17.06.2009
200801679	Networks	13/000,724	8611261	US	CONTROL CHANNEL SIGNALING FOR MULTIPLE ACK/NACK ASSIGNMENTS	24.06.2009
200802674	Networks	13/131,056	8675611	US	Transmission mode selection based on radio link quality and radio load on the air interface	26.11.2008
201001312	Networks	13/076,498	8804748	US	Hitless node insertion for Ethernet networks	31.03.2011
200801823	Networks	13/062,060	8873399	US	Gateway network element, a method, and a group of load balanced access points configured for load balancing in a communications network	03.09.2008
200298095	Networks	201110048770.X	1053999	CN	METHOD AND CIRCUITRY FOR PROCESSING DATA	29.04.2003
200801386	Networks	08425429.1	2136469	FR	METHOD OF HIGH POWER AMPLIFIERS TRANSFER FUNCTION LINEARIZATION BY ADAPTIVELY CALCULATING MAIN INTERMODULATION PRODUCTS OF RADIOFREQUENCY HARMONIC CANCELLATION	18.06.2008
200801386	Networks	08425429.1	2136469	GB	METHOD OF HIGH POWER AMPLIFIERS TRANSFER FUNCTION LINEARIZATION BY ADAPTIVELY CALCULATING MAIN INTERMODULATION PRODUCTS OF RADIOFREQUENCY HARMONIC CANCELLATION	18.06.2008
200801386	Networks	08425429.1	2136469	IT	METHOD OF HIGH POWER AMPLIFIERS TRANSFER FUNCTION LINEARIZATION BY ADAPTIVELY CALCULATING MAIN INTERMODULATION PRODUCTS OF RADIOFREQUENCY HARMONIC CANCELLATION	18.06.2008
200801386	Networks	08425429.1	2136469	SE	METHOD OF HIGH POWER AMPLIFIERS TRANSFER FUNCTION LINEARIZATION BY ADAPTIVELY CALCULATING MAIN INTERMODULATION PRODUCTS OF RADIOFREQUENCY HARMONIC CANCELLATION	18.06.2008
200801386	Networks	08425429.1	60 2008 007 023.9	DE	METHOD OF HIGH POWER AMPLIFIERS TRANSFER FUNCTION LINEARIZATION BY ADAPTIVELY CALCULATING MAIN INTERMODULATION PRODUCTS OF RADIOFREQUENCY HARMONIC CANCELLATION	18.06.2008
201300546	Networks	13/862,091		US	Radio Access Network Based Traffic Steering to Non-Cellular Access	12.04.2013
201100072	Networks	201180069526.X		CN	METHOD AND APPARATUS FOR IN SEQUENCE DELIVERY OF DOWNLINK LOCAL IP ACCESS (LIPA) PACKETS	15.02.2011
201100072	Networks	13/985,631	9723531	US	METHOD AND APPARATUS FOR IN SEQUENCE DELIVERY OF DOWNLINK LOCAL IP ACCESS (LIPA) PACKETS	15.02.2011

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
201202006	Networks	13/929,944	9154206	US	Vertical Beam Design for UE-Specific Beamforming by Matching to a CB	28.06.2013
201201020	Networks	13/935,717	9332553	US	USE OF LICENSED SHARED SPECTRUM IN A RADIO ACCESS NETWORK WHERE SIGNAL PROPAGATION IS UNKNOWN	05.07.2013
201001374	Networks	2013-7011572	1495502	KR	NETWORK CONTROL BY TRANSFERRING TRAFFIC BETWEEN OPERATION LAYERS BASED ON MONITORED TRAFFIC STATUS	04.10.2010
200598027	Networks	06778557.6	60 2006 037 857.2	DE	METHOD AND ARRANGEMENT FOR RADIO RESOURCE CONTROL	31.08.2006
200598027	Networks	06778557.6	1920617	GB	METHOD AND ARRANGEMENT FOR RADIO RESOURCE CONTROL	31.08.2006
200598027	Networks	06778557.6	1920617	SE	METHOD AND ARRANGEMENT FOR RADIO RESOURCE CONTROL	31.08.2006
201101191	Networks	201180074114.5		CN	Method and device for determining a position for a charging station	13.10.2011
201200970	Networks	13/908,548	9136995	US	Codebook Partitioning for Enabling Elevation-eICIC	03.06.2013
200598008	Networks	06700055.4	60 2006 035 847.4	DE	Clipping of transmission signal	05.01.2006
200598008	Networks	06700055.4	1834462	FR	Clipping of transmission signal	05.01.2006
200598008	Networks	06700055.4	1834462	IT	Clipping of transmission signal	05.01.2006
200598008	Networks	06700055.4	1834462	NL	Clipping of transmission signal	05.01.2006
200802251	Networks	08803590.2	60 2008 019 841.3	DE	REDUCTION OF INTERRUPTION TIME IN A HANDOVER	03.09.2008
200802251	Networks	08803590.2	2364561	GB	REDUCTION OF INTERRUPTION TIME IN A HANDOVER	03.09.2008
200802862	Networks	12109848.1		HK	MODIFYING COMMAND SEQUENCES	08.10.2012
200703629	Networks	08002557.0	60 2008 009 903.2	DE	Method for transmitting data to a user equipments, communication system, base station and user equipment	12.02.2008
200703629	Networks	08002557.0	2091163	GB	Method for transmitting data to a user equipments, communication system, base station and user equipment	12.02.2008
200901567	Networks	13/516,459	8855642	US	NEIGHBOUR CELL LIST IN A PRIVATE NETWORK	17.12.2009
200802389	Networks	09173179.4	60 2009 001 366.1	DE	Using a cache of outgoing packet identifiers to recover from a protocol error in GTP-u	15.10.2009
200802862	Networks	9333/DELNP/2011		IN	MODIFYING COMMAND SEQUENCES	26.06.2009
200802862	Networks	A201200773	104034	UA	MODIFYING COMMAND SEQUENCES	26.06.2009
200802862	Networks	1-2012-00185		VN	MODIFYING COMMAND SEQUENCES	26.06.2009
200802862	Networks	09779982.9	2446624	WE	MODIFYING COMMAND SEQUENCES	26.06.2009
201000652	Networks	13/877,463		US	Subscriber handling in radio telecommunication networks	06.10.2010
200510856	Networks	06763563.1	50 2006 011 826.2	DE	Verfahren und Einrichtung zur Bestimmung des Leckwiderstands von zumindest einer Ader einer mehrere Adern aufweisenden Teilnehmeranschlußleitung in einem Kommunikationsnetz	07.06.2006
200510856	Networks	06763563.1	1897353	FR	Verfahren und Einrichtung zur Bestimmung des Leckwiderstands von zumindest einer Ader einer mehrere Adern aufweisenden Teilnehmeranschlußleitung in einem Kommunikationsnetz	07.06.2006
200510856	Networks	06763563.1	1897353	GB	Verfahren und Einrichtung zur Bestimmung des Leckwiderstands von zumindest einer Ader einer mehrere Adern aufweisenden Teilnehmeranschlußleitung in einem Kommunikationsnetz	07.06.2006
200800699	Networks	08006718.4	60 2008 019 368.3	DE	Method and device for SNR measurement and communication system comprising such device	02.04.2008
200800699	Networks	08006718.4	2107693	FR	Method and device for SNR measurement and communication system comprising such device	02.04.2008
200800699	Networks	08006718.4	2107693	GB	Method and device for SNR measurement and communication system comprising such device	02.04.2008
200800699	Networks	08006718.4	2107693	SE	Method and device for SNR measurement and communication system comprising such device	02.04.2008
200414292	Networks	05797253.1	50 2005 012 631.9	DE	Verfahren zum Nachweis der Verfügbarkeit von Systemkomponenten eines redundanten Kommunikationssystems	11.10.2005
200414292	Networks	05797253.1	1820307	GB	Verfahren zum Nachweis der Verfügbarkeit von Systemkomponenten eines redundanten Kommunikationssystems	11.10.2005
200198080	Networks	02755068.0	1430645	GB	Implementing multicasting	06.09.2002
200198080	Networks	02755068.0	60240453,3	DE	Implementing multicasting	06.09.2002
200900176	Networks	13/262,975	9020507	US	Radio access technology multiplexing	06.04.2009
200703628	Networks	08000392.4	60 2008 008 451.5	DE	Time based and hybrid resource partitioning	10.01.2008
200703628	Networks	08000392.4	2079257	FR	Time based and hybrid resource partitioning	10.01.2008
200703628	Networks	08000392.4	2079257	GB	Time based and hybrid resource partitioning	10.01.2008
200800887	Networks	08425312.9	60 2008 011 692.1	DE	IMPROVEMENT TO REMOTE CONTROL METHODS OF TRANSMISSION SIGNALS ADAPTIVE PREDISTORTION	06.05.2008
200800887	Networks	08425312.9	2117115	FR	IMPROVEMENT TO REMOTE CONTROL METHODS OF TRANSMISSION SIGNALS ADAPTIVE PREDISTORTION	06.05.2008

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200800887	Networks	08425312.9	2117115	GB	IMPROVEMENT TO REMOTE CONTROL METHODS OF TRANSMISSION SIGNALS ADAPTIVE PREDISTORTION	06.05.2008
200800887	Networks	08425312.9	2117115	IT	IMPROVEMENT TO REMOTE CONTROL METHODS OF TRANSMISSION SIGNALS ADAPTIVE PREDISTORTION	06.05.2008
200704256	Networks	08000697.6	60 2008 010 521.0	DE	Method and device for data processing in an optical network and communication system	15.01.2008
200704256	Networks	08000697.6	2081399	DK	Method and device for data processing in an optical network and communication system	15.01.2008
200704256	Networks	08000697.6	2081399	FR	Method and device for data processing in an optical network and communication system	15.01.2008
200704256	Networks	08000697.6	2081399	GB	Method and device for data processing in an optical network and communication system	15.01.2008
200704256	Networks	08000697.6	2081399	IT	Method and device for data processing in an optical network and communication system	15.01.2008
200704256	Networks	08000697.6	2081399	PT	Method and device for data processing in an optical network and communication system	15.01.2008
200704256	Networks	08000697.6	2081399	SE	Method and device for data processing in an optical network and communication system	15.01.2008
200900550	Networks	13/383,333	8843588	US	METHODS, APPARATUSES, RELATED COMPUTER PROGRAM PRODUCT AND DATA STRUCTURE FOR DISTRIBUTED STORAGE OF SERVICE PROVISION-RELATED INFORMATION	10.07.2009
200900694	Networks	13/501,493	9621250	US	Femto access point operable with different spatial characteristic antenna patterns	16.10.2009
200703542	Networks	07020513.3	60 2007 025 663.1	DE	Method and device for transmitting or receiving a clock signal and communication system comprising such device	19.10.2007
200703542	Networks	07020513.3	2051431	GB	Method and device for transmitting or receiving a clock signal and communication system comprising such device	19.10.2007
200511910	Networks	06776986.9	1927218	CH	Optimized bandwidth allocation for guaranteed bandwidth services	21.08.2006
200511910	Networks	06776986.9	60 2006 029 684.3	DE	Optimized bandwidth allocation for guaranteed bandwidth services	21.08.2006
200511910	Networks	06776986.9	1927218	FR	Optimized bandwidth allocation for guaranteed bandwidth services	21.08.2006
200511910	Networks	06776986.9	1927218	GB	Optimized bandwidth allocation for guaranteed bandwidth services	21.08.2006
201001171	Networks	2012/014329	320782	MX	Improved Peer-to-Peer System	17.06.2010
201001171	Networks	13/703,196		US	Improved Peer-to-Peer System	17.06.2010
201001171	Networks	10727387.2		WE	Improved Peer-to-Peer System	17.06.2010
200802521	Networks	PI 0823115-0		BR	Service access control	04.11.2008
200902210	Networks	13/582,772	8917863	US	Method and device for data processing in a digital subscriber line environment	05.03.2010
200902210	Networks	10708181.2		WE	Method and device for data processing in a digital subscriber line environment	05.03.2010
200800318	Networks	08003208.9	2093951	BE	Method and device for processing multimedia data and communication system comprising such device	21.02.2008
200800318	Networks	08003208.9	60 2008 020 896.6	DE	Method and device for processing multimedia data and communication system comprising such device	21.02.2008
200800318	Networks	08003208.9	2093951	FR	Method and device for processing multimedia data and communication system comprising such device	21.02.2008
200800318	Networks	08003208.9	2093951	GB	Method and device for processing multimedia data and communication system comprising such device	21.02.2008
200800318	Networks	08003208.9	2093951	NL	Method and device for processing multimedia data and communication system comprising such device	21.02.2008
200800318	Networks	08003208.9	2093951	SE	Method and device for processing multimedia data and communication system comprising such device	21.02.2008
201200902	Networks	13/590,482	8742842	US	High Efficiency Power Amplifier Architecture for Off-Peak Traffic Hours	21.08.2012
200901492	Networks	13/502,240	9654371	US	DETERMINATION OF SYSTEM PERFORMANCE PARAMETERS IN HETEROGENEOUS NETWORK ENVIRONMENTS	22.10.2009
201201091	Networks	13/586,284	8619894	US	Methods and Apparatus For Beamforming	15.08.2012
201102059	Networks	13/423,433		US	Storage and processing savings when adapting video bit rate to link speed	19.03.2012
200803115	Networks	2011/4096	2011/4096	ZA	INPUT-SENSITIVE INTERFACE SELECTION FOR POSTING	06.11.2009
200621866	Networks	07821346.9	2082344	BE	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007
200621866	Networks	07821346.9	2082344	CH	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007
200621866	Networks	50 2007 010 651.8	2082344	DE	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007
200621866	Networks	07821346.9	2082344	DK	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007
200621866	Networks	07821346.9	2082344	ES	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007
200621866	Networks	07821346.9	2082344	FR	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007
200621866	Networks	07821346.9	2082344	GB	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007
200621866	Networks	07821346.9	2082344	IT	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200621866	Networks	07821346.9	2082344	NL	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007
200621866	Networks	07821346.9	2082344	SE	Anordnung und Verfahren zur Bereitstellung von Daten	15.10.2007
200702487	Networks	07017520.3	2034730	BE	Load control for a television distribution system	06.09.2007
200702487	Networks	07017520.3	60 2007 019 013.4	DE	Load control for a television distribution system	06.09.2007
200702487	Networks	07017520.3	2034730	FR	Load control for a television distribution system	06.09.2007
200702487	Networks	07017520.3	2034730	GB	Load control for a television distribution system	06.09.2007
200702487	Networks	07017520.3	2034730	NL	Load control for a television distribution system	06.09.2007
200901199	Networks	13/579,979		US	Method and device for conveying OAM messages across an inter-carrier network	19.02.2010
200901199	Networks	10705156.7		WE	Method and device for conveying OAM messages across an inter-carrier network	19.02.2010
200698008	Networks	07766531.3	60 2007 027 162.2	DE	ANTENNA ARRAY AND UNIT CELL USING AN ARTIFICIAL MAGNETIC LAYER	11.06.2007
200698008	Networks	07766531.3	2036165	FR	ANTENNA ARRAY AND UNIT CELL USING AN ARTIFICIAL MAGNETIC LAYER	11.06.2007
200698008	Networks	07766531.3	2036165	GB	ANTENNA ARRAY AND UNIT CELL USING AN ARTIFICIAL MAGNETIC LAYER	11.06.2007
200698008	Networks	07766531.3	2036165	NL	ANTENNA ARRAY AND UNIT CELL USING AN ARTIFICIAL MAGNETIC LAYER	11.06.2007
200698008	Networks	07766531.3	2036165	SE	ANTENNA ARRAY AND UNIT CELL USING AN ARTIFICIAL MAGNETIC LAYER	11.06.2007
200098082	Networks	01913916.1	601 47 051.6	DE	METHOD INCLUDING A RADIO TRANSMITTER FOR IMPROVING RADIO LINK OPERATION	28.02.2001
200098082	Networks	01913916.1	1262032	FR	METHOD INCLUDING A RADIO TRANSMITTER FOR IMPROVING RADIO LINK OPERATION	28.02.2001
200098082	Networks	01913916.1	1262032	GB	METHOD INCLUDING A RADIO TRANSMITTER FOR IMPROVING RADIO LINK OPERATION	28.02.2001
200098082	Networks	07102192.7	601 46 880.5	DE	METHOD OF IMPROVING RADIO LINK OPERATION	28.02.2001
200098082	Networks	07102192.7	1777839	FR	METHOD OF IMPROVING RADIO LINK OPERATION	28.02.2001
200098082	Networks	07102192.7	1777839	GB	METHOD OF IMPROVING RADIO LINK OPERATION	28.02.2001
201000191	Networks	10712043.8		WE	Bandwidth Extension Usage Optimization	25.03.2010
200703978	Networks	08717901.6	60 2008 024 565.9	DE	Method and device for providing content information and system comprising such device	17.03.2008
200703978	Networks	08717901.6	2245825	FR	Method and device for providing content information and system comprising such device	17.03.2008
200703978	Networks	08717901.6	2245825	GB	Method and device for providing content information and system comprising such device	17.03.2008
200703978	Networks	08717901.6	2245825	BE	Method and device for providing content information and system comprising such device	17.03.2008
200703978	Networks	08717901.6	2245825	NL	Method and device for providing content information and system comprising such device	17.03.2008
200802162	Networks	12180950.3		EP	Method, System and Nodes for Network Topology Detection in Communication Networks	13.02.2009
200902078	Networks	13/576,410	8929206	US	METHOD OF SUPERVISING A NODE IN A COMMUNICATION SYSTEM	04.02.2010
200902078	Networks	10703447.2		WE	A METHOD OF SUPERVISING A NODE IN A COMMUNICATION SYSTEM	04.02.2010
201200963	Networks	13/599,704	8868026	US	Sending BCCH Modification info/ETWS Information to UEs in enhanced Cell PCH in one DRX cycle	30.08.2012
201200591	Networks	13/557,648	8922453	US	Variable Adaption of Active Antenna System Radio Frequency Signal Filtering	25.07.2012
200802520	Networks	08805078.6	2338262	CZ	Service Provider Access	06.10.2008
200802520	Networks	08805078.6	2338262	FR	Service Provider Access	06.10.2008
200802520	Networks	08805078.6	2338262	NL	Service Provider Access	06.10.2008
200703967	Networks	07020700.6	60 2007 030 281.1	DE	Method and device for data processing and communication system comprising such device	23.10.2007
200703967	Networks	07020700.6	2053774	GB	Method and device for data processing and communication system comprising such device	23.10.2007
200901487	Networks	201080067883.8	102986085	CN	ANTENNA ARRANGEMENT	28.10.2010
200901487	Networks	10012/DELNP/2012		IN	ANTENNA ARRANGEMENT	28.10.2010
200901487	Networks	2013-515716	5596857	JP	ANTENNA ARRANGEMENT	28.10.2010
200901487	Networks	2013-7002659	1430039	KR	ANTENNA ARRANGEMENT	28.10.2010
200901487	Networks	13/807,038		US	ANTENNA ARRANGEMENT	28.10.2010
200901487	Networks	10776330.2		WE	ANTENNA ARRANGEMENT	28.10.2010
200900843	Networks	09779719.5	60 2009 014 647.5	DE	Code Block selection combining in multi point reception up-link data transfer	10.06.2009
200900843	Networks	09779719.5	2441194	GB	Code Block selection combining in multi point reception up-link data transfer	10.06.2009
200298103	Networks	03103988.6	603 43 600.5	DE	Data transmission method using antenna diversity	28.10.2003

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200803251	Networks	09005900.7	2247061	BE	Verfahren und Vorrichtung zum berechtigungsabhängigen Zugriff auf Multimediainhalte sowie die Vorrichtung umfassendes System	28.04.2009
200803251	Networks	09005900.7	50 2009 002 103.8	DE	Verfahren und Vorrichtung zum berechtigungsabhängigen Zugriff auf Multimediainhalte sowie die Vorrichtung umfassendes System	28.04.2009
200803251	Networks	09005900.7	2247061	FR	Verfahren und Vorrichtung zum berechtigungsabhängigen Zugriff auf Multimediainhalte sowie die Vorrichtung umfassendes System	28.04.2009
200803251	Networks	09005900.7	2247061	GB	Verfahren und Vorrichtung zum berechtigungsabhängigen Zugriff auf Multimediainhalte sowie die Vorrichtung umfassendes System	28.04.2009
200803251	Networks	09005900.7	2247061	NL	Verfahren und Vorrichtung zum berechtigungsabhängigen Zugriff auf Multimediainhalte sowie die Vorrichtung umfassendes System	28.04.2009
200703978	Networks	08717901.6	2245825	SE	Method and device for providing content information and system comprising such device	17.03.2008
200901285	Networks	4753/DELNP/2012		IN	Mechanism for Alarm Management of Femto related Systems to avoid Alarm floods	10.12.2009
200901285	Networks	13/514,184	9225587	US	Mechanism for Alarm Management of Femto related Systems to avoid Alarm floods	10.12.2009
200901285	Networks	09851956.4		WE	ALARM MANAGEMENT IN A COMMUNICATIONS SYSTEM	10.12.2009
200802162	Networks	09100113.1	60 2009 009 752.0	DE	Method, System and Nodes for Network Topology Detection in Communication Networks	13.02.2009
200802162	Networks	09100113.1	2219322	ES	Method, System and Nodes for Network Topology Detection in Communication Networks	13.02.2009
200802162	Networks	09100113.1	2219322	FR	Method, System and Nodes for Network Topology Detection in Communication Networks	13.02.2009
200802162	Networks	09100113.1	2219322	GB	Method, System and Nodes for Network Topology Detection in Communication Networks	13.02.2009
200802162	Networks	09100113.1	2219322	IT	Method, System and Nodes for Network Topology Detection in Communication Networks	13.02.2009
200802162	Networks	09100113.1	2219322	NL	Method, System and Nodes for Network Topology Detection in Communication Networks	13.02.2009
200802162	Networks	09100113.1	TR201213975T4	TR	Method, System and Nodes for Network Topology Detection in Communication Networks	13.02.2009
200802984	Networks	13/148,580	8989291	US	Spatial pre-coding for transmitting data within a mobile telecommunication network	10.02.2009
200802984	Networks	09779035.6		WE	Spatial pre-coding for transmitting data within a mobile telecommunication network	10.02.2009
201201666	Networks	13/714,584		US	CARRIER DEPLOYMENT METHOD FOR REDUCED BANDWIDTH MTC DEVICES	14.12.2012
200703654	Networks	07019472.5	60 2007 031 646.4	DE	ACCESS SERVICE NETWORK FOR USE IN A MOBILE IP BASED COMMUNICATION SYSTEM	04.10.2007
200703654	Networks	07019472.5	2045990	GB	ACCESS SERVICE NETWORK FOR USE IN A MOBILE IP BASED COMMUNICATION SYSTEM	04.10.2007
200702614	Networks	07821900.3	2104938	BE	Apparatus for processing audio and/or video data and method to be run on said apparatus	26.10.2007
200702614	Networks	07821900.3	60 2007 032 564.1	DE	Apparatus for processing audio and/or video data and method to be run on said apparatus	26.10.2007
200702614	Networks	07821900.3	2104938	FR	Apparatus for processing audio and/or video data and method to be run on said apparatus	26.10.2007
200702614	Networks	07821900.3	2104938	GB	Apparatus for processing audio and/or video data and method to be run on said apparatus	26.10.2007
200702614	Networks	07821900.3	2104938	NL	Apparatus for processing audio and/or video data and method to be run on said apparatus	26.10.2007
200702614	Networks	07821900.3	2104938	SE	Apparatus for processing audio and/or video data and method to be run on said apparatus	26.10.2007
200600240	Networks	07803289.3	1932348	CH	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007
200600240	Networks	07803289.3	1932348	DK	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007
200600240	Networks	07803289.3	1932348	BE	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007
200600240	Networks	07803289.3	1932348	ES	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007
200600240	Networks	07803289.3	1932348	FR	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007
200600240	Networks	07803289.3	1932348	GB	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0220

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200600240	Networks	07803289.3	1932348	IT	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007
200600240	Networks	07803289.3	1932348	NL	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007
200600240	Networks	07803289.3	1932348	SE	Vorrichtung und Verfahren zum individuellen Wechsel zwischen Sendungen	06.09.2007
200802639	Networks	13/124,321	8737326	US	ALLOCATING RESOURCE UNITS TO A MOBILE STATION	22.09.2009
200701633	Networks	07857347.4	60 2007 018 342	DE	Method, apparatus, and computer program product for dynamic bandwidth management in an IP-network	10.12.2007
200701633	Networks	07857347.4	2111712	FR	Method, apparatus, and computer program product for dynamic bandwidth management in an IP-network	10.12.2007
200701633	Networks	07857347.4	2111712	GB	Method, apparatus, and computer program product for dynamic bandwidth management in an IP-network	10.12.2007
200701633	Networks	07857347.4	2111712	NL	Method, apparatus, and computer program product for dynamic bandwidth management in an IP-network	10.12.2007
200701633	Networks	07857347.4	2111712	SE	Method, apparatus, and computer program product for dynamic bandwidth management in an IP-network	10.12.2007
200701633	Networks	07857347.4	2111712	BE	Method, apparatus, and computer program product for dynamic bandwidth management in an IP-network	10.12.2007
201301513	Networks	14/325,784	9148278	US	DIGITAL FREQUENCY SYNTHESIS	08.07.2014
201101042	Networks	201280042527.X	103858313	CN	Method, apparatus, and system for controlling electric current	22.06.2012
201101042	Networks	14/241,941		US	Method, apparatus, and system for controlling electric current	22.06.2012
200801436	Networks	14/193,516	9490958	US	ALLOCATING RESOURCES WITHIN A COMMUNICATION SYSTEM	30.05.2008
201101108	Networks	13/151,447	8649996	US	Container Control	02.06.2011
200901335	Networks	2014-7003781	1700725	KR	Signal Predistortion for Non-Linear Amplifier	13.07.2011
200901335	Networks	14/232,071	9362869	US	Signal Predistortion for Non-Linear Amplifier	13.07.2011
200901335	Networks	11730692.8		WE	Signal Predistortion for Non-Linear Amplifier	13.07.2011
200602663	Networks	07727599.8	50 2007 007 729.1	DE	Verfahren zur Synchronisation von Baugruppen einer Basisstation	30.03.2007
200602663	Networks	07727599.8	2013995	GB	Verfahren zur Synchronisation von Baugruppen einer Basisstation	30.03.2007
200703670	Networks	07022626.1	60 2007 034 626.6	DE	Method and device for processing data and to a communication system comprising such device	21.11.2007
200703670	Networks	07022626.1	2063618	GB	Method and device for processing data and to a communication system comprising such device	21.11.2007
200800669	Networks	09730271.5	60 2009 022 406.9	DE	NETWORK NODE POWER CONSERVATION APPARATUS, SYSTEM, AND METHOD	01.04.2009
200800669	Networks	09730271.5	2266259	FR	NETWORK NODE POWER CONSERVATION APPARATUS, SYSTEM, AND METHOD	01.04.2009
200800669	Networks	09730271.5	2266259	GB	NETWORK NODE POWER CONSERVATION APPARATUS, SYSTEM, AND METHOD	01.04.2009
200800669	Networks	09730271.5	2266259	SE	NETWORK NODE POWER CONSERVATION APPARATUS, SYSTEM, AND METHOD	01.04.2009
201101086	Networks	14/350,649		US	Method, metering equipment, user device, and system for providing of metering information	14.10.2011
201301420	Networks	13198995.6		EP	Base Station Protocol Determination	20.12.2013
201101701	Networks	14/355,899	9609522	US	MULTI-CELL TRANSMISSIONS	03.11.2011
201101701	Networks	11782094.4		WE	MULTI-CELL TRANSMISSIONS	03.11.2011
201101880	Networks	12700033.9		WE	RATE CAPPING WITH MULTIPLE CARRIER AGGREGATION SCHEDULERS	02.01.2012
200801746	Networks	08104577.5	60 2008 033 271.3	DE	Method and network element for processing data and communication system comprising such network element	27.06.2008
200801746	Networks	08104577.5	2139216	GB	Method and network element for processing data and communication system comprising such network element	27.06.2008
200803125	Networks	2751980	2751980	CA	Method and device for data processing	11.02.2010
200803125	Networks	13/201,229	8934358	US	Method and device for data processing	11.02.2010
201100134	Networks	14/350,185	9537936	US	Joint Processing	07.10.2011
201100134	Networks	11769846.4		WE	Joint Processing	07.10.2011
201102331	Networks	13/593,049		US	Windows in conductive covering of dielectric bodies for filters	23.08.2012
201102331	Networks	12759806.8		WE	Multi-mode filter	23.08.2012
201001258	Networks	10762623.6	60 2010 017 542.1	DE	Method and Network Devices for Splitting of a Data Stream	21.09.2010
201001258	Networks	10762623.6	2619946	FR	Method and Network Devices for Splitting of a Data Stream	21.09.2010
201001258	Networks	10762623.6	2619946	GB	Method and Network Devices for Splitting of a Data Stream	21.09.2010
201001258	Networks	10762623.6	2619946	IT	Method and Network Devices for Splitting of a Data Stream	21.09.2010
201400347	Networks	14/274,944	9231676	US	Low Effort Massive MIMO Antenna Arrays and Their Use	12.05.2014

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0221

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
201200772	Networks	14184787.1		EP	Method, system and apparatus for establishing a data connection with parallel communication channels	15.09.2014
201302163	Networks	14/134,965	9614264	US	Filter	19.12.2013
201100007	Networks	12701876.0		WE	Time Synchronization in DSL Environment	26.01.2012
201400847	Networks	14/506,023		US	Modular Active Antenna Structures and Arrangements	03.10.2014
201401183	Networks	14187934.6		EP	CONTROLLING TRANSMISSION	07.10.2014
201301460	Networks	14/508,401	9509426	US	Interference Estimation Resource Definition and Usage for Enhanced Receivers	07.10.2014
201102110	Networks	12711877.6		WE	Transmission system	30.03.2012
200511530	Networks	06777333.3	1900182	FR	Verfahren und Einrichtung zur Überprüfung des Zuschaltens einer positiven Versorgungsspannung auf eine mehrere Adern umfassende Teilnehmeranschlussleitung	14.06.2006
200511530	Networks	06777333.3	1900182	GB	Verfahren und Einrichtung zur Überprüfung des Zuschaltens einer positiven Versorgungsspannung auf eine mehrere Adern umfassende Teilnehmeranschlussleitung	14.06.2006
201200489	Networks	14/399,284		US	Adapting a system bandwidth to be used by a user equipment for an uplink communication channel	11.05.2012
201200489	Networks	12719769.7		WE	Adapting a system bandwidth to be used by a user equipment for an uplink communication channel	11.05.2012
201101908	Networks	14/365,183	9344254	US	Two Outer Loop Link Adaptations for Legacy User Equipment	15.12.2011
201100825	Networks	14/390,078		US	Network management system	02.04.2012
201200591	Networks	201380039564.X	104488137	CN	Variable Adaption of Active Antenna System Radio Frequency Signal Filtering	18.07.2013
201200591	Networks	13737613.3		WE	Variable Adaption of Active Antenna System Radio Frequency Signal Filtering	18.07.2013
201401493	Networks	14/593,187	9380500	US	Methods And Apparatus For Radio Link Failure Reporting	09.01.2015
201102059	Networks	2014-7029377	1654333	KR	Storage and processing savings when adapting video bit rate to link speed	15.03.2013
201102059	Networks	13709437.1		WE	Storage and processing savings when adapting video bit rate to link speed	15.03.2013
201101258	Networks	14/353,907	9445425	US	METHOD OF TRANSMISSION IN A COMMUNICATIONS NETWORK	24.10.2011
201101258	Networks	11773465.7		WE	METHOD OF TRANSMISSION IN A COMMUNICATIONS NETWORK	24.10.2011
201002407	Networks	12705841.0		WE	Method and device for data processing in a digital subscriber line environment	20.02.2012
200801679	Networks	09769290.9	60 2009 025 825.7	DE	CONTROL CHANNEL SIGNALING FOR MULTIPLE ACK/NACK ASSIGNMENTS	24.06.2009
200801679	Networks	09769290.9	2291942	GB	CONTROL CHANNEL SIGNALING FOR MULTIPLE ACK/NACK ASSIGNMENTS	24.06.2009
201401728	Networks	14/535,887	9473182	US	Oportunistic interference cancellation of radar signals	07.11.2014
201201211	Networks	201280076637.8		CN	Distance to VSWR fault measurement	25.10.2012
201201211	Networks	14/437,908		US	Distance to VSWR fault measurement	25.10.2012
201201211	Networks	12797729.6		WE	Distance to VSWR fault measurement	25.10.2012
201201728	Networks	201280078026.7		CN	Uplink Backpressure Coordination	26.10.2012
201201728	Networks	14/438,492		US	Uplink Backpressure Coordination	26.10.2012
201201728	Networks	12783556.9		WE	Uplink Backpressure Coordination	26.10.2012
201501723	Networks	201710065457.4		CN	METHOD AND APPARATUS FOR IMPLEMENTING A RETRANSMISSION SCHEME	06.02.2017
201501723	Networks	17151710.5		EP	METHOD AND APPARATUS FOR IMPLEMENTING A RETRANSMISSION SCHEME	17.01.2017
201400779	Networks	201480081226.7		CN	PMI SELECTION	14.08.2014
201400779	Networks	15/503,546		US	PMI SELECTION	14.08.2014
201400847	Networks	15188112.5		EP	Modular Active Antenna Structures and Arrangements	02.10.2015
201501127	Networks	15/010,616		US	METHOD AND APPARATUS FOR IMPLEMENTING AN ADAPTIVE COEXISTENCE SCHEME	29.01.2016
200505444	Networks	06725344.3	50 2006 014 528.6	DE	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
200505444	Networks	06725344.3	1867155	GB	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
200505123	Networks	06725199.1	1864540	CH	Fast Synchronised Transparent Handover Method and System	21.03.2006
200505123	Networks	06725199.1	1864540	FR	Fast Synchronised Transparent Handover Method and System	21.03.2006
200505123	Networks	06725199.1	1864540	IE	Fast Synchronised Transparent Handover Method and System	21.03.2006
200505123	Networks	06725199.1	1864540	LU	Fast Synchronised Transparent Handover Method and System	21.03.2006
201201144	Networks	201280077042.4		CN	Fast load balancing by cooperative scheduling for heterogeneous networks with eICIC	13.09.2012
201201144	Networks	14/428,059	9537624	US	Fast load balancing by cooperative scheduling for heterogeneous networks with eICIC	13.09.2012
201201144	Networks	12758480.3		WE	Fast load balancing by cooperative scheduling for heterogeneous networks with eICIC	13.09.2012

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PATENT
REEL: 043877 FRAME: 0222

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200801823	Networks	08803591.0	60 2008 037 594.3	DE	A gateway network element configured for load balancing in a communications network	03.09.2008
200801823	Networks	08803591.0	2324657	FR	A gateway network element configured for load balancing in a communications network	03.09.2008
200801823	Networks	08803591.0	2324657	GB	A gateway network element configured for load balancing in a communications network	03.09.2008
200801823	Networks	08803591.0	2324657	IT	A gateway network element configured for load balancing in a communications network	03.09.2008
200702072	Networks	08735805.7	60 2008 040 643.1	DE	Method and device for adjusting a transmission mode and system comprising such device	03.04.2008
200702072	Networks	08735805.7	2147529	GB	Method and device for adjusting a transmission mode and system comprising such device	03.04.2008
201501966	Networks	15/086,777		US	PRE-COMBINER INTERFERENCE REMOVAL	31.03.2016
201502391	Networks	PCI/EP2016/054389		WO	Data center managed connectivity	02.03.2016
201200902	Networks	13750589.7		WE	High Efficiency Power Amplifier Architecture for Off-Peak Traffic Hours	21.08.2013
201201020	Networks	12733117.1		WE	USE OF LICENSED SHARED SPECTRUM IN A RADIO ACCESS NETWORK WHERE SIGNAL PROPAGATION IS UNKNOWN	06.07.2012
200602663	Networks	201410831822.4		CN	Verfahren zur Synchronisation von Baugruppen einer Basisstation	30.03.2007
201100072	Networks	11703880.2	60 2011 015 211.4	DE	METHOD AND APPARATUS FOR IN SEQUENCE DELIVERY OF DOWNLINK LOCAL IP ACCESS (LIPA) PACKETS	15.02.2011
201100072	Networks	11703880.2	2676478	FR	METHOD AND APPARATUS FOR IN SEQUENCE DELIVERY OF DOWNLINK LOCAL IP ACCESS (LIPA) PACKETS	15.02.2011
201100072	Networks	11703880.2	2676478	GB	METHOD AND APPARATUS FOR IN SEQUENCE DELIVERY OF DOWNLINK LOCAL IP ACCESS (LIPA) PACKETS	15.02.2011
201100072	Networks	11703880.2	2676478	SE	METHOD AND APPARATUS FOR IN SEQUENCE DELIVERY OF DOWNLINK LOCAL IP ACCESS (LIPA) PACKETS	15.02.2011
201500193	Networks	15168360.4		EP	ANTENNA STRUCTURE	20.05.2015
201500216	Networks	15180490.3		EP	N-way load modulation amplifier	11.08.2015
201401959	Networks	14/610,079	9603055	US	Controlling LTE/Wi-Fi aggregation	30.01.2015
201200665	Networks	14/419,757	9660784	US	METHOD AND APPARATUS PROVIDING INTER-TRANSMISSION POINT PHASE RELATIONSHIP FEEDBACK FOR JOINT TRANSMISSION CoMP	06.08.2013
201502220	Networks	14/969,420		US	Method of WLAN Mobility Set Construction	15.12.2015
201102151	Networks	14/641,499		US	SCHEDULING IMPROVEMENT	09.03.2015
200800330	Networks	08002559.6	60 2008 043 421.4	DE	Method and device for data processing in a digital subscriber line environment and communication system comprising such device	12.02.2008
200800330	Networks	08002559.6	2091172	GB	Method and device for data processing in a digital subscriber line environment and communication system comprising such device	12.02.2008
201402252	Networks	14/605,052	9294931	US	Co-primary spectrum sharing for 4G/5G small cell base stations with long term fairness criteria	26.01.2015
201201155	Networks	201280075726.0		CN	Power Control	10.09.2012
201201155	Networks	14/426,798		US	Power Control	10.09.2012
201201155	Networks	12758464.7		WE	Power+Control	10.09.2012
201402290	Networks	2011-099184	5609759	JP	WIRELESS BASE STATION APPARATUS AND COMMUNICATION CONTROL METHOD	27.04.2011
201402290	Networks	201280013984.6	103444224	CN	WIRELESS BASE STATION APPARATUS AND COMMUNICATION CONTROL METHOD	24.04.2012
201402290	Networks	14/007,443	9313710	US	WIRELESS BASE STATION APPARATUS AND COMMUNICATION CONTROL METHOD	24.04.2012
201300546	Networks	14714220.2		WE	Radio Access Network Based Traffic Steering to Non-Cellular Access	25.03.2014
201201250	Networks	1509500.3		GB	Antenna selection for coordinated multipoint uplink reception	30.11.2012
201201250	Networks	14/648,303		US	Antenna selection for coordinated multipoint uplink reception	30.11.2012
201301936	Networks	15/303,291		US	ENHANCING INTERFERENCE REJECTION	11.04.2014
201301936	Networks	14717442.9		WE	ENHANCING INTERFERENCE REJECTION	11.04.2014
201101880	Networks	15/426,107		US	RATE CAPPING WITH MULTIPLE CARRIER AGGREGATION SCHEDULERS	02.01.2012
201301460	Networks	201480066897.6		CN	Interference Estimation Resource Definition and Usage for Enhanced Receivers	07.10.2014
201301460	Networks	14795699.9		WE	Interference Estimation Resource Definition and Usage for Enhanced Receivers	07.10.2014
201201786	Networks	14/785,870		US	INCOMING CALL	22.04.2013
201201786	Networks	13719459.3		WE	INCOMING CALL	22.04.2013
200802521	Networks	08875273.8	60 2008 045 642.0	DE	Service access control	04.11.2008
200802521	Networks	08875273.8	2347559	FR	Service access control	04.11.2008
200802521	Networks	08875273.8	2347559	GB	Service access control	04.11.2008

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0223

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
201500193	Networks	15/158,686		US	ANTENNA STRUCTURE	19.05.2016
201302013	Networks	201480077642.X		CN	HANDOVER OF SUBSCRIBER TERMINAL OF MOBILE COMMUNICATIONS NETWORK	28.01.2014
201302013	Networks	201617025536		IN	HANDOVER OF SUBSCRIBER TERMINAL OF MOBILE COMMUNICATIONS NETWORK	28.01.2014
201302013	Networks	14704091.9		WE	HANDOVER OF SUBSCRIBER TERMINAL OF MOBILE COMMUNICATIONS NETWORK	28.01.2014
201300942	Networks	201480075450.5		CN	ANTENNA ARRANGEMENT FOR ORTHOGONALLY POLARIZED OMNIDIRECTIONAL TRANSMISSION	14.02.2014
201300942	Networks	11201604310Y		SG	ANTENNA ARRANGEMENT FOR ORTHOGONALLY POLARIZED OMNIDIRECTIONAL TRANSMISSION	14.02.2014
201300942	Networks	15/117,642		US	ANTENNA ARRANGEMENT FOR ORTHOGONALLY POLARIZED OMNIDIRECTIONAL TRANSMISSION	14.02.2014
201300942	Networks	14710199.2		WE	ANTENNA ARRANGEMENT FOR ORTHOGONALLY POLARIZED OMNIDIRECTIONAL TRANSMISSION	14.02.2014
201301986	Networks	201480079711.0		CN	A METHOD, APPARATUS AND SYSTEM	11.04.2014
201301986	Networks	2017-504214		JP	A METHOD, APPARATUS AND SYSTEM	11.04.2014
201301986	Networks	15/303,303		US	A METHOD, APPARATUS AND SYSTEM	11.04.2014
201301986	Networks	14889134.4		WE	A METHOD, APPARATUS AND SYSTEM	11.04.2014
201300553	Networks	14714221.0		WE	Automatic Learning of Wi-Fi Neighbors and Network Characteristics	25.03.2014
200701617	Networks	07016688.9	60 2007 044 758.5	DE	Method and apparatus for temporarily suspending a network connection	24.08.2007
200701617	Networks	07016688.9	2028901	GB	Method and apparatus for temporarily suspending a network connection	24.08.2007
201101908	Networks	11797013.7	60 2011 030 208.6	DE	Method for configuring a communication channel	15.12.2011
201101908	Networks	11797013.7	2792202	FR	Method for configuring a communication channel	15.12.2011
201101908	Networks	11797013.7	2792202	GB	Method for configuring a communication channel	15.12.2011
201400769	Networks	14777321.2		WE	Wideband transmit signal generation	30.09.2014
201301513	Networks	2015-098756		JP	SYSTEMS AND TECHNIQUES FOR OSCILLATOR OUTPUT FREQUENCY CONTROL USING PHASE ADJUSTMENT	14.05.2015
201201629	Networks	201380073017.3		CN	Antenna Selection in Coordinated Multipoint Communications	14.02.2013
201201629	Networks	14/766,514		US	Antenna Selection in Coordinated Multipoint Communications	14.02.2013
201501723	Networks	15/016,931		US	METHOD AND APPARATUS FOR IMPLEMENTING A RETRANSMISSION SCHEME	05.02.2016
200802862	Networks	09779982.9	60 2009 042 292.8	DE	MODIFYING COMMAND SEQUENCES	26.06.2009
200802862	Networks	09779982.9	2446624	FR	MODIFYING COMMAND SEQUENCES	26.06.2009
200802862	Networks	09779982.9	2446624	GB	MODIFYING COMMAND SEQUENCES	26.06.2009
200703601	Networks	07852987.2	60 2007 048 408.1	DE	A METHOD FOR NEIGHBOR SET SELECTION FOR HANDOVER IN A HOME ACCESS ENVIRONMENT	29.10.2007
200703601	Networks	07852987.2	2206369	GB	A METHOD FOR NEIGHBOR SET SELECTION FOR HANDOVER IN A HOME ACCESS ENVIRONMENT	29.10.2007
201501966	Networks	3697/DEL/2015		IN	Pre-Combiner Interference Removal	12.11.2015
201501538	Networks	16190048.5		EP	Ground Phase Manipulation in a Beam Forming Antenna	22.09.2016
201500443	Networks	201610545417.5		CN	METHOD AND APPARATUS FOR IMPLEMENTING A DISTRIBUTED INTERWORKING BASED ON USER EQUIPMENT THROUGHPUT	28.04.2016
201500443	Networks	16167313.2		EP	METHOD AND APPARATUS FOR IMPLEMENTING A DISTRIBUTED INTERWORKING BASED ON USER EQUIPMENT THROUGHPUT	27.04.2016
201401959	Networks	201610205910.2		CN	Controlling LTE/Wi-Fi aggregation	29.01.2016
201401959	Networks	16152556.3		EP	Controlling LTE/Wi-Fi aggregation	25.01.2016
200801042	Networks	08760562.2	2289198	CH	RECEIVING UNIT IN A WIRELESS COMMUNICATION NETWORK AND METHOD FOR GENERATING AN AUTOMATIC REPEAT REQUEST FEEDBACK MESSAGE	05.06.2008
200801042	Networks	08760562.2	60 2008 040 778.0	DE	RECEIVING UNIT IN A WIRELESS COMMUNICATION NETWORK AND METHOD FOR GENERATING AN AUTOMATIC REPEAT REQUEST FEEDBACK MESSAGE	05.06.2008
200801042	Networks	08760562.2	2289198	FR	RECEIVING UNIT IN A WIRELESS COMMUNICATION NETWORK AND METHOD FOR GENERATING AN AUTOMATIC REPEAT REQUEST FEEDBACK MESSAGE	05.06.2008
200801042	Networks	08760562.2	2289198	GB	RECEIVING UNIT IN A WIRELESS COMMUNICATION NETWORK AND METHOD FOR GENERATING AN AUTOMATIC REPEAT REQUEST FEEDBACK MESSAGE	05.06.2008
200801042	Networks	08760562.2	2289198	IE	RECEIVING UNIT IN A WIRELESS COMMUNICATION NETWORK AND METHOD FOR GENERATING AN AUTOMATIC REPEAT REQUEST FEEDBACK MESSAGE	05.06.2008
201400327	Networks	201480078735.4		CN	IMPROVED ANTENNA ARRANGEMENT	09.05.2014
201400327	Networks	15/307,871		US	IMPROVED ANTENNA ARRANGEMENT	09.05.2014
200902079	Networks	10703430.8	60 2010 029 320.3	DE	METHOD FOR CONTROLLING ACCESS TO RESOURCES	25.01.2010

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
200902079	Networks	10703430.8	2529527	GB	METHOD FOR CONTROLLING ACCESS TO RESOURCES	25.01.2010
201501538	Networks	14/878,622		US	Ground Phase Manipulation in a Beam Forming Antenna	08.10.2015
200702614	Networks	07821906.0	60 2007 048 988.1	DE	Apparatus for processing audio and/or video data and method to be run on said apparatus	26.10.2007
200702614	Networks	07821906.0	2156439	FR	Apparatus for processing audio and/or video data and method to be run on said apparatus	26.10.2007
200702614	Networks	07821906.0	2156439	GB	Apparatus for processing audio and/or video data and method to be run on said apparatus	26.10.2007
201201188	Networks	14/443,095	9484874	US	INPUT AMPLITUDE MODULATED OUTPHASING WITH AN UNMATCHED COMBINER	16.11.2012
201500443	Networks	14/698,494	9713036	US	METHOD AND APPARATUS FOR IMPLEMENTING A DISTRIBUTED INTERWORKING BASED ON USER EQUIPMENT THROUGHPUT	28.04.2015
201000652	Networks	10761017.2	60 2010 029 964.3	DE	Subscriber handling in radio telecommunication networks	06.10.2010
201000652	Networks	10761017.2	2625826	FR	Subscriber handling in radio telecommunication networks	06.10.2010
201400638	Networks	15/315,544		US	Dynamic quality of service management	13.06.2014
201400638	Networks	14730863.9		WE	Dynamic quality of service management	13.06.2014
200505445	Networks	06725343.5	50 2006 015 310.6	DE	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
200505445	Networks	06725343.5	1867154	FR	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
200505445	Networks	06725343.5	1867154	GB	Verfahren und Anordnung zum Speichern und Wiedergeben von TV-Sendungen	28.03.2006
201400347	Networks	201510238205.8		CN	Low Effort Massive MIMO Antenna Arrays and Their Use	12.05.2015
201400347	Networks	15165647.7		EP	Low Effort Massive MIMO Antenna Arrays and Their Use	29.04.2015
201201786	Networks			US	INCOMING CALL	
200800607	Networks	08103819.2	60 2008 050 938.9	DE	Patch antenna element array	05.05.2008
201401493	Networks	PCT/EP2015/081360		CN	METHODS AND APPARATUS FOR RADIO LINK FAILURE REPORTING	29.12.2015
201401493	Networks	15820864.5		WE	METHODS AND APPARATUS FOR RADIO LINK FAILURE REPORTING	29.12.2015
200902078	Networks	10703447.2		DE	A METHOD OF SUPERVISING A NODE IN A COMMUNICATION SYSTEM	04.02.2010
200902078	Networks	10703447.2		GB	A METHOD OF SUPERVISING A NODE IN A COMMUNICATION SYSTEM	04.02.2010
200902078	Networks	10703447.2		NL	A METHOD OF SUPERVISING A NODE IN A COMMUNICATION SYSTEM	04.02.2010
200902078	Networks	10703447.2		PL	A METHOD OF SUPERVISING A NODE IN A COMMUNICATION SYSTEM	04.02.2010
120045	ALU	09/087708	US6246725	US	Reduction of power consumption in ADSL modem.	01.06.1998
120045	ALU	124552	IL124552	IL	Reduction of power consumption in ADSL modem.	19.05.1998
120119	ALU	97402201.4	EP0903897	GB	Multicarrier transmission system	22.09.1997
120119	ALU	97402201.4	EP0903897	ES	Multicarrier transmission system	22.09.1997
120119	ALU	97402201.4	EP0903897	IT	Multicarrier transmission system	22.09.1997
120119	ALU	97402201.4	EP0903897	DE	Multicarrier transmission system	22.09.1997
120119	ALU	97402201.4	EP0903897	FR	Multicarrier transmission system	22.09.1997
120119	ALU	97402201.4	EP0903897	BE	Multicarrier transmission system	22.09.1997
120015	ALU	08/965136	US5903612	US	A METHOD TO SYNCHRONISE DATA AND A TRANSMITTER AND A RECEIVER REALISING SAID METHOD.	06.11.1997
120015	ALU	305853/97	JP3429169	JP	A METHOD TO SYNCHRONISE DATA AND A TRANSMITTER AND A RECEIVER REALISING SAID METHOD.	07.11.1997
120015	ALU	122048	IL122048	IL	A METHOD TO SYNCHRONISE DATA AND A TRANSMITTER AND A RECEIVER REALISING SAID METHOD.	28.10.1997
120015	ALU	43639/97	AU734451	AU	A METHOD TO SYNCHRONISE DATA AND A TRANSMITTER AND A RECEIVER REALISING SAID METHOD.	30.10.1997
120016	ALU	08/965141	US6072810	US	ATM TIME REFERENCE TRANSPORT OVER ADSL.	06.11.1997
120016	ALU	305854/97	JP3825156	JP	ATM TIME REFERENCE TRANSPORT OVER ADSL.	07.11.1997
120016	ALU	122049	IL122049	IL	ATM TIME REFERENCE TRANSPORT OVER ADSL.	28.10.1997
120016	ALU	43693/97	AU732219	AU	ATM TIME REFERENCE TRANSPORT OVER ADSL.	03.11.1997
120017	ALU	08/967155	US6215793	US	ADSL RATE RE-NEGOTIATION.	10.11.1997
120017	ALU	310558/97	JP3833799	JP	ADSL RATE RE-NEGOTIATION.	12.11.1997
120017	ALU	122071	IL122071	IL	ADSL RATE RE-NEGOTIATION.	30.10.1997
120017	ALU	43692/97	AU720494	AU	ADSL RATE RE-NEGOTIATION.	03.11.1997
123166	ALU	09/007865	US6351473	US	RFI REDUCTION IN DMT SYSTEMS.	15.01.1998
120019	ALU	09/010814	US6151690	US	VDLS DYNAMIC TRIANGULAR INTERLEAVER.	23.01.1998
120019	ALU	2661/1998	KR100502384	KR	VDLS DYNAMIC TRIANGULAR INTERLEAVER.	31.01.1998
120019	ALU	019500/98	JP4049429	JP	VDLS DYNAMIC TRIANGULAR INTERLEAVER.	30.01.1998
120019	ALU	122982	IL122982	IL	VDLS DYNAMIC TRIANGULAR INTERLEAVER.	19.01.1998
120019	ALU	52730/98	AU726761	AU	VDLS DYNAMIC TRIANGULAR INTERLEAVER.	23.01.1998

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PATENT
REEL: 043877 FRAME: 0225

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
110522	ALU	97440128.3	EP0856998	GB	ATM Radio Transmission	08.12.1997
110522	ALU	97440128.3	EP0856998	DE	ATM Radio Transmission	08.12.1997
110522	ALU	97440128.3	EP0856998	FR	ATM Radio Transmission	08.12.1997
120038	ALU	09/113958	US6400705	US	PON-BASED CATV NETWORKS.	10.07.1998
110260	ALU	98105321.1	ZL98105321.1	CN	Call and Credit	20.02.1998
110260	ALU	09/023033	US6085179	US	Call and Credit	13.02.1998
110260	ALU	98440032.5	EP0860975	GB	Call and Credit	19.02.1998
110260	ALU	98440032.5	EP0860975	DE	Call and Credit	19.02.1998
110260	ALU	98440032.5	EP0860975	FR	Call and Credit	19.02.1998
110230	ALU	09/078908	US6192421	US	Switching between operating systems	14.05.1998
120185	ALU	09/340675	US6337981	US	VISITED OPERATOR ENVIRONMENT.	29.06.1999
120185	ALU	98401676.6	EP0969645	GB	VISITED OPERATOR ENVIRONMENT.	03.07.1998
120185	ALU	172924/99	JP4246854	JP	VISITED OPERATOR ENVIRONMENT.	18.06.1999
120185	ALU	98401676.6	EP0969645	IT	VISITED OPERATOR ENVIRONMENT.	03.07.1998
120185	ALU	98401676.6	EP0969645	DE	VISITED OPERATOR ENVIRONMENT.	03.07.1998
120185	ALU	98401676.6	EP0969645	FR	VISITED OPERATOR ENVIRONMENT.	03.07.1998
120185	ALU	99110138.3	ZL99110138.3	CN	VISITED OPERATOR ENVIRONMENT.	02.07.1999
111002	ALU	09/334606	US6338070	US	Persistency Data Base	17.06.1999
120216	ALU	09/346930	US6842514	US	INTERFACE BETWEEN IN AND CTI.	02.07.1999
120216	ALU	176231/99	JP4398012	JP	INTERFACE BETWEEN IN AND CTI.	23.06.1999
94936	ALU	09/113719	US6240129	US	Single frequency or banded noise imm...	10.07.1998
120119	ALU	09/158596	US6628738	US	Multicarrier transmission system	22.09.1998
120119	ALU	265181/98	JP4188466	JP	Multicarrier transmission system	18.09.1998
120119	ALU	125333	IL125333	IL	Multicarrier transmission system	13.07.1998
120119	ALU	84187/98	AU743588	AU	Multicarrier transmission system	11.09.1998
120247	ALU	98402408.3	EP0991222	GB	ADSL Fast Transition to full power state.	30.09.1998
120247	ALU	98402408.3	EP0991222	ES	ADSL Fast Transition to full power state.	30.09.1998
120247	ALU	98402408.3	EP0991222	IT	ADSL Fast Transition to full power state.	30.09.1998
120247	ALU	98402408.3	EP0991222	DE	ADSL Fast Transition to full power state.	30.09.1998
120247	ALU	98402408.3	EP0991222	FR	ADSL Fast Transition to full power state.	30.09.1998
131075	ALU	464392	US6731643	US	HIERARCHICAL SEARCH ALGORITHM FOR SUBSETS OF USER ADDRESSES IN A VIRTUAL PRIVATE NETWORK	16.12.1999
131075	ALU	99440358.2	EP1018824	GB	HIERARCHICAL SEARCH ALGORITHM FOR SUBSETS OF USER ADDRESSES IN A VIRTUAL PRIVATE NETWORK	20.12.1999
131075	ALU	99440358.2	EP1018824	IT	HIERARCHICAL SEARCH ALGORITHM FOR SUBSETS OF USER ADDRESSES IN A VIRTUAL PRIVATE NETWORK	20.12.1999
131075	ALU	99440358.2	EP1018824	DE	HIERARCHICAL SEARCH ALGORITHM FOR SUBSETS OF USER ADDRESSES IN A VIRTUAL PRIVATE NETWORK	20.12.1999
131075	ALU	99440358.2	EP1018824	FR	HIERARCHICAL SEARCH ALGORITHM FOR SUBSETS OF USER ADDRESSES IN A VIRTUAL PRIVATE NETWORK	20.12.1999
120270	ALU	09/478196	US6215356	US	ADSL LINE DRIVER.	05.01.2000
120272	ALU	09/466789	US6204730	US	ADSL LINE DRIVER CIRCUIT.	20.12.1999
131099	ALU	09/588945	US6944157	US	OPTIMIZATION TIME MANAGEMENT OF INFORMATION DISTRIBUTED ON K BYTES IN A SDH FRAME	07.06.2000
111343	ALU	99440159.4	EP1063790	GB	Diversity Transmission in a Mobile Radio System	24.06.1999
111343	ALU	99440159.4	EP1063790	FR	Diversity Transmission in a Mobile Radio System	24.06.1999
111343	ALU	99440159.4	EP1063790	DE	Diversity Transmission in a Mobile Radio System	24.06.1999
120246	ALU	09/408264	US6850539	US	ADSL TRANSITION TO FULL POWER STATE WITH INTERRUPTED DMT SYMBOL.	29.09.1999
120246	ALU	131970	IL131970	IL	ADSL TRANSITION TO FULL POWER STATE WITH INTERRUPTED DMT SYMBOL.	17.09.1999
111343	ALU	09/353354	US6636495	US	Diversity Transmission in a Mobile Radio System	15.07.1999
111526	ALU	99440209.7	EP1071306	GB	Improved uplink call admission control	23.07.1999
111526	ALU	99440209.7	EP1071306	ES	Improved uplink call admission control	23.07.1999
111526	ALU	99440209.7	EP1071306	IT	Improved uplink call admission control	23.07.1999
111526	ALU	99440209.7	EP1071306	FR	Improved uplink call admission control	23.07.1999
111526	ALU	99440209.7	EP1071306	DE	Improved uplink call admission control	23.07.1999
120219	ALU	09/393303	US6553066	US	VDSL INTERPOLATION SYNCHRONISATION.	10.09.1999
120246	ALU	99120567.7	ZL99120567.7	CN	ADSL TRANSITION TO FULL POWER STATE WITH INTERRUPTED DMT SYMBOL.	29.09.1999
111526	ALU	09/377408	US6643521	US	Improved uplink call admission control	20.08.1999
120292	ALU	09/707975	US7003089	US	SMART XDSL/POTS SPLITTER.	08.11.2000
120292	ALU	00128549.1	ZL00128549.1	CN	SMART XDSL/POTS SPLITTER.	17.11.2000

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0226

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
120438	ALU	99403045.0	EP1107550	GB	TERMINAL (U)SIM SERVICE CAPABILITY FEATURES FOR OPEN SERVICE ARCHITECTURE.	06.12.1999
120438	ALU	2000357074	JP5285827	JP	TERMINAL (U)SIM SERVICE CAPABILITY FEATURES FOR OPEN SERVICE ARCHITECTURE.	24.11.2000
120438	ALU	99403045.0	EP1107550	IT	TERMINAL (U)SIM SERVICE CAPABILITY FEATURES FOR OPEN SERVICE ARCHITECTURE.	06.12.1999
120438	ALU	99403045.0	EP1107550	FR	TERMINAL (U)SIM SERVICE CAPABILITY FEATURES FOR OPEN SERVICE ARCHITECTURE.	06.12.1999
120438	ALU	99403045.0	EP1107550	DE	TERMINAL (U)SIM SERVICE CAPABILITY FEATURES FOR OPEN SERVICE ARCHITECTURE.	06.12.1999
120438	ALU	00134832.9	ZL00134832.9	CN	TERMINAL (U)SIM SERVICE CAPABILITY FEATURES FOR OPEN SERVICE ARCHITECTURE.	06.12.2000
131121	ALU	TO99A001185	IT1311463	IT	Clock recovery method and apparatus	31.12.1999
131121	ALU	09/736294	US6934347	US	Clock recovery method and apparatus	15.12.2000
111032	ALU	09/830772	US6992971	US	ATM CELLS TRANSMISSION WITH CDMA	24.11.1999
111032	ALU	99964519.5	EP1142437	GB	ATM CELLS TRANSMISSION WITH CDMA	24.11.1999
111032	ALU	2000584717	JP4485689	JP	ATM CELLS TRANSMISSION WITH CDMA	24.11.1999
111032	ALU	99964519.5	EP1142437	FR	ATM CELLS TRANSMISSION WITH CDMA	24.11.1999
111032	ALU	99813745.6	ZL99813745.6	CN	ATM CELLS TRANSMISSION WITH CDMA	24.11.1999
111032	ALU	2349929	CA2349929	CA	ATM CELLS TRANSMISSION WITH CDMA	24.11.1999
111032	ALU	99964519.5	EP1142437	BE	ATM CELLS TRANSMISSION WITH CDMA	24.11.1999
131116	ALU	MI2000A000139	IT1316315	IT	Method to calculate the current route of paths on MS SP rings	01.02.2000
131116	ALU	09/771436	US7023796	US	Method to calculate the current route of paths on MS SP rings	30.01.2001
120460	ALU	00400231.7	EP1120943	GB	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	28.01.2000
120460	ALU	00400231.7	EP1120943	ES	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	28.01.2000
120460	ALU	00400231.7	EP1120943	IT	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	28.01.2000
120460	ALU	00400231.7	EP1120943	DE	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	28.01.2000
120460	ALU	00400231.7	EP1120943	FR	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	28.01.2000
120256	ALU	09/767831	US6968000	US	PHASE EQUALIZATION.	24.01.2001
120256	ALU	20014845	KR676362	KR	PHASE EQUALIZATION.	01.02.2001
120016	ALU	09/471757	US6327273	US	ATM TIME REFERENCE TRANSPORT OVER ADSL.	23.12.1999
120178	ALU	09/799129	US6952441	US	CHANNEL ESTIMATION.	06.03.2001
120178	ALU	00400620.1	EP1134945	GB	CHANNEL ESTIMATION.	07.03.2000
120178	ALU	00400620.1	EP1134945	DE	CHANNEL ESTIMATION.	07.03.2000
120178	ALU	00400620.1	EP1134945	FR	CHANNEL ESTIMATION.	07.03.2000
111716	ALU	01440040.2	EP1143762	GB	ADSL-ISDN/POTS separator	22.02.2001
111716	ALU	01440040.2	EP1143762	IT	ADSL-ISDN/POTS separator	22.02.2001
111716	ALU	01440040.2	EP1143762	DE	ADSL-ISDN/POTS separator	22.02.2001
111716	ALU	01440040.2	EP1143762	FR	ADSL-ISDN/POTS separator	22.02.2001
111716	ALU	200101448-9	SG101961	SG	ADSL-ISDN/POTS separator	08.03.2001
111343	ALU	00118377.X	ZL00118377.X	CN	Diversity Transmission in a Mobile Radio System	15.06.2000
111580	ALU	00440139.4	EP1156653	GB	Caller dependent voice message	15.05.2000
111580	ALU	00440139.4	EP1156653	DE	Caller dependent voice message	15.05.2000
111580	ALU	00440139.4	EP1156653	FR	Caller dependent voice message	15.05.2000
131142	ALU	MI2000A001163	IT1319278	IT	NETWORK ELEMENT FOR INTERCONNECTING MS-SPRING AND SNCP RINGS	26.05.2000
131142	ALU	863468	US7035203	US	NETWORK ELEMENT FOR INTERCONNECTING MS-SPRING AND SNCP RINGS	24.05.2001
111766	ALU	01440118.6	EP1154657	GB	Service Number Portability	23.04.2001
131142	ALU	2001147588	JP4420583	JP	NETWORK ELEMENT FOR INTERCONNECTING MS-SPRING AND SNCP RINGS	17.05.2001
111766	ALU	01440118.6	EP1154657	ES	Service Number Portability	23.04.2001
111766	ALU	01440118.6	EP1154657	NL	Service Number Portability	23.04.2001
111766	ALU	01440118.6	EP1154657	IT	Service Number Portability	23.04.2001
111766	ALU	01440118.6	EP1154657	DE	Service Number Portability	23.04.2001
111766	ALU	01440118.6	EP1154657	FR	Service Number Portability	23.04.2001
111766	ALU	09/852703	US6744871	US	Service Number Portability	11.05.2001
111684	ALU	00440160.0	EP1158710	GB	STM-N Signals over Virtual concatenated SDH/SONET Containers	26.05.2000
111684	ALU	00440160.0	EP1158710	IT	STM-N Signals over Virtual concatenated SDH/SONET Containers	26.05.2000
111684	ALU	00440160.0	EP1158710	DE	STM-N Signals over Virtual concatenated SDH/SONET Containers	26.05.2000
111684	ALU	00440160.0	EP1158710	FR	STM-N Signals over Virtual concatenated SDH/SONET Containers	26.05.2000
120454	ALU	90114750	TW173411	TW	Use of ATM header fields for process addressing and in-band control	18.06.2001
120454	ALU	200137194	KR100772808	KR	Use of ATM header fields for process addressing and in-band control	27.06.2001

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
131120	ALU	09/881722	US7162157	US	Transceiver telescope for through-air communication bidirectional link	18.06.2001
131120	ALU	184417/2001	JP4550321	JP	Transceiver telescope for through-air communication bidirectional link	19.06.2001
120377	ALU	09/615759	US6823390	US	PROTOCOL PROFILING AND NEGOTIATION	13.07.2000
120377	ALU	200112724	JP4703859	JP	PROTOCOL PROFILING AND NEGOTIATION	22.01.2001
131134	ALU	09/911625	US7103278	US	Lambda concatenation in WDM networks	25.07.2001
134896	ALU	09/592442	US7032022	US	Network Policy Logs and Statistics Aggregation	12.06.2000
111762	ALU	01440271.3	EP1191768	GB	Mobile Terminal Display Control (MPD)	20.08.2001
111762	ALU	01440271.3	EP1191768	IT	Mobile Terminal Display Control (MPD)	20.08.2001
111762	ALU	01440271.3	EP1191768	DE	Mobile Terminal Display Control (MPD)	20.08.2001
111762	ALU	01440271.3	EP1191768	FR	Mobile Terminal Display Control (MPD)	20.08.2001
102475	ALU	00440275.6	EP1198081	GB	Overhead modulation by a Semiconductor Optical Amplifier	13.10.2000
102475	ALU	00440275.6	EP1198081	DE	Overhead modulation by a Semiconductor Optical Amplifier	13.10.2000
102475	ALU	00440275.6	EP1198081	FR	Overhead modulation by a Semiconductor Optical Amplifier	13.10.2000
111957	ALU	10/021354	US6584243	US	WDM Add/Drop multiplexer	19.12.2001
111957	ALU	01130530.7	EP1220564	GB	WDM Add/Drop multiplexer	21.12.2001
111957	ALU	01130530.7	EP1220564	IT	WDM Add/Drop multiplexer	21.12.2001
111957	ALU	01130530.7	EP1220564	DE	WDM Add/Drop multiplexer	21.12.2001
111957	ALU	01130530.7	EP1220564	FR	WDM Add/Drop multiplexer	21.12.2001
125351	ALU	09/816382	US6426685	US	Leaky cable	26.03.2001
125351	ALU	01111799.0	ZL1229895	CN	Leaky cable	28.03.2001
137137	ALU	09/261197	US7065052	US	Cell Stream Replicating Device	03.03.1999
125351	ALU	01440058.4	EP1139491	GB	Leaky cable	08.03.2001
125351	ALU	01440058.4	EP1139491	ES	Leaky cable	08.03.2001
125351	ALU	01440058.4	EP1139491	IT	Leaky cable	08.03.2001
125351	ALU	01440058.4	EP1139491	DE	Leaky cable	08.03.2001
125351	ALU	01440058.4	EP1139491	FR	Leaky cable	08.03.2001
137196	ALU	09/274720	US6600744	US	Packet classification engine	23.03.1999
137216	ALU	09/472740	US	US	IP Based Video Service DMDS	23.12.1999
137229	ALU	09/500582	US6724881	US	PNNI admin weight	09.02.2000
137200	ALU	09/663793	US6876625	US	Hot redundancy in Link/Topology State Routing Protocols	18.09.2000
131168	ALU	10/090749	US7035362	US	METHOD AND CIRCUIT FOR THE CLOCK SELECTION IN A BASEBAND COMBINER	06.03.2002
131168	ALU	02290390.0	EP1244245	GB	METHOD AND CIRCUIT FOR THE CLOCK SELECTION IN A BASEBAND COMBINER	19.02.2002
131168	ALU	02290390.0	EP1244245	DE	METHOD AND CIRCUIT FOR THE CLOCK SELECTION IN A BASEBAND COMBINER	19.02.2002
131168	ALU	02290390.0	EP1244245	FR	METHOD AND CIRCUIT FOR THE CLOCK SELECTION IN A BASEBAND COMBINER	19.02.2002
131164	ALU	10/107045	US7386007	US	METHOD FOR MAPPING DIFFERENT DATA INTERFACED (ETHERNET, FAST-ETHERNET AND Nx1 OR NxDS1) IN A SINGLE VC-4 OF A SYNCHRONOUS STM-1 PAYLOAD TRANSMITTED IN A RADIO-RELAY SYSTEM.	28.03.2002
103320	ALU	01440074.1	EP1241808	GB	WDM RAMAN PUMPING SCHEME	16.03.2001
103320	ALU	01440074.1	EP1241808	IT	WDM RAMAN PUMPING SCHEME	16.03.2001
103320	ALU	01440074.1	EP1241808	DE	WDM RAMAN PUMPING SCHEME	16.03.2001
103320	ALU	01440074.1	EP1241808	FR	WDM RAMAN PUMPING SCHEME	16.03.2001
111727	ALU	09/832827	US6928204	US	Printed Optical Circuit Boards	28.05.2004
111684	ALU	09/863321	US7586921	US	STM-N Signals over Virtual concatenated SDH/SONET Containers	24.05.2001
111916	ALU	10/090750	US6703977	US	Rake Finger Pooling	06.03.2002
111916	ALU	02003247.0	EP1246371	GB	Rake Finger Pooling	21.02.2002
111916	ALU	200290300	JP4156854	JP	Rake Finger Pooling	28.03.2002
111916	ALU	02003247.0	EP1246371	DE	Rake Finger Pooling	21.02.2002
111916	ALU	02003247.0	EP1246371	FR	Rake Finger Pooling	21.02.2002
120604	ALU	01440156.6	EP1265414	GB	Service Deployment Templates	06.06.2001
120604	ALU	01440156.6	EP1265414	IT	Service Deployment Templates	06.06.2001
120604	ALU	01440156.6	EP1265414	DE	Service Deployment Templates	06.06.2001
120604	ALU	01440156.6	EP1265414	FR	Service Deployment Templates	06.06.2001
120604	ALU	10/128462	US7117195	US	Service Deployment Templates	24.04.2002
131173	ALU	10/198347	US6697189	US	ACTIVE GAIN EQUALIZATION OF TWO STAGE EDFA USING THE RAMAN AMPLIFICATION.	19.07.2002
131173	ALU	02126379.5	ZL02126379.5	CN	ACTIVE GAIN EQUALIZATION OF TWO STAGE EDFA USING THE RAMAN AMPLIFICATION.	19.07.2002
113166	ALU	01440232.5	EP1280373	GB	Synchrone Crossconnect für OTN-Signale	23.07.2001
113166	ALU	01440232.5	EP1280373	IT	Synchrone Crossconnect für OTN-Signale	23.07.2001
113166	ALU	01440232.5	EP1280373	DE	Synchrone Crossconnect für OTN-Signale	23.07.2001
113166	ALU	01440232.5	EP1280373	FR	Synchrone Crossconnect für OTN-Signale	23.07.2001
127084	ALU	01440043.6	EP1139485	GB	TEMPERATURE COMPENSATION ARRANGEMENT FOR MICROWAVE FILTER	23.02.2001

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0228

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
127084	ALU	01440043.6	EP1139485	DE	TEMPERATURE COMPENSATION ARRANGEMENT FOR MICROWAVE FILTER	23.02.2001
127084	ALU	01440043.6	EP1139485	FR	TEMPERATURE COMPENSATION ARRANGEMENT FOR MICROWAVE FILTER	23.02.2001
127084	ALU	09/816466	US6420947	US	TEMPERATURE COMPENSATION ARRANGEMENT FOR MICROWAVE FILTER	26.03.2001
113166	ALU	10/198983	US8005359	US	Synchroner Crossconnect für OTN-Signale	22.07.2002
113166	ALU	02126828.2	ZL02126828.2	CN	Synchroner Crossconnect für OTN-Signale	22.07.2002
111772	ALU	09/911519	US7028093	US	Pilot Codes for S-CDMA Up-Stream Transmission Controlling	25.07.2001
127125	ALU	10/201217	US6741443	US	Method of Providing Reliable Switching for DSL Relay Array/LICENSING NEGOTIATIONS	24.07.2002
127125	ALU	01440260.6	EP1331657	GB	Method of Providing Reliable Switching for DSL Relay Array/LICENSING NEGOTIATIONS	07.08.2001
127125	ALU	01440260.6	EP1331657	ES	Method of Providing Reliable Switching for DSL Relay Array/LICENSING NEGOTIATIONS	07.08.2001
127125	ALU	01440260.6	EP1331657	IT	Method of Providing Reliable Switching for DSL Relay Array/LICENSING NEGOTIATIONS	07.08.2001
127125	ALU	01440260.6	EP1331657	DE	Method of Providing Reliable Switching for DSL Relay Array/LICENSING NEGOTIATIONS	07.08.2001
127125	ALU	01440260.6	EP1331657	FR	Method of Providing Reliable Switching for DSL Relay Array/LICENSING NEGOTIATIONS	07.08.2001
127125	ALU	2002300371	AU2002300371	AU	Method of Providing Reliable Switching for DSL Relay Array/LICENSING NEGOTIATIONS	02.08.2002
102475	ALU	09/974854	US6522449	US	Overhead modulation by a Semiconductor Optical Amplifier	12.10.2001
113041	ALU	01440280.4	EP1286499	GB	Discrimination (AFDs/EDDs) Konfiguration	21.08.2001
113041	ALU	01440280.4	EP1286499	IT	Discrimination (AFDs/EDDs) Konfiguration	21.08.2001
113041	ALU	01440280.4	EP1286499	DE	Discrimination (AFDs/EDDs) Konfiguration	21.08.2001
113041	ALU	01440280.4	EP1286499	FR	Discrimination (AFDs/EDDs) Konfiguration	21.08.2001
111911	ALU	09/981784	US7505787	US	Hardware for CDMA reception	19.10.2001
113331	ALU	01440276.2		EP	Address Decoder	21.08.2001
120560	ALU	10/247478	US7126997	US	SLIDING WINDOWED FFT	20.09.2002
120560	ALU	01440309.1	EP1296492	GB	SLIDING WINDOWED FFT	21.09.2001
120560	ALU	01440309.1	EP1296492	DE	SLIDING WINDOWED FFT	21.09.2001
120560	ALU	01440309.1	EP1296492	FR	SLIDING WINDOWED FFT	21.09.2001
113332	ALU	10/223242	US6895462	US	Register Bank	20.08.2002
127109	ALU	10/003071	US6816668	US	Phase shifter	06.12.2001
127109	ALU	01403159.5	EP1215752	GB	Phase shifter	07.12.2001
127109	ALU	01403159.5	EP1215752	DE	Phase shifter	07.12.2001
120559	ALU	02360001.8	EP1328099	GB	OPTIMISED BIT ALLOCATION FOR VDSL	07.01.2002
120559	ALU	02360001.8	EP1328099	ES	OPTIMISED BIT ALLOCATION FOR VDSL	07.01.2002
120559	ALU	02360001.8	EP1328099	IT	OPTIMISED BIT ALLOCATION FOR VDSL	07.01.2002
120559	ALU	02360001.8	EP1328099	DE	OPTIMISED BIT ALLOCATION FOR VDSL	07.01.2002
120559	ALU	02360001.8	EP1328099	FR	OPTIMISED BIT ALLOCATION FOR VDSL	07.01.2002
103320	ALU	10/084884	US7197247	US	WDM RAMAN PUMPING SCHEME	01.03.2002
113268	ALU	10/373027	US7924740	US	Network Service	26.02.2003
113268	ALU	02360082.8	EP1343272	GB	Network Service	08.03.2002
113268	ALU	02360082.8	EP1343272	IT	Network Service	08.03.2002
113268	ALU	02360082.8	EP1343272	DE	Network Service	08.03.2002
113268	ALU	02360082.8	EP1343272	FR	Network Service	08.03.2002
113268	ALU	03120218.7	ZL03120218.7	CN	Network Service	07.03.2003
134087	ALU	10/074340	US7002912	US	Architecture for Transporting PBX Digital Telephone Messages via SIP	12.02.2002
134894	ALU	00801378.0	ZL00801378.0	CN	Policy Network Devices and Methods	12.06.2000
134894	ALU	00939849.6	EP1145519	GB	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110183.9	EP1143661	GB	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110184.7	EP1143662	FR	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110184.7	EP1143662	DE	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110184.7	EP1143662	IT	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110184.7	EP1143662	GB	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110185.4	EP1143663	FR	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110185.4	EP1143663	DE	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110185.4	EP1143663	GB	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110188.8	EP1143665	FR	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110188.8	EP1143665	DE	Policy Network Devices and Methods	12.06.2000
134894	ALU	01110188.8	EP1143665	GB	Policy Network Devices and Methods	12.06.2000
112046	ALU	10/404143	US7035392	US	TOPOLOGY SERVER	02.04.2003
113367	ALU	10/401537	US6801684	US	Control scheme for optical switch matrix based on tilt mirrors	31.03.2003

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PATENT
REEL: 043877 FRAME: 0229

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
113367	ALU	02360121.4	EP1357408	GB	Control scheme for optical switch matrix based on tilt mirrors	15.04.2002
113367	ALU	02360121.4	EP1357408	DE	Control scheme for optical switch matrix based on tilt mirrors	15.04.2002
113367	ALU	02360121.4	EP1357408	FR	Control scheme for optical switch matrix based on tilt mirrors	15.04.2002
113240	ALU	02360126.3	EP1355452	GB	Method to efficiently poll mobile terminals for resources in a TDMA/TDD environment	19.04.2002
113240	ALU	02360126.3	EP1355452	IT	Method to efficiently poll mobile terminals for resources in a TDMA/TDD environment	19.04.2002
113240	ALU	02360126.3	EP1355452	DE	Method to efficiently poll mobile terminals for resources in a TDMA/TDD environment	19.04.2002
113240	ALU	02360126.3	EP1355452	FR	Method to efficiently poll mobile terminals for resources in a TDMA/TDD environment	19.04.2002
131204	ALU	03122059.2	ZL03122059.2	CN	CONNECTION DELETION MANAGEMENT IN A CENTRALIZED POLICY MANAGER WITH COPS PROTOCOL	24.04.2003
113276	ALU	10/423622	US7590125	US	Simplified control of SDH and OTH signals	28.04.2003
113276	ALU	02360141.2	EP1379092	GB	Simplified control of SDH and OTH signals	02.05.2002
113276	ALU	02360141.2	EP1379092	DE	Simplified control of SDH and OTH signals	02.05.2002
113276	ALU	02360141.2	EP1379092	FR	Simplified control of SDH and OTH signals	02.05.2002
134092	ALU	10/177043	US7765313	US	A hierarchical protocol classification engine with integrated support for network address translation, firewall decision and quality of service (QoS) tagging	21.06.2002
134093	ALU	10/264061	US6754314	US	Novel Usage of Digital Telephone Set Keyboard/Display for Generating Text Messages to Alphanumeric Pagers, Cellphones and Pdas.	02.10.2002
113150	ALU	10/194049	US7031616	US	Procedure for Q-factor measurement on optical burst signals	15.07.2002
113331	ALU	10/223322	US6963945	US	Address Decoder	20.08.2002
113331	ALU	02127760.5	ZL02127760.5	CN	Address Decoder	08.08.2002
113358	ALU	10/453647	US7492774	US	Common handling of DCC and GCC routing for SDH and OTH Signals	04.06.2003
113422	ALU	02360229.5	EP1387525	EP	OMC Macro EDITOR	02.08.2002
113422	ALU	03178420.8	ZL1218533	CN	OMC Macro EDITOR	16.07.2003
113409	ALU	10/624510	US6996135	US	Raman laser with improved efficiency	23.07.2003
113409	ALU	03133114.9	ZL03133114.9	CN	Raman laser with improved efficiency	23.07.2003
111820	ALU	10/237803	US7089469	US	Temporary implementation of test support tools on a UUT	10.09.2002
113443	ALU	10/626849	US7302194	US	Stabilization scheme for vestigial side-band optical filter	25.07.2003
113388	ALU	10/603614	US7433671	US	Shared Protection Restoration Combined (SPRC)	26.06.2003
113388	ALU	03178798.3	ZL03178798.3	CN	Shared Protection Restoration Combined (SPRC)	22.07.2003
100734	ALU	09/099949	US6122044	US	REFLECTOMETRY WITH PULSE AND CHANGE SIGNALS OF SAME WAVELENGTH	19.06.1998
100025	ALU	08/962615	US6341069	US	RADIO MODEM WITH SIM CARD	03.11.1997
100551	ALU	08/998807	US5977833	US	POWER AMPLIFIER CONTROL	29.12.1997
100551	ALU	97403132.0	EP0851577	GB	POWER AMPLIFIER CONTROL	23.12.1997
100551	ALU	97403132.0	EP0851577	DE	POWER AMPLIFIER CONTROL	23.12.1997
100551	ALU	97403132.0	EP0851577	FR	POWER AMPLIFIER CONTROL	23.12.1997
100551	ALU	97123465.5	ZL97123465.5	CN	POWER AMPLIFIER CONTROL	29.12.1997
100970	ALU	9800768	FR2774245	FR	DELECTION IN A LINE GROUP (1)	26.01.1998
100970	ALU	09/236115	US6311073	US	DELECTION IN A LINE GROUP (1)	25.01.1999
100970	ALU	99400160.0	EP0932315	GB	DELECTION IN A LINE GROUP (1)	25.01.1999
100970	ALU	99400160.0	EP0932315	DE	DELECTION IN A LINE GROUP (1)	25.01.1999
100965	ALU	09/057543	US6131029	US	HANDOVER WITH PREEMPTION	09.04.1998
100965	ALU	98106486.8	ZL98106486.8	CN	HANDOVER WITH PREEMPTION	10.04.1998
100405	ALU	09/194012	US6459688	US	BIMODE TERMINAL	20.03.1998
100405	ALU	98917189.7	EP0925701	GB	BIMODE TERMINAL	20.03.1998
100405	ALU	98917189.7	EP0925701	ES	BIMODE TERMINAL	20.03.1998
100405	ALU	98917189.7	EP0925701	IT	BIMODE TERMINAL	20.03.1998
100405	ALU	98917189.7	EP0925701	DE	BIMODE TERMINAL	20.03.1998
100405	ALU	98917189.7	EP0925701	FR	BIMODE TERMINAL	20.03.1998
100405	ALU	98800330.9	ZL98800330.9	CN	BIMODE TERMINAL	20.03.1998
101006	ALU	9805611	FR2778303	FR	INDOOR USE OF GSM	04.05.1998
101913	ALU	09/377747	US6498665	US	OPTIMISED OPTICAL WAVELENGTH ADD DROP MULTIPLEXEUR	20.08.1999
101913	ALU	235355/99	JP4271789	JP	OPTIMISED OPTICAL WAVELENGTH ADD DROP MULTIPLEXEUR	23.08.1999
129039	ALU	99400279.8	EP0939564	GB	METHOD FOR PROVIDING EMERGENCY CALL SERVICE	08.02.1999
129039	ALU	99400279.8	EP0939564	ES	METHOD FOR PROVIDING EMERGENCY CALL SERVICE	08.02.1999
129039	ALU	99400279.8	EP0939564	IT	METHOD FOR PROVIDING EMERGENCY CALL SERVICE	08.02.1999
129039	ALU	99400279.8	EP0939564	DE	METHOD FOR PROVIDING EMERGENCY CALL SERVICE	08.02.1999
129039	ALU	99400279.8	EP0939564	FR	METHOD FOR PROVIDING EMERGENCY CALL SERVICE	08.02.1999
132115	ALU	09/156794	US6411407	US	BI-DIRECTIONAL OPTICAL SUPERVISORY CHANNEL	17.09.1998
111071	ALU	09/417081	US6556558	US	CDMA WITH IMPROVED CAPACITY	13.10.1999
101986	ALU	9813374	FR2785118	FR	CANAL MODULE D'ACQUISITION ET DE POURSUITE	26.10.1998
101757	ALU	09/442818	US6344923	US	RAMAN EFFECT CANCELLATION THROUGH POLARISATION MODULATION	23.11.1999

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
101757	ALU	99402843.9	EP1005183	GB	RAMAN EFFECT CANCELLATION THROUGH POLARISATION MODULATION	17.11.1999
101757	ALU	99402843.9	EP1005183	DE	RAMAN EFFECT CANCELLATION THROUGH POLARISATION MODULATION	17.11.1999
101757	ALU	99402843.9	EP1005183	FR	RAMAN EFFECT CANCELLATION THROUGH POLARISATION MODULATION	17.11.1999
102033	ALU	09/287289	US6560194	US	VARIABLE LENGTH CODE ALLOCATION	07.04.1999
102033	ALU	99400945.4	EP0994593	GB	VARIABLE LENGTH CODE ALLOCATION	19.04.1999
102033	ALU	99400945.4	EP0994593	DE	VARIABLE LENGTH CODE ALLOCATION	19.04.1999
102033	ALU	99400945.4	EP0994593	FR	VARIABLE LENGTH CODE ALLOCATION	19.04.1999
101006	ALU	09/303569	US6161014	US	INDOOR USE OF GSM	03.05.1999
101006	ALU	99401070.0	EP0955784	GB	INDOOR USE OF GSM	03.05.1999
101006	ALU	99401070.0	EP0955784	DE	INDOOR USE OF GSM	03.05.1999
102191	ALU	09/588352	US6741872	US	Mobile Phone without SIM CARD.	07.06.2000
102191	ALU	2000168496	JP2000-168496	JP	Mobile Phone without SIM CARD.	06.06.2000
101996	ALU	10/009573	US7313362	US	HIGH ALTITUDE VEHICLE	19.06.2000
102331	ALU	09/594079	US6629180	US	Real time DSP processing with cache and interrupts.	15.06.2000
102348	ALU	09/594774	US6366729	US	Transmission system with Raman gain smaller than Rayleigh diffusion coefficient	16.06.2000
102348	ALU	00401696.0	EP1067640	GB	Transmission system with Raman gain smaller than Rayleigh diffusion coefficient	15.06.2000
102348	ALU	00401696.0	EP1067640	IT	Transmission system with Raman gain smaller than Rayleigh diffusion coefficient	15.06.2000
102348	ALU	00401696.0	EP1067640	FR	Transmission system with Raman gain smaller than Rayleigh diffusion coefficient	15.06.2000
102348	ALU	00401696.0	EP1067640	DE	Transmission system with Raman gain smaller than Rayleigh diffusion coefficient	15.06.2000
132278	ALU	09/343517	US7042872	US	TECHNIQUE TO MANAGE REMOTE IP NEs THROUGH THE SONET DCC	30.06.1999
102077	ALU	09/624994	US6490383	US	Space and spectrum selector.	25.07.2000
132349	ALU	09/393636	US6661789	US	DYNAMIC BURSTIFICATION BASED ON FULLY/PARTIALLY SHARED MULTICAST ENTITIES	10.09.1999
102365	ALU	09/506959	US6748236	US	DECT/GSM emulator.	18.02.2000
102365	ALU	00102395.0	ZL00102395.0	CN	DECT/GSM emulator.	22.02.2000
135544	ALU	09/393752	US7167443	US	PACKET-LEVEL RESTORATION OF IP TRAFFIC USING SONET OVERHEAD	10.09.1999
101986	ALU	88118410	TW1311882	TW	CANAL MODULE D'ACQUISITION ET DE POURSUITE	25.10.1999
101986	ALU	09/581043	US6813307	US	CANAL MODULE D'ACQUISITION ET DE POURSUITE	25.10.1999
102393	ALU	9912350	FR2799325	FR	High efficiency audio reception path.	04.10.1999
135008	ALU	09/228451	US6438188	US	METHOD AND APPARATUS FOR A DIGITALLY CONTROLLED CONSTANT CURRENT SOURCE FOR PHASE ADJUSTMENT OF A SYNTHESIZED CLOCK	11.01.1999
135009	ALU	09/228472	US6301656	US	METHOD FOR INITIAL PROGRAMMING OF FLASH BASED FIRMWARE	11.01.1999
132277	ALU	09/399711	US6194939	US	TIME-WALKING PREVENTION IN A DIGITAL SWITCHING IMPLEMENTATION FOR CLOCK SELECTION	21.09.1999
102612	ALU	89122907	TW157856	TW	Asiatic character presence indicator in a displayable WML-Card.	31.10.2000
102612	ALU	200006283-6	SG131734	SG	Asiatic character presence indicator in a displayable WML-Card.	01.11.2000
102612	ALU	00133817.X	ZL00133817.X	CN	Asiatic character presence indicator in a displayable WML-Card.	03.11.2000
102509	ALU	9914975	FR2801682	FR	Jammer localisation from LEO and GEO.	29.11.1999
102509	ALU	09/722300	US6417799	US	Jammer localisation from LEO and GEO.	28.11.2000
135568	ALU	09/439940	US6456708	US	METHOD AND PROCEDURE OR NUMBER PORTABILITY QUERYLESS DATABASE ACCESS, UPDATE, AND DOWNSTREAM, ETC.	12.11.1999
135559	ALU	09/454838	US6353663	US	COLLECT CALLING BY CALLING ID	06.12.1999
102937	ALU	09/739325	US6947412	US	VOIP jitter buffer turning with VAD deactivation	19.12.2000
135594	ALU	09/473754	US6389200	US	WIDE TUNING RANGE FIBER BRAGG GRATING FILTER (FBGF) USING MUSCLE WIRE ACTUATOR	28.12.1999
102552	ALU	09/754212	US7164909	US	Mixte terminal.	05.01.2001
102552	ALU	2001000860	JP4657459	JP	Mixte terminal.	05.01.2001
102708	ALU	09/755130	US6775481	US	3R regenerator based on an all-optical XOR gate.	08.01.2001
102802	ALU	09/757567	US6766116	US	Improved transission spectral efficiency of optical DWDM channels.	11.01.2001
135614	ALU	09/668897	US6909692	US	SELF-ADJUSTABLE DESIGN FOR HANDLING EVENT FLOWS	22.09.2000
135586	ALU	09/465352	US6683887	US	LITESPAN ADSL: ADSL DOWNSTREAM HIGH SPEED CELL BUS INTERFACE PROTOCOL	16.12.1999
102726	ALU	0001421	FR2804825	FR	Corporate radio link.	04.02.2000
102726	ALU	09/773729	US7218913	US	Corporate radio link.	02.02.2001
102191	ALU	00118147.5	ZL00118147.5	CN	Mobile Phone without SIM CARD.	09.06.2000
135360	ALU	08/994369	US6128321	US	SYSTEM AND METHOD FOR CENTRALLY-MANAGING SWITCHING FUNCTION	19.12.1997

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
135360	ALU	98964816.7	EP1048137	GB	SYSTEM AND METHOD FOR CENTRALLY-MANAGING SWITCHING FUNCTION	18.12.1998
135360	ALU	98964816.7	EP1048137	DE	SYSTEM AND METHOD FOR CENTRALLY-MANAGING SWITCHING FUNCTION	18.12.1998
135360	ALU	98964816.7	EP1048137	FR	SYSTEM AND METHOD FOR CENTRALLY-MANAGING SWITCHING FUNCTION	18.12.1998
135195	ALU	08/947186	US6055430	US	CALL INSTANCE REPRESENTATION OF A CALL FOR CALL MANAGEMENT IN A WIRELESS TELECOMMUNICATIONS SYSTEM	08.10.1997
101996	ALU	00401738.0	EP1063165	GB	HIGH ALTITUDE VEHICLE	19.06.2000
101996	ALU	00401738.0	EP1063165	ES	HIGH ALTITUDE VEHICLE	19.06.2000
101996	ALU	00401738.0	EP1063165	NL	HIGH ALTITUDE VEHICLE	19.06.2000
101996	ALU	00401738.0	EP1063165	IT	HIGH ALTITUDE VEHICLE	19.06.2000
101996	ALU	00401738.0	EP1063165	DE	HIGH ALTITUDE VEHICLE	19.06.2000
101996	ALU	00401738.0	EP1063165	FR	HIGH ALTITUDE VEHICLE	19.06.2000
135356	ALU	09/001316	US6067288	US	PERFORMANCE MONITORING DELAY MODULES	31.12.1997
132277	ALU	99120997.4	EP1087563	IT	TIME-WALKING PREVENTION IN A DIGITAL SWITCHING IMPLEMENTATION FOR CLOCK SELECTION	04.11.1999
132277	ALU	99120997.4	EP1087563	DE	TIME-WALKING PREVENTION IN A DIGITAL SWITCHING IMPLEMENTATION FOR CLOCK SELECTION	04.11.1999
132277	ALU	99120997.4	EP1087563	FR	TIME-WALKING PREVENTION IN A DIGITAL SWITCHING IMPLEMENTATION FOR CLOCK SELECTION	04.11.1999
135432	ALU	09/016047	US6118772	US	WIRELINE TELEPHONY OF A CELLULAR SWITCH	30.01.1998
135436	ALU	09/052761	US6426958	US	SYSTEM AND METHOD FOR PERFORMANCE MONITORING TELECOMMUNICAITON SIGNALS HAVING VARIOUS FORMATS	31.03.1998
135048	ALU	09/201676	US6452944	US	ADSL AND NON-ADSL TRAFFIC DISCRIMINATOR	30.11.1998
102456	ALU	09/868067	US6545640	US	Miniature T-patch antenna.	08.06.2000
102456	ALU	2001537129	JP4549600	JP	Miniature T-patch antenna.	08.06.2000
102456	ALU	00802572.X	ZL00502572.X	CN	Miniature T-patch antenna.	08.06.2000
103207	ALU	2001169697	JP4878700	JP	Internet access control.	05.06.2001
103207	ALU	01120873.2	ZL01120873.2	CN	Internet access control.	08.06.2001
135261	ALU	08/967975	US6026290	US	CALL LOGGING IN A WIRELESS TELECOMMUNICATIONS SYSTEM	12.11.1997
132350	ALU	09/519066	US6763192	US	INTEGRATION OF ALL-OPTICAL CROSSCONNECT FUNCTIONALITY IN TIPOR OR INTO ANY FIXED LENGTH OR VARIABLE LENGTH SYNCHRONOUS OR ASYNCHRONOUS OPTICAL PACKET SWITCHING APPARATUS	03.03.2000
132476	ALU	09/602712	US6804221	US	MICROMOBILITY USING MULTICAST	26.06.2000
132353	ALU	09/497254	US6671256	US	DATA CHANNEL RESERVATION IN OPTICAL BURST-SWITCHED NETWORKS	03.02.2000
102319	ALU	09/786553	US7042966	US	SNR estimation in a telecommunication receiver and use for controlling an emitter	06.07.2000
102319	ALU	2001509188	JP4319368	JP	SNR estimation in a telecommunication receiver and use for controlling an emitter	06.07.2000
102319	ALU	2342725	CA2342725	CA	SNR estimation in a telecommunication receiver and use for controlling an emitter	06.07.2000
135702	ALU	09/618080	US6747862	US	A METHOD OF ACHIEVING HIGH VOLTAGE WITHSTAND BETWEEN PINS OF A HIGH DENSITY COMPLIANT PIN CONNECTOR	17.07.2000
135702	ALU	01123136.X	ZL194338	CN	A METHOD OF ACHIEVING HIGH VOLTAGE WITHSTAND BETWEEN PINS OF A HIGH DENSITY COMPLIANT PIN CONNECTOR	17.07.2001
132278	ALU	2000165588	JP4666718	JP	TECHNIQUE TO MANAGE REMOTE IP NES THROUGH THE SONET DCC	02.06.2000
102690	ALU	09/951719	US6657773	US	Wavelength selector and convertor.	14.09.2001
102224	ALU	09/856362	US7801444	US	Wide band optical amplification	22.09.2000
102224	ALU	00966197.6	EP1133842	GB	Wide band optical amplification	22.09.2000
102224	ALU	00966197.6	EP1133842	DE	Wide band optical amplification	22.09.2000
102224	ALU	00966197.6	EP1133842	FR	Wide band optical amplification	22.09.2000
135432	ALU	99904462.1	EP1051868	GB	WIRELINE TELEPHONY OF A CELLULAR SWITCH	29.01.1999
135432	ALU	99904462.1	EP1051868	ES	WIRELINE TELEPHONY OF A CELLULAR SWITCH	29.01.1999
135432	ALU	99904462.1	EP1051868	IT	WIRELINE TELEPHONY OF A CELLULAR SWITCH	29.01.1999
135432	ALU	99904462.1	EP1051868	DE	WIRELINE TELEPHONY OF A CELLULAR SWITCH	29.01.1999
102393	ALU	09/857235	US6597241	US	High efficiency audio reception path.	04.10.2000
102393	ALU	2001528424	JP4152105	JP	High efficiency audio reception path.	04.10.2000
102393	ALU	00802162.7	ZL218419	CN	High efficiency audio reception path.	04.10.2000
132349	ALU	00119372.1	EP1083708	GB	DYNAMIC BURSTIFICATION BASED ON FULLY/PARTIALLY SHARED MULTICAST ENTITIES	11.09.2000
132349	ALU	00119372.1	EP1083708	DE	DYNAMIC BURSTIFICATION BASED ON FULLY/PARTIALLY SHARED MULTICAST ENTITIES	11.09.2000
132349	ALU	00119372.1	EP1083708	FR	DYNAMIC BURSTIFICATION BASED ON FULLY/PARTIALLY SHARED MULTICAST ENTITIES	11.09.2000

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0232

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
132349	ALU	00134731.4	ZL00134731.4	CN	DYNAMIC BURSTIFICATION BASED ON FULLY/PARTIALLY SHARED MULTICAST ENTITIES	08.09.2000
135645	ALU	09/717731	US6745021	US	MASS EMERGENCY MULTI-MEDIA INFORMATION CALLING	21.11.2000
129210	ALU	09/986555	US7836470	US	Common burst synchronization method	09.11.2001
129210	ALU	2001336079	JP4213380	JP	Common burst synchronization method	01.11.2001
135614	ALU	00127940.5	EP1111856	GB	SELF-ADJUSTABLE DESIGN FOR HANDLING EVENT FLOWS	21.12.2000
135614	ALU	00127940.5	EP1111856	IT	SELF-ADJUSTABLE DESIGN FOR HANDLING EVENT FLOWS	21.12.2000
135614	ALU	00127940.5	EP1111856	DE	SELF-ADJUSTABLE DESIGN FOR HANDLING EVENT FLOWS	21.12.2000
135614	ALU	00127940.5	EP1111856	FR	SELF-ADJUSTABLE DESIGN FOR HANDLING EVENT FLOWS	21.12.2000
135592	ALU	09/737361	US6868233	US	WAVELENGTH AGILE OPTICAL TRANSPONDER FOR WDM SYSTEM TESTING	14.12.2000
102686	ALU	09/914064	US6532104	US	C-band and L-band EDFA.	21.12.2000
135594	ALU	2000384730	JP4786029	JP	WIDE TUNING RANGE FIBER BRAGG GRATING FILTER (FBGF) USING MUSCLE WIRE ACTUATOR	19.12.2000
135769	ALU	09/795373	US6963564	US	A SLOT-BASED OBS (OPTICAL BURST SWITCHING) ARCHITECTURE IMPLEMENTATION FOR OPTICAL IP SWITCH/ROUTER	26.02.2001
135594	ALU	00137001.4	ZL00137001.4	CN	WIDE TUNING RANGE FIBER BRAGG GRATING FILTER (FBGF) USING MUSCLE WIRE ACTUATOR	27.12.2000
102902	ALU	10/035114	US6606062	US	Patch antenna with band matching by additional load radiotelephone terminals.	04.01.2002
102902	ALU	2001393380	JP4249411	JP	Patch antenna with band matching by additional load radiotelephone terminals.	26.12.2001
102902	ALU	02100921.X	ZL02100921.X	CN	Patch antenna with band matching by additional load radiotelephone terminals.	04.01.2002
103235	ALU	10/022896	US7154662	US	Wavelength tuneable pump laser for broadband gain controlled Raman amplifiers by selective reflector switching.	20.12.2001
120460	ALU	09/767850	US7388925	US	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	24.01.2001
120460	ALU	90100965	TW161615	TW	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	16.01.2001
120460	ALU	200100301-1	SG101950	SG	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	19.01.2001
120460	ALU	1020010004074	KR796909	KR	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	29.01.2001
120460	ALU	20018550	JP3357663	JP	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	17.01.2001
120460	ALU	140916	IL140916	IL	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	16.01.2001
120460	ALU	01111970.5	ZL01111970.5	CN	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	23.01.2001
120460	ALU	16371/01	AU766838	AU	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	19.01.2001
102819	ALU	200170431	JP4703871	JP	Resources allocation based on a weighted fair queueing in a radiocommunications system.	13.03.2001
103728	ALU	10/046899	US6813493	US	SIGNALLING LINK FOR AERONAUTICAL GSM	17.01.2002
137333	ALU	09/573218	US7412018	US	Rapid acquisition synchronization sequences for direct sequence spread spectrum systems using code time offsets	19.05.2000
137337	ALU	09/493733	US6421397	US	Modulation system having on-line IQ calibration	28.01.2000
137337	ALU	09/573607	US6421398	US	Modulation system having on-line IQ calibration	18.05.2000
137353	ALU	09/694728	US7068758	US	Metallic Test Access	23.10.2000
120492	ALU	10/084055	US6917795	US	IMPROVEMENT TO VDSL HAM CANCELLER.	28.02.2002
120563	ALU	09/801696	US6839320	US	BANDWIDTH EFFICIENT LDP END-TO-END AUTHENTICATION.	09.03.2001
135788	ALU	09/812080	US6409542	US	LOW PROFILE 50 POSITION OVERMOLD DO NOT DROP SEE LINK	19.03.2001
103526	ALU	10/087835	US6737937	US	TELECOM ANTENNA WITH FREQUENCY REJECTION	05.03.2002
132489	ALU	09/833085	US7315887	US	ARCHITECTURE AND DESIGN FOR AN INTEGRATED TELECOMMUNICATIONS EQUIPMENT MANAGEMENT SYSTEM	11.04.2001
120548	ALU	10/109880	US8407034	US	TDR BASED TRANSFER FUNCTION ESTIMATION OF LOCAL LOOP.	01.04.2002
135809	ALU	09/833119	US7096176	US	MARGIN ANALYSIS OF AN OPTICAL TRANSMISSION ROUTE	11.04.2001
102822	ALU	01401004.5	EP1152487	GB	Monolithic cross-polarized antenna	19.04.2001
102822	ALU	01401004.5	EP1152487	SE	Monolithic cross-polarized antenna	19.04.2001
102822	ALU	01401004.5	EP1152487	ES	Monolithic cross-polarized antenna	19.04.2001
102822	ALU	01401004.5	EP1152487	DE	Monolithic cross-polarized antenna	19.04.2001
102822	ALU	01401004.5	EP1152487	FR	Monolithic cross-polarized antenna	19.04.2001
135815	ALU	09/858099	US7161898	US	COMMON PROTECTION ARCHITECTURE ON SHARED PROTECTION RINGS	15.05.2001
135816	ALU	09/858098	US7158720	US	ENHANCING OPTICAL SHARED PROTECTION RING ARCHITECTURE BY USING HIGH DENSITY PROTECTION SPANS	15.05.2001
120576	ALU	10/137421	US6867647	US	DIGITAL QUIESCENT CURRENT CONTROL FOR CLASS AB AMPLIFIERS.	03.05.2002

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0233

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
137373	ALU	09/833531	US7054274	US	Collection reordering (polling improvement)	11.04.2001
135780	ALU	09/871042	US6628763	US	MULTIMEDIA CALL WAITING	31.05.2001
135785	ALU	09/871410	US6744868	US	CALL PARTY ID/PROFILE PRESENTATION	31.05.2001
135850	ALU	09/882918	US6547585	US	CABLE HOLDER AND REMOVAL HARNESS	15.06.2001
103745	ALU	10/142053	US7602842	US	INTERFACE BETWEEN MSC AND BSC	10.05.2002
120531	ALU	10/171971		US	AN E-COMMERCE QOS PROVIDER.	17.06.2002
120531	ALU	01401594.5	EP1271857	GB	AN E-COMMERCE QOS PROVIDER.	18.06.2001
120531	ALU	01401594.5	EP1271857	IT	AN E-COMMERCE QOS PROVIDER.	18.06.2001
120531	ALU	01401594.5	EP1271857	DE	AN E-COMMERCE QOS PROVIDER.	18.06.2001
120531	ALU	01401594.5	EP1271857	FR	AN E-COMMERCE QOS PROVIDER.	18.06.2001
102896	ALU	10/069781	US6718106	US	Manufacturing process for cladding pumped fiber	28.06.2001
103191	ALU	2002505421	JP4675546	JP	Dispersion compensating fiber	28.06.2001
135821	ALU	20025533	JP4318883	JP	DISTRIBUTED INTELLIGENCE MAC PROTOCOLS FOR DWDM METRO NETWORKS	15.01.2002
135821	ALU	02102501.0	ZL02102501.0	CN	DISTRIBUTED INTELLIGENCE MAC PROTOCOLS FOR DWDM METRO NETWORKS	24.01.2002
137200	ALU	01402377.4	EP1189384	GB	Hot redundancy in Link/Topology State Routing Protocols	17.09.2001
137200	ALU	2001270169	JP4755786	JP	Hot redundancy in Link/Topology State Routing Protocols	06.09.2001
137200	ALU	01402377.4	EP1189384	IT	Hot redundancy in Link/Topology State Routing Protocols	17.09.2001
137200	ALU	01402377.4	EP1189384	DE	Hot redundancy in Link/Topology State Routing Protocols	17.09.2001
137200	ALU	01402377.4	EP1189384	FR	Hot redundancy in Link/Topology State Routing Protocols	17.09.2001
137200	ALU	01133057.0	ZL01133057.0	CN	Hot redundancy in Link/Topology State Routing Protocols	17.09.2001
135740	ALU	09/903268	US7158478	US	SIGNALING IN A SHARED PROTECTION RING ARCHITECTURE	11.07.2001
103924	ALU	10/197402	US7710955	US	MULTI-PLATFORM ACTIVE CODE REPOSITORY	18.07.2002
135592	ALU	01145772.4	ZL01145772.4	CN	WAVELENGTH AGILE OPTICAL TRANSPONDER FOR WDM SYSTEM TESTING	14.12.2001
132110	ALU	09/924074	US7042900	US	ASAM Architecture	07.08.2001
132350	ALU	01440053.5	EP1130942	GB	INTEGRATION OF ALL-OPTICAL CROSSCONNECT FUNCTIONALITY IN TIPOR OR INTO ANY FIXED LENGTH OR VARIABLE LENGTH SYNCHRONOUS OR ASYNCHRONOUS OPTICAL PACKET SWITCHING APPARATUS	02.03.2001
132350	ALU	01440053.5	EP1130942	DE	INTEGRATION OF ALL-OPTICAL CROSSCONNECT FUNCTIONALITY IN TIPOR OR INTO ANY FIXED LENGTH OR VARIABLE LENGTH SYNCHRONOUS OR ASYNCHRONOUS OPTICAL PACKET SWITCHING APPARATUS	02.03.2001
132350	ALU	01440053.5	EP1130942	FR	INTEGRATION OF ALL-OPTICAL CROSSCONNECT FUNCTIONALITY IN TIPOR OR INTO ANY FIXED LENGTH OR VARIABLE LENGTH SYNCHRONOUS OR ASYNCHRONOUS OPTICAL PACKET SWITCHING APPARATUS	02.03.2001
103344	ALU	10/234125	US6813413	US	PROTECTED OPTICAL RING	05.09.2002
103866	ALU	0111851	FR2829657	FR	ADAPTIVE DIGITAL COMPRESSION	13.09.2001
120393	ALU	10/237897	US7881190	US	ARTIFICIAL PACKET LOSS MECHANISM IN DIFFSERV IP NETWORK NODES.	10.09.2002
120393	ALU	01402342.8	EP1294134	GB	ARTIFICIAL PACKET LOSS MECHANISM IN DIFFSERV IP NETWORK NODES.	12.09.2001
120393	ALU	01402342.8	EP1294134	DE	ARTIFICIAL PACKET LOSS MECHANISM IN DIFFSERV IP NETWORK NODES.	12.09.2001
120393	ALU	01402342.8	EP1294134	FR	ARTIFICIAL PACKET LOSS MECHANISM IN DIFFSERV IP NETWORK NODES.	12.09.2001
132110	ALU	09/942388	US7039065	US	ASAM Architecture	29.08.2001
103743	ALU	0112594	FR2830384	FR	CODE CONVOLUTIF CYCLIQUE	01.10.2001
103743	ALU	10/259567	US7080311	US	CODE CONVOLUTIF CYCLIQUE	30.09.2002
135821	ALU	09/962685	US7899066	US	DISTRIBUTED INTELLIGENCE MAC PROTOCOLS FOR DWDM METRO NETWORKS	25.09.2001
120669	ALU	01402558.9	EP1300964	GB	UPSTREAM POWER BACK OFF FOR VDSL.	03.10.2001
120669	ALU	01402558.9	EP1300964	DE	UPSTREAM POWER BACK OFF FOR VDSL.	03.10.2001
120669	ALU	01402558.9	EP1300964	FR	UPSTREAM POWER BACK OFF FOR VDSL.	03.10.2001
137250	ALU	09/974318	US6987753	US	DBA & GBA SUPPORTING QOS (NIU QUEUE STATE IN BASESTATION)	09.10.2001
129228	ALU	10/022891	US7075950	US	Satellite transmission de fichiers multimedia.	20.12.2001
129228	ALU	2365841	CA2365841	CA	Satellite transmission de fichiers multimedia.	20.12.2001
120675	ALU	01402766.8	EP1307027	GB	SPEED TOUCH INSTALL WIZARD, MDAP COMMUNICATION PROTOCOL.	25.10.2001
120675	ALU	01402766.8	EP1307027	DE	SPEED TOUCH INSTALL WIZARD, MDAP COMMUNICATION PROTOCOL.	25.10.2001
120675	ALU	01402766.8	EP1307027	FR	SPEED TOUCH INSTALL WIZARD, MDAP COMMUNICATION PROTOCOL.	25.10.2001
120593	ALU	10/290186	US7486661	US	VOICE TRANSPORT OVERHEAD REDUCTION.	08.11.2002
120593	ALU	01402880.7	EP1311085	GB	VOICE TRANSPORT OVERHEAD REDUCTION.	09.11.2001
120593	ALU	01402880.7	EP1311085	IT	VOICE TRANSPORT OVERHEAD REDUCTION.	09.11.2001
120593	ALU	01402880.7	EP1311085	DE	VOICE TRANSPORT OVERHEAD REDUCTION.	09.11.2001

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
120593	ALU	01402880.7	EP1311085	FR	VOICE TRANSPORT OVERHEAD REDUCTION.	09.11.2001
120593	ALU	02161105.X	ZL422402	CN	VOICE TRANSPORT OVERHEAD REDUCTION.	08.11.2002
135733	ALU	10/042556	US6978014	US	VARIABLE LINE CARD POWER FEEDBACK	19.11.2001
132687	ALU	09/985383	US6685383	US	Integrated Antenna and Radio Interface	02.11.2001
132687	ALU	02147998.4	ZL02147998.4	CN	Integrated Antenna and Radio Interface	01.11.2002
103956	ALU	10/293306	US8639795	US	ADAPTATIVE MEASUREMENT SYSTEM FOR TELECOM NETWORK	14.11.2002
137456	ALU	10/015794	US6985084	US	VISUAL INDICATORS CONTROLLED THROUGH INDUCTION COUPLING	17.12.2001
137456	ALU	2002345317	JP4295495	JP	VISUAL INDICATORS CONTROLLED THROUGH INDUCTION COUPLING	28.11.2002
137456	ALU	02157145.7	ZL02157145.7	CN	VISUAL INDICATORS CONTROLLED THROUGH INDUCTION COUPLING	16.12.2002
137488	ALU	10/029123	US8040869	US	IP Link Auto-Discovery	19.12.2001
137490	ALU	02293094.5	EP1322065	GB	LAYER-3 NETWORK MANAGEMENT GUI	13.12.2002
137490	ALU	02293094.5	EP1322065	DE	LAYER-3 NETWORK MANAGEMENT GUI	13.12.2002
137490	ALU	02293094.5	EP1322065	FR	LAYER-3 NETWORK MANAGEMENT GUI	13.12.2002
135863	ALU	10/028076	US7127527	US	TL1 DIRECT ACCESS SYSTEM	21.12.2001
135775	ALU	10/320220	US7519055	US	INGRESS EDGE ROUTER ARCHITECTURE AND RELATED CHANNEL SCHEDULING ALGORITHMS FOR OBS NETWORKS	16.12.2002
137443	ALU	10/026713	US7088674	US	OAM CONTINUITY CHECK (OAM CC)	27.12.2001
137443	ALU	02160846.6	ZL02160846.6	CN	OAM CONTINUITY CHECK (OAM CC)	27.12.2002
132664	ALU	10/026453	US6812808	US	APERTURE COUPLED OUTPUT NETWORK FOR CERAMIC AND WAVEGUIDE COMBINER NETWORK	27.12.2001
137459	ALU	10/025741	US7206287	US	FABRIC BOUNCE TEST	26.12.2001
137459	ALU	02293215.6	EP1324538	GB	FABRIC BOUNCE TEST	23.12.2002
137459	ALU	02293215.6	EP1324538	IT	FABRIC BOUNCE TEST	23.12.2002
137459	ALU	02293215.6	EP1324538	FR	FABRIC BOUNCE TEST	23.12.2002
137460	ALU	10/025742	US7047459	US	FABRIC LOOPBACK TEST	26.12.2001
103492	ALU	10/239072	US7948982	US	CONFIGURATION OF EDGE ROUTERS FOR CONTROL OF ACTIVE PACKETS	21.01.2002
120016	ALU	09/906531	US6754235	US	ATM TIME REFERENCE TRANSPORT OVER ADSL.	16.07.2001
120239	ALU	10/345218	US7447210	US	ATM header reduction technique	16.01.2003
120239	ALU	02290154.0	EP1330142	GB	ATM header reduction technique	21.01.2002
120239	ALU	02290154.0	EP1330142	DE	ATM header reduction technique	21.01.2002
120239	ALU	02290154.0	EP1330142	FR	ATM header reduction technique	21.01.2002
120553	ALU	10/337781	US6954119	US	FLEXIBLE POLE AND ZERO SELECTION FOR PASSIVE FILTER CONSTRUCTION.	08.01.2003
120701	ALU	02290075.7	EP1328091	GB	METHOD FOR SEGREGATING DATA TRAFFIC OVER MULTIPLE ETHERNET LINKS WITH DIFFERENT TRANSMISSION CHARACTERISTICS.	11.01.2002
120701	ALU	02290075.7	EP1328091	DE	METHOD FOR SEGREGATING DATA TRAFFIC OVER MULTIPLE ETHERNET LINKS WITH DIFFERENT TRANSMISSION CHARACTERISTICS.	11.01.2002
120701	ALU	02290075.7	EP1328091	FR	METHOD FOR SEGREGATING DATA TRAFFIC OVER MULTIPLE ETHERNET LINKS WITH DIFFERENT TRANSMISSION CHARACTERISTICS.	11.01.2002
134061	ALU	2002099938	JP4011950	JP	SIP Call Routing Using Information from INVITE Message Body	02.04.2002
134061	ALU	02127268.9	ZL02127268.9	CN	SIP Call Routing Using Information from INVITE Message Body	03.04.2002
120558	ALU	10/355081	US7313209	US	MULTI-PILOT SYNCHRONISATION AND EQUALISATION.	31.01.2003
103863	ALU	10/098128	US7283711	US	Double-clad photonic optical fiber	15.03.2002
103863	ALU	02106790.2	ZL02106790.2	CN	Double-clad photonic optical fiber	08.03.2002
135959	ALU	10/092075	US6775362	US	GRAPHICAL SIP PROXY	06.03.2002
104070	ALU	10/387565	US7031590	US	OPTICAL WAVEGUIDE AMPLIFIER INCLUDING NANO-ENGINEERED PARTICLES	14.03.2003
104082	ALU	10/391641	US7340176	US	FULLY TRANSPARENT HIERARCHICAL RING NETWORK	20.03.2003
104082	ALU	03122650.7	ZL03122650.7	CN	FULLY TRANSPARENT HIERARCHICAL RING NETWORK	21.03.2003
120576	ALU	02119862.4	ZL273981	CN	DIGITAL QUIESCENT CURRENT CONTROL FOR CLASS AB AMPLIFIERS.	17.05.2002
104493	ALU	10/391656	US7139377	US	PROVIDING PRIVATE SERVICES TO DISTANT MOBILE TERMINAL	20.03.2003
104493	ALU	03120941.6	ZL03120941.6	CN	PROVIDING PRIVATE SERVICES TO DISTANT MOBILE TERMINAL	24.03.2003
135908	ALU	10/108208	US7065577	US	A PROTOCOL TO CONTROL MULTICAST IN A HIERARCHICAL DSLAM NETWORK	27.03.2002
104579	ALU	10/407245	US6891607	US	MEASUREMENT OF OPTICAL FIBER INSERTION	07.04.2003
135830	ALU	10/109993	US6950968	US	COEXISTENCE OF DIAGNOSTICS AND SONET SOFTWARE IN A SONET FORMATTER BOARD	29.03.2002
103832	ALU	0204866	FR2838901	FR	OVER-MODULATION FOR BAND SUPERVISION	18.04.2002
103832	ALU	03290791.7		EP	OVER-MODULATION FOR BAND SUPERVISION	28.03.2003
103832	ALU	10/411312	US7295775	US	OVER-MODULATION FOR BAND SUPERVISION	11.04.2003
103832	ALU	03122516.0	ZL03122516.0	CN	OVER-MODULATION FOR BAND SUPERVISION	16.04.2003

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
135780	ALU	02121664.9	ZL02121664.9	CN	MULTIMEDIA CALL WAITING	30.05.2002
135785	ALU	02121663.0	ZL02121663.0	CN	CALL PARTY ID/PROFILE PRESENTATION	30.05.2002
135957	ALU	10/132806	US7274669	US	ARCHITECTURE FOR AN ALL DIGITAL SUBSCRIBER LINE WITH MULTIPLE POTS/DATA PORTS A	25.04.2002
104285	ALU	0205724	FR2839588	FR	FLOW ALLOCATION DEVICE	07.05.2002
104285	ALU	10/428845	US7327893	US	FLOW ALLOCATION DEVICE	05.05.2003
104285	ALU	655/DEL/2003		IN	FLOW ALLOCATION DEVICE	01.05.2003
135740	ALU	02140552.2	ZL02140552.2	CN	SIGNALING IN A SHARED PROTECTION RING ARCHITECTURE	09.07.2002
120675	ALU	10/278842	US7650417	US	SPEED TOUCH INSTALL WIZARD, MDAP COMMUNICATION PROTOCOL	24.10.2002
137401	ALU	10/151451	US7502373	US	CELL ROUTING INTERNAL HEADER TO SUPPORT IS SWITCH FABRIC UPGRADE	20.05.2002
137429	ALU	10/152857	US7710866	US	OPTIMIZATION OF REDUNDANT LINK USAGE IN A MULTI-SHELF NE	22.05.2002
					INTEGRATION OF ALL-OPTICAL CROSSCONNECT FUNCTIONALITY IN TIPOR OR INTO ANY FIXED LENGTH OR VARIABLE LENGTH SYNCHRONOUS OR ASYNCHRONOUS OPTICAL PACKET SWITCHING APPARATUS	
132350	ALU	200152852	JP4806130	JP		27.02.2001
137561	ALU	10/158115	US7284272	US	SECRET HASHING FOR TCP SYN/FIN CORRESPONDENCE	31.05.2002
137561	ALU	03138176.6	ZL03138176.6	CN	SECRET HASHING FOR TCP SYN/FIN CORRESPONDENCE	30.05.2003
135997	ALU	10/163962	US7171120	US	OPTICAL SWITCH CONTROLLER FOR FAIR AND EFFECTIVE LIGHTPATH RESERVATION	05.06.2002
104054	ALU	10/455437	US6845199	US	HYDROGEN GETTER FOR OPTICAL CABLE	06.06.2003
103995	ALU	0206962	FR2840756	FR	DECT SYNCHRONISATION OVER IP	06.06.2002
103995	ALU	03291177.8		EP	DECT SYNCHRONISATION OVER IP	20.05.2003
103995	ALU	10/445962	US7177656	US	DECT SYNCHRONISATION OVER IP	28.05.2003
104494	ALU	0207271	FR2841071	FR	ENTREPRISE MOBILE WHEN ROAMING UNDER PLMN COVER	13.06.2002
135983	ALU	10/175192	US7221869	US	HIGH-SPEED DATA-SIGNAL CLASSIFICATION USING LOW-FREQUENCY ELECTRICAL SPECTRAL FINGERPRINTING	19.06.2002
135988	ALU	10/174776	US7093013	US	HIGH AVAILABILITY SYSTEM FOR NETWORK ELEMENTS	21.06.2002
120669	ALU	10/261486	US7664254	US	UPSTREAM POWER BACK OFF FOR VDSL	02.10.2002
135998	ALU	10/184180	US7233743	US	LIGHTPATH SEGMENTATION METHOD	27.06.2002
120669	ALU	02139968.9	ZL250316	CN	UPSTREAM POWER BACK OFF FOR VDSL	08.10.2002
120755	ALU	10/455432	US7782837	US	SPECTRAL FRIENDLY REMOTE ADSL DEPLOYMENT.	06.06.2003
120668	ALU	10/629706	US7050548	US	TDR BASED CUSTOMER PREMISES LOCALIZATION	30.07.2003
135984	ALU	10/219959	US7315553	US	MODULAR SERVICE PROVISIONING WITHIN AN ACCESS NODE	15.08.2002
139009	ALU	10/227934	US7180872	US	STORAGE MODULE LOCATED IN DSLAM	26.08.2002
104324	ALU	10/643937	US6895155	US	SELF CLEANING TUBES FOR PHOTONIC CRYSTAL FIBERS	20.08.2003
139059	ALU	10/320286	US7324453	US	A CONSTRAINT-BASED SHORTEST PATH FIRST ALGORITHM FOR FIBER SWITCHING	16.12.2002
103933	ALU	10/488772	US7386233	US	DUAL BUS OPTICAL RING NETWORK	06.09.2002
103933	ALU	02781370.8	EP1428333	GB	DUAL BUS OPTICAL RING NETWORK	06.09.2002
103933	ALU	02781370.8	EP1428333	IT	DUAL BUS OPTICAL RING NETWORK	06.09.2002
103933	ALU	02781370.8	EP1428333	DE	DUAL BUS OPTICAL RING NETWORK	06.09.2002
103933	ALU	02781370.8	EP1428333	FR	DUAL BUS OPTICAL RING NETWORK	06.09.2002
103933	ALU	02818802.0	ZL02818802.0	CN	DUAL BUS OPTICAL RING NETWORK	06.09.2002
103866	ALU	2459909	CA2459909	CA	ADAPTIVE DIGITAL COMPRESSION	12.09.2002
139038	ALU	10/241967	US6831873	US	SDRAM INDEPENDENT IN-LINE CONTROL	12.09.2002
134093	ALU	02151488.7	ZL02151488.7	CN	Novel Usage of Digital Telephone Set Keyboard/Display for Generating Text Messages to Alphanumeric Pagers, Cellphones and Pdas.	11.10.2002
131249	ALU	10/686572	US7263297	US	AN AUTOMATIC ADJUSTABLE VARIABLE GAIN ANTENNA FOR FREE SPACE OPTICS	17.10.2003
120763	ALU	10/692681	US7346749	US	MEMORY TRAP TREE.	27.10.2003
104864	ALU	0213737	FR2846821	FR	Mapping Of Network Trap Based On A Scripting Engine	04.11.2002
131250	ALU	10/695764	US7269360	US	HIGH DYNAMIC RECEIVER FOR FREE SPACE OPTICS APPLICATIONS	30.10.2003
120438	ALU	10/247621	US6788956	US	TERMINAL (U)SIM SERVICE CAPABILITY FEATURES FOR OPEN SERVICE ARCHITECTURE.	20.09.2002
104691	ALU	0214936	FR2848042	FR	RELIABLE AND PRECISE END-TO-END FLOW MEASUREMENTS	28.11.2002
120701	ALU	10/339348	US7376135	US	METHOD FOR SEGREGATING DATA TRAFFIC OVER MULTIPLE ETHERNET LINKS WITH DIFFERENT TRANSMISSION CHARACTERISTICS.	10.01.2003
120701	ALU	03101542.5	CN100435544C	CN	METHOD FOR SEGREGATING DATA TRAFFIC OVER MULTIPLE ETHERNET LINKS WITH DIFFERENT TRANSMISSION CHARACTERISTICS.	10.01.2003
120559	ALU	10/336815	US6856947	US	OPTIMISED BIT ALLOCATION FOR VDSL	06.01.2003
120559	ALU	2002367627	JP4249978	JP	OPTIMISED BIT ALLOCATION FOR VDSL	19.12.2002
137596	ALU	10/310910	US7359939	US	Fast Service Restoration for Lost IGMP Leave Requests	06.12.2002

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
134096	ALU	10/289547	US8040873	US	Distributed integration of legacy PBX systems with SIP networks.	06.11.2002
137595	ALU	10/316916	US7228356	US	IGMP Expedited Leave Triggered By MAC Address	12.12.2002
137553	ALU	10/318050	US7072449	US	OPTIMUM POWER SPECTRAL DENSITIES FOR CABINET DEPLOYED XDSL	13.12.2002
135912	ALU	10/317686	US7773624	US	THE QoS RESOLUTION PROTOCOL (QoRP): A METHOD AND APPARATUS TO MAP DIFFSERV QUALITY OF SERVICE TO LAYER 2 QUALITY OF SERVICE	12.12.2002
139054	ALU	10/320244	US7324750	US	PROTECTION REQUEST MESSAGES	16.12.2002
103957	ALU	02806776.2	ZL02806776.2	CN	AUTOMATIC NETWORK TRAFFIC ENGINEERING BASED ON TRENDS	20.12.2002
137620	ALU	10/319553	US7428299	US	H.248 Bulk Configuration Provisioning	16.12.2002
139048	ALU	10/320163	US7570585	US	LAYER 4 THROUGH 7 SERVER CARD HOSTED BY THE DSLAM	16.12.2002
120797	ALU	10/736551	US6977534	US	LVDS DRIVER WITH PRE-EMPHASIS	17.12.2003
139069	ALU	10/328354	US7420918	US	LOOK-AHEAD CONTENTION RESOLUTION SCHEME FOR OBS	23.12.2002
104843	ALU	0216618	FR2849315	FR	INTELLIGENT PROXY	24.12.2002
104843	ALU	10/742788	US7801113	US	INTELLIGENT PROXY	23.12.2003
104689	ALU	10/748278	US7003197	US	UV TRANSPARENT INTERPENETRATED POLYMER NETWORK COATING FOR FBG	31.12.2003
137498	ALU	10/323633	US7233987	US	IGMPv2 in PIM-SSM environment	20.12.2002
137498	ALU	200310124693.7	ZL200310124693.7	CN	IGMPv2 in PIM-SSM environment	19.12.2003
104895	ALU	10/753328	US7574138	US	PERFORMANCE OPTIMIZATION METHOD IN WAVEBAND SWITCHED TRANSPARENT NETWORKS	09.01.2004
114066	ALU	2003128568	JP4313606	JP	AREA INFORMATION DISTRIBUTION SYSTEM	07.05.2003
104923	ALU	10/768684	US6809695	US	IMPROVED SUBREFLECTOR	02.02.2004
104923	ALU	200410039511.0	ZL200410039511.0	CN	IMPROVED SUBREFLECTOR	03.02.2004
104929	ALU	0302264	FR2851712	FR	PRO-ACTIVE CALL CONNECTION	25.02.2003
104929	ALU	04290332.8	EP1453276	EP	PRO-ACTIVE CALL CONNECTION	09.02.2004
104929	ALU	10/780717	US7480370	US	PRO-ACTIVE CALL CONNECTION	19.02.2004
104929	ALU	200410003165.0	ZL200410003165.0	CN	PRO-ACTIVE CALL CONNECTION	24.02.2004
113240	ALU	10/418079	US7564783	US	Method to efficiently poll mobile terminals for resources in a TDMA/TDD environment	18.04.2003
131247	ALU	10/720194	US7004779	US	LC CONNECTORS UNHOOKING DEVICE	25.11.2003
132276	ALU	10/373105	US6947915	US	MULTIRESOLUTION LEARNING PARADIGM AND SIGNAL PREDICTION	26.02.2003
104564	ALU	10/792846	US7015724	US	RTD-BASED RZ DECISION CIRCUIT	05.03.2004
139157	ALU	10/392227	US7215644	US	INTER-DOMAIN CSPF ALGORITHM FOR SUPPORTING HIERARCHICAL ROUTING IN INTERCONNECTED MULTI-DOMAIN OPTICAL TRANSPORT NETWORKS	19.03.2003
104967	ALU	10/809521	US8140661	US	EMBEDDED ASSURANCE SYSTEM	26.03.2004
104967	ALU	200410030928.0	ZL200410030928.0	CN	EMBEDDED ASSURANCE SYSTEM	26.03.2004
139058	ALU	10/404231	US7518847	US	DC BLOCKING PROTECTOR WITH BYPASS	01.04.2003
113838	ALU	10/787358	US7590131	US	SELF ROUTED AND FAST RESTORED CIRCUIT IN SDH; SONET AND OTH	27.02.2004
114159	ALU	2003312153	JP4203382	JP	METHOD FOR OBTAINING USER DATA TO BE TRANSMITTED TO NETWORK IN UMTS SYSTEM	04.09.2003
135957	ALU	20030026500	KR100965033	KR	ARCHITECTURE FOR AN ALL DIGITAL SUBSCRIBER LINE WITH MULTIPLE POTS/DATA PORTS A	25.04.2003
135957	ALU	2003118436	JP4263525	JP	ARCHITECTURE FOR AN ALL DIGITAL SUBSCRIBER LINE WITH MULTIPLE POTS/DATA PORTS A	23.04.2003
135957	ALU	03142794.4	ZL03142794.4	CN	ARCHITECTURE FOR AN ALL DIGITAL SUBSCRIBER LINE WITH MULTIPLE POTS/DATA PORTS A	24.04.2003
137627	ALU	10/417117	US7536716	US	Labeling Conversion Gateway for Compartmented Multi Operator Network Management over a Heterogeneous Network	17.04.2003
104682	ALU	10/828205	US7405855	US	OPTICALLY RECONFIGURABLE FIBRE GRATING	21.04.2004
105113	ALU	0304853	FR2854017	FR	COMMUNICATION CONTACT CENTER	18.04.2003
105113	ALU	04291018.2	EP1469660	EP	COMMUNICATION CONTACT CENTER	16.04.2004
120795	ALU	10/823643	US7068130	US	SILICON COIL FOR DSL SPLITTERS	14.04.2004
137680	ALU	10/427938	US7346706	US	Equal Cost Multi-Path Routing	02.05.2003
113358	ALU	031451152.2	ZL03145115.2	CN	Common handling of DCC and GCC routing for SDH and OTH Signals	19.06.2003
120863	ALU	10/796125	US7295602	US	AUTONEGOTIATION METHOD FOR XDSL MODEM SYSTEMS	10.03.2004
120863	ALU	200447240	JP4390589	JP	AUTONEGOTIATION METHOD FOR XDSL MODEM SYSTEMS	24.02.2004
120863	ALU	200410004662.2	CN100391214C	CN	AUTONEGOTIATION METHOD FOR XDSL MODEM SYSTEMS	09.03.2004
113880	ALU	10/671671	US7433939	US	Two-Phase Approach	29.09.2003

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
113800	ALU	200310121305.X	ZL200310121305.X	CN	Signaling of Defects for HW Supported Protection Switching Inside an Optical Cross-Connect System	11.12.2003
113914	ALU	10/815723	US7414965	US	Hitless Equipment Protection Switch	02.04.2004
120775	ALU	10/601857	US6996410	US	SOLUTION FOR BROADCAST MODE OF MULTIMEDIA BROADCAST MULTICAST SERVICE.	24.06.2003
120775	ALU	03147838.7	ZL03147838.7	CN	SOLUTION FOR BROADCAST MODE OF MULTIMEDIA BROADCAST MULTICAST SERVICE.	25.06.2003
137680	ALU	04300256.7		EP	Equal Cost Multi-Path Routing	03.05.2004
113443	ALU	02360237.8	EP1365528	GB	Stabilization scheme for vestigial side-band optical filter	12.08.2002
113443	ALU	02360237.8	EP1365528	DE	Stabilization scheme for vestigial side-band optical filter	12.08.2002
113443	ALU	02360237.8	EP1365528	FR	Stabilization scheme for vestigial side-band optical filter	12.08.2002
135983	ALU	03149422.6	ZL03149422.6	CN	HIGH-SPEED DATA-SIGNAL CLASSIFICATION USING LOW-FREQUENCY ELECTRICAL SPECTRAL FINGERPRINTING	18.06.2003
104494	ALU	10/517369	US9258430	US	ENTREPRISE MOBILE WHEN ROAMING UNDER PLMN COVER	13.06.2003
120868	ALU	200410048786.0	ZL549369	CN	NEW RADIUS ATTRIBUTES THAT ALLOW FLEXIBLE AUTHORIZATION/CONFIGURATION FOR MULTICAST SERVICES.	18.06.2004
134101	ALU	10/603918	US8086721	US	Resource management in a network device	25.06.2003
120874	ALU	10/874288	US7330516	US	AUTONOMOUS POWER BACK-OFF FOR REMOTELY DEPLOYED DSL.	24.06.2004
120874	ALU	200410050168-X	ZL553971	CN	AUTONOMOUS POWER BACK-OFF FOR REMOTELY DEPLOYED DSL.	25.06.2004
120851	ALU	10/869893	US7715394	US	ARCHITECTURE FOR BRIDGED ETHERNET RESIDENTIAL ACCESS NETWORKS.	18.06.2004
120851	ALU	200410049675.1	ZL200410049675.1	CN	ARCHITECTURE FOR BRIDGED ETHERNET RESIDENTIAL ACCESS NETWORKS.	23.06.2004
104624	ALU	10/874281	US7805072	US	OPTICAL CHANNEL SHARED PROTECTION RING CONTROL SCHEME WITHOUT K BYTE PROTOCOL IN METROPOLITAN NETWORKS	24.06.2004
137600	ALU	10/601627	US7676559	US	Real-Time Policy Evaluation Mechanism	24.06.2003
120810	ALU	10/686580	US6909978	US	PREPROCESSING OF THE MEASURED S11 SCATTERING PARAMETER FOR SUBSCRIBER LINE IDENTIFICATION.	17.10.2003
120887	ALU	10/886606	US8644343	US	VC SELECTION WITH ONE MAC ADDRESS AT EDGE POINT.	09.07.2004
120887	ALU	200410069254.5	CN100463430C	CN	VC SELECTION WITH ONE MAC ADDRESS AT EDGE POINT.	15.07.2004
113818	ALU	10/656125	US7010114	US	S57 Signaling Server (STP+SAS)	08.09.2003
104658	ALU	10/791887	US7129848	US	INTERNET/WAP SYSTEM FOR HOME OR OFFICE REMOTE MONITORING	04.03.2004
104990	ALU	10/885754	US7949735	US	TRANSACTION FRAMEWORK FOR NETWORK ELEMENTS PROVISIONING BASED ON POLICY MANAGEMENT	08.07.2004
104838	ALU	10/639452	US7437465	US	CALL TRANSFER IN SIP/QSIG NETWORK	13.08.2003
139059	ALU	03156125.X	ZL03156125.X	CN	A CONSTRAINT-BASED SHORTEST PATH FIRST ALGORITHM FOR FIBER SWITCHING	29.08.2003
103453	ALU	10/471402	US7680058	US	DRX PARAMETERS CONFIGURATION BY A DTE FOR GPRS APPLICATION DO NOT DROP SEE LINK	14.03.2002
103453	ALU	02806423.2	ZL02806423.2	CN	DRX PARAMETERS CONFIGURATION BY A DTE FOR GPRS APPLICATION DO NOT DROP SEE LINK	14.03.2002
114104	ALU	200410070859.6	ZL1305254	CN	Virus Remedy	23.07.2004
137659	ALU	10/635602	US7565426	US	Intra-AS Mechanism For Tracing Back Anonymous Network Flows	07.08.2003
137659	ALU	04300412.6		EP	Intra-AS Mechanism For Tracing Back Anonymous Network Flows	29.06.2004
137639	ALU	10/869939	US7593401	US	IGMP GMQ Audit Load Balancing	18.06.2004
137642	ALU	10/869938	US7415015	US	Centralized IGMP GMQ Audit Timing	18.06.2004
134150	ALU	10/746056	US8018852	US	ADAPTIVE ECMP TO A DESTINATION NETWORK BASED ON REVERSE TRAFFIC	24.12.2003
139112	ALU	10/651159	US7315897	US	GMPLS ROUTING ENGINE ARCHITECTURE	28.08.2003
137690	ALU	10/659341	US7254713	US	DoS Attack Mitigation Using Upstream Router Suggested Remedies	11.09.2003
137714	ALU	10/663791	US7415018	US	IP TTL Covert Channel For Flows Trace Back	17.09.2003
120897	ALU	10/944944	US7701879	US	FILTERING AGENT FOR TRUSTED/ALLOWED PEERS IN ACCESS NETWORKS.	21.09.2004
120897	ALU	200410078052.7	ZL531852	CN	FILTERING AGENT FOR TRUSTED/ALLOWED PEERS IN ACCESS NETWORKS.	20.09.2004
114132	ALU	10/785098	US7630322	US	OSPF Monitor	25.02.2004
114132	ALU	200410029711.8	ZL200410029711.8	CN	OSPF Monitor	22.03.2004
114161	ALU	10/895839	US7015771	US	Arrangement for coupling adjustment in directional couplers using coupled TEM-mode lines	22.07.2004
114161	ALU	200410054691.X	ZL200410054691.X	CN	Arrangement for coupling adjustment in directional couplers using coupled TEM-mode lines	30.07.2004

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
114161	ALU	2004203279	AU2004203279	AU	Arrangement for coupling adjustment in directional couplers using coupled TEM-mode lines	20.07.2004
120015	ALU	09/280435	US6845136	US	A METHOD TO SYNCHRONISE DATA AND A TRANSMITTER AND A RECEIVER REALISING SAID METHOD.	29.03.1999
137646	ALU	10/670257	US9438515	US	Network Element Resource Utilization Tracking	26.09.2003
137637	ALU	10/679288	US7509674	US	Improved Access Control Listing Mechanism for Routers	07.10.2003
137637	ALU	200410095909.6	ZL200410095909.6	CN	Improved Access Control Listing Mechanism for Routers	08.10.2004
113804	ALU	10/697120	US7483642	US	Receiver for OTDM transmission systems	31.10.2003
104303	ALU	10/532134	US7706686	US	ADD-DROP COMBINED WITH A SWITCH	21.10.2003
120721	ALU	10/697121	US7610401	US	Per adapter routing table	31.10.2003
134118	ALU	10/690277	US7554980	US	PACKET CLASSIFICATION USING RELEVANCE SCORING	20.10.2003
105242	ALU	0312270	FR2861247	FR	OVERALL VOICE QUALITY IMPROVEMENT	21.10.2003
105242	ALU	10/968259	US7835515	US	OVERALL VOICE QUALITY IMPROVEMENT	20.10.2004
105271	ALU	10/964766	US7643457	US	DYNAMIC REGULATION OF AVAILABLE WIRELESS NETWORK BANDWIDTH	15.10.2004
113647	ALU	10/716467	US7092601	US	Thin film filter/mirror with waveguide substrate	20.11.2003
139139	ALU	10/703802	US7158289	US	OPTICAL SUPERVISORY/ORDERWIRE CHANNEL USING BROADBAND NOISE MODULATION	07.11.2003
137518	ALU	10/717377	US7424652	US	Coherent Counters for Cell Loss Detection and Fault Isolation	19.11.2003
131266	ALU	10/710090	US7720111	US	SDH SYSTEM ARCHITECTURE COMPLIANT WITH ITU G783 SPEC	17.06.2004
131266	ALU	200410070835.0	ZL1620186	CN	SDH SYSTEM ARCHITECTURE COMPLIANT WITH ITU G783 SPEC	20.07.2004
134132	ALU	10/741306	US7852859	US	SIP-PBX PROXY SERVER FOR INTERFACING LEGACY IP-PBXs TO SIP NETWORKS	19.12.2003
137727	ALU	10/720225	US7502447	US	Improved Call Failure Recording	25.11.2003
104457	ALU	2004567788	JP5054283	JP	SIGNALING DRIVEN ACTIVE NETWORK.	01.12.2003
104457	ALU	200380108575.5	ZL20038010857.5	CN	SIGNALING DRIVEN ACTIVE NETWORK.	01.12.2003
139048	ALU	20030092146	KR101018196	KR	LAYER 4 THROUGH 7 SERVER CARD HOSTED BY THE DSLAM	16.12.2003
139048	ALU	2003404253	JP4489415	JP	LAYER 4 THROUGH 7 SERVER CARD HOSTED BY THE DSLAM	03.12.2003
120902	ALU	10/980223	US7933318	US	tone based training during showtime.	04.11.2004
120877	ALU	10/980848	US7440411	US	INTELLIGENT ECHO REDUCTION AGENT	04.11.2004
104494	ALU	03760024.4		EP	ENTREPRISE MOBILE WHEN ROAMING UNDER PLMN COVER	13.06.2003
104494	ALU	2004514321	JP4312712	JP	ENTREPRISE MOBILE WHEN ROAMING UNDER PLMN COVER	13.06.2003
104494	ALU	03813591.4	ZL03813591.4	CN	ENTREPRISE MOBILE WHEN ROAMING UNDER PLMN COVER	13.06.2003
114062	ALU	10/885593	US8089864	US	Temporary SNCP for Restoration	08.07.2004
113968	ALU	02360353.3	EP1432276	GB	Mobiles Scramblermodule	17.12.2002
113968	ALU	02360353.3	EP1432276	DE	Mobiles Scramblermodule	17.12.2002
113968	ALU	02360353.3	EP1432276	FR	Mobiles Scramblermodule	17.12.2002
114066	ALU	10/819285	US7949350	US	AREA INFORMATION DISTRIBUTION SYSTEM	07.04.2004
114066	ALU	200410034701.3	ZL200410034701.3	CN	AREA INFORMATION DISTRIBUTION SYSTEM	21.04.2004
137840	ALU	10/730926	US7487541	US	Flow-Based Method For Tracing Back Single Packets	10.12.2003
137840	ALU	04300865.5		EP	Flow-Based Method For Tracing Back Single Packets	09.12.2004
131244	ALU	10/963713	US7561795	US	PROCEDURE FOR IN-BAND SIGNALLING TO ALLOW ODU-FORWARD PROTECTION INDICATION AND ODU-LINK DEGRADATION INDICATION FOR NEW OTN PROTECTION MECHANISM	14.10.2004
105512	ALU	10/994305	US7583691	US	COMMUNICATION MANAGEMENT METHOD AND MODEM IN SLOTTED ALONA ACCESS	23.11.2004
105512	ALU	200410091757.2	ZL200410091757.2	CN	COMMUNICATION MANAGEMENT METHOD AND MODEM IN SLOTTED ALONA ACCESS	25.11.2004
120961	ALU	11/010437	US7600137	US	PROGRAMMABLE SERVICE SUBSTITUTION FOR SLEEPING DEVICES IN A RESIDENTIAL CONTEXT	14.12.2004
120944	ALU	11/011166	US7457318	US	USE OF IPv6 HEADER FOR ENFORCED FORWARDING IN ACCESS.	15.12.2004
120944	ALU	2004351054	JP4570451	JP	USE OF IPv6 HEADER FOR ENFORCED FORWARDING IN ACCESS.	03.12.2004
120944	ALU	200410098712.8	ZL541244	CN	USE OF IPv6 HEADER FOR ENFORCED FORWARDING IN ACCESS.	14.12.2004
134122	ALU	10/728454	US7912065	US	COMMUNICATION METHOD HAVING IP PHONE LOCATION ASSOCIATION	05.12.2003
134122	ALU	200310123864.4	ZL200310123864.4	CN	COMMUNICATION METHOD HAVING IP PHONE LOCATION ASSOCIATION	31.12.2003
105189	ALU	10/994916	US7813375	US	OPTIMAL TRANSFER OF SDH/SONET FRAMES OVER A MPLS NETWORK USING AN AUTO-ADAPTIVE LOAD BALANCING SESSION	23.11.2004
137794	ALU	10/742239	US7747716	US	Injecting Addresses Into a Virtual Private Network Forwarding Database To Enable Operational, Administrative, and Management Functions	18.12.2003

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
137794	ALU	2004129488	JP4567367	JP	Injecting Addresses Into a Virtual Private Network Forwarding Database To Enable Operational, Administrative, and Management Functions	26.04.2004
137794	ALU	200410063135.9	ZL200410063135.9	CN	Injecting Addresses Into a Virtual Private Network Forwarding Database To Enable Operational, Administrative, and Management Functions	28.04.2004
134140	ALU	10/737684	US8099481	US	HUB OR THIRD PARTY DEVICE DETECTION AND RESOLUTION FOR NETWORK TOPOLOGY	16.12.2003
134174	ALU	10/745743	US7698394	US	GLOBAL NETWORK MANAGEMENT CONFIGURATION **REVISED 134139**	23.12.2003
134147	ALU	10/748487	US7512122	US	IDENTIFYING QOS FLOWS UNIQUELY BY ALLOCATING SOURCE AND DESTINATION INDICIES	29.12.2003
104527	ALU	200410101643.1	ZL200410101643.1	CN	HANDLING INFORMATION FOR ROUTING OPTICAL NETWORKS	20.12.2004
120966	ALU	11/011191	US7529259	US	DSL PHYSICAL LAYER SESSION RESOURCE BROKER AND STABLE VIDEO LINK IMPLEMENTATION.	15.12.2004
135961	ALU	09/989344	US6709292	US	ELECTRICALLY SHIELDED CONNECTOR WITH 180 DEGREE OVER-MOLDED INSULATING COVER	20.11.2001
132687	ALU	10/730992	US7006054	US	Integrated Antenna and Radio Interface	10.12.2003
120863	ALU	03290595.2	EP1458129	GB	AUTONEGOTIATION METHOD FOR XDSL MODEM SYSTEMS	11.03.2003
120863	ALU	03290595.2	EP1458129	ES	AUTONEGOTIATION METHOD FOR XDSL MODEM SYSTEMS	11.03.2003
120863	ALU	03290595.2	EP1458129	IT	AUTONEGOTIATION METHOD FOR XDSL MODEM SYSTEMS	11.03.2003
120863	ALU	03290595.2	EP1458129	DE	AUTONEGOTIATION METHOD FOR XDSL MODEM SYSTEMS	11.03.2003
120863	ALU	03290595.2	EP1458129	FR	AUTONEGOTIATION METHOD FOR XDSL MODEM SYSTEMS	11.03.2003
114096	ALU	11/011216	US7738789	US	Delay Compensation for distributed Radio units in UMTS	15.12.2004
114096	ALU	200510000022.9	ZL200510000022.9	CN	Delay Compensation for distributed Radio units in UMTS	04.01.2005
137821	ALU	10/760277	US7436770	US	IP Flow Limiting	21.01.2004
103866	ALU	10/487082	US7336843	US	ADAPTIVE DIGITAL COMPRESSION	12.09.2002
137824	ALU	10/761343	US7738259	US	Shared Via Decoupling for High-Speed Components	22.01.2004
113709	ALU	10/781626	US7136401	US	Raman fiber laser with stable output power	20.02.2004
114113	ALU	10/873359	US8855504	US	Optical transmission format with trainings sequence	23.06.2004
114159	ALU	10/931972	US7428409	US	METHOD FOR OBTAINING USER DATA TO BE TRANSMITTED TO NETWORK IN UMTS SYSTEM	02.09.2004
114159	ALU	200410058324.7	ZL1592202	CN	METHOD FOR OBTAINING USER DATA TO BE TRANSMITTED TO NETWORK IN UMTS SYSTEM	10.08.2004
105348	ALU	11/002202	US7180998	US	ELECTRONIC CIRCUIT WHICH ALLOWS TO EQUALIZE THE IMPEDANCE OF AN INTERFACE ACCESS AND THE WIRE LINE CONNECTED	03.12.2004
135236	ALU	98902722.2	EP0995322	GB	A TELECOMMUNICATIONS MANAGEMENT SYSTEM	23.01.1998
135236	ALU	98902722.2	EP0995322	IT	A TELECOMMUNICATIONS MANAGEMENT SYSTEM	23.01.1998
135236	ALU	98902722.2	EP0995322	DE	A TELECOMMUNICATIONS MANAGEMENT SYSTEM	23.01.1998
135236	ALU	98902722.2	EP0995322	FR	A TELECOMMUNICATIONS MANAGEMENT SYSTEM	23.01.1998
104967	ALU	200488322	JP4653407	JP	EMBEDDED ASSURANCE SYSTEM	25.03.2004
104990	ALU	2004187587	JP4707973	JP	TRANSACTION FRAMEWORK FOR NETWORK ELEMENTS PROVISIONING BASED ON POLICY MANAGEMENT	25.06.2004
104990	ALU	200410069778.4	ZL200410069778.4	CN	TRANSACTION FRAMEWORK FOR NETWORK ELEMENTS PROVISIONING BASED ON POLICY MANAGEMENT	19.07.2004
114180	ALU	10/951594	US7734472	US	Speech recognition enhancer	29.09.2004
105219	ALU	11/076899	US7567563	US	SECURING PING RESPONSES	11.03.2005
132005	ALU	10/802118	USRE39378	US	OPTICAL CHANNEL REGULATOR AND METHOD	16.03.2004
114142	ALU	10/934537	US7129881	US	Pipelined Analog-to-Digital Converter with variable characteristics	07.09.2004
120016	ALU	10/801755	US7116686	US	ATM TIME REFERENCE TRANSPORT OVER ADSL	15.03.2004
114383	ALU	11/045075	US7123994	US	Power Control Protocol	31.01.2005
113738	ALU	10/827303	US7081988	US	Tilt control of terrestrials EDFA	20.04.2004
137757	ALU	10/898222	US7284162	US	Agent based router diagnostics, monitoring and maintenance	26.07.2004
113388	ALU	02360233.7	EP1389843	GB	Shared Protection Restoration Combined (SPRC)	05.08.2002
113388	ALU	02360233.7	EP1389843	DE	Shared Protection Restoration Combined (SPRC)	05.08.2002
113388	ALU	02360233.7	EP1389843	FR	Shared Protection Restoration Combined (SPRC)	05.08.2002
114047	ALU	10/951599	US7177073	US	Raman amplifier for Second order pumping (in transmission line) and DCF pumping	29.09.2004
131269	ALU	11/081568	US7447199	US	IMPROVED MEMORY BASED SWITCH	17.03.2005
131269	ALU	200510056979.5	ZL200510056979.5	CN	IMPROVED MEMORY BASED SWITCH	24.03.2005
131272	ALU	11/004060	US7778156	US	SWITCHING TIME IMPROVEMENTS OF SECTION/LINE AND EQUIPMENT PROTECTIONS IN SDH AND SONET TECHNOLOGIES.	06.12.2004
105278	ALU	10/867751	US6995727	US	SPLASHPLATE FEED	16.06.2004
105332	ALU	11/113991	US7590062	US	HIERARCHICAL FILTERS TO OPTIMIZE CORRELATION OF END-TO-END PASSIVE MEASUREMENT	26.04.2005
120901	ALU	10/937292	US7406052	US	XDSL BIT SWAP.	10.09.2004

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
114061	ALU	10/873286	US7489879	US	Optical Data Packet source	23.06.2004
132812	ALU	10/161210	US7609682	US	Implementing an Intelligent Network Service for a Packet-Switched Service Using a Node Interfacing a Mobile Communications Network to a Packet Data Network	03.06.2002
114017	ALU	10/862578	US7042635	US	Dynamical Control of Parametric Gain	08.06.2004
114182	ALU	10/893296	US7594164	US	HyperVideo	19.07.2004
137778	ALU	10/830822	US6944256	US	Avoiding Statistics Counter Overflow in a Network Processing Environment	23.04.2004
105278	ALU	200410048328.7	ZL200410048328.7	CN	SPLASHPLATE FEED	17.06.2004
137833	ALU	10/820497	US7633961	US	Scaling VPRN for Thousands of BGP Peers	07.04.2004
120820	ALU	10/882219	US7119546	US	IMPROVE DYNAMIC RANGE OF SINGLE-ENDED LINE TESTING	02.07.2004
120820	ALU	200410062315.5	ZL528276	CN	IMPROVE DYNAMIC RANGE OF SINGLE-ENDED LINE TESTING	01.07.2004
137869	ALU	10/903436	US8599852	US	Open Service Discovery And Routing Mechanism For Configuring Cross-Domain Telecommunication Services	30.07.2004
137928	ALU	10/854272	US7821948	US	OAM CC on Multicast and Multi-Endpoint Paths	27.05.2004
137929	ALU	10/854964	US7436774	US	OAM CC Enabling of Reroute On Loss Of Connectivity (LOC)	27.05.2004
137894	ALU	10/896061	US7057904	US	High Density Circuit Card With Interlocking and Interconnecting Adapter Card	22.07.2004
104679	ALU	0451127	FR2871242	FR	IONIC LIQUIDS USED AS INDEX MATCHING ELEMENT	08.06.2004
104679	ALU	05104741.3		EP	IONIC LIQUIDS USED AS INDEX MATCHING ELEMENT	01.06.2005
104679	ALU	11/146123	US7613378	US	IONIC LIQUIDS USED AS INDEX MATCHING ELEMENT	07.06.2005
113586	ALU	02360235.2	EP1389862	GB	Lawful Interception for a SIP based Network	08.08.2002
113586	ALU	02360235.2	EP1389862	DE	Lawful Interception for a SIP based Network	08.08.2002
113586	ALU	02360235.2	EP1389862	FR	Lawful Interception for a SIP based Network	08.08.2002
104086	ALU	10/505214	US7664029	US	TOPAZ : TRANSPARENT OPTICAL PATHS PROCESS AND ALGORITHMZ	21.02.2002
104086	ALU	2003577465	JP3845087	JP	TOPAZ : TRANSPARENT OPTICAL PATHS PROCESS AND ALGORITHMZ	21.02.2002
104086	ALU	02828250.7	ZL02828250.7	CN	TOPAZ : TRANSPARENT OPTICAL PATHS PROCESS AND ALGORITHMZ	21.02.2002
104658	ALU	03290601.8	EP1457942	GB	INTERNET/WAP SYSTEM FOR HOME OR OFFICE REMOTE MONITORING	11.03.2003
104658	ALU	03290601.8	EP1457942	DE	INTERNET/WAP SYSTEM FOR HOME OR OFFICE REMOTE MONITORING	11.03.2003
104658	ALU	03290601.8	EP1457942	FR	INTERNET/WAP SYSTEM FOR HOME OR OFFICE REMOTE MONITORING	11.03.2003
104398	ALU	10/503058	US7953367	US	SYSTEME HYBRIDE MULTI-SPOTS A REUTILISATION DE FREQUENCE	01.02.2002
104398	ALU	2003565080	JP4044905	JP	SYSTEME HYBRIDE MULTI-SPOTS A REUTILISATION DE FREQUENCE	01.02.2002
104398	ALU	02827456.3	ZL02827456.3	CN	SYSTEME HYBRIDE MULTI-SPOTS A REUTILISATION DE FREQUENCE	01.02.2002
105318	ALU	0451372	FR2872654	FR	DISTRIBUTED RE-SYNCHRONISATION POINTS FOR CIRCUIT EMULATION SERVICES	30.06.2004
105318	ALU	05300451.1	EP1612979	EP	DISTRIBUTED RE-SYNCHRONISATION POINTS FOR CIRCUIT EMULATION SERVICES	03.06.2005
105318	ALU	11/166216	US7564876	US	DISTRIBUTED RE-SYNCHRONISATION POINTS FOR CIRCUIT EMULATION SERVICES	27.06.2005
105318	ALU	200510080745.4	ZL200510080745.4	CN	DISTRIBUTED RE-SYNCHRONISATION POINTS FOR CIRCUIT EMULATION SERVICES	30.06.2005
137337	ALU	10/156930	US6574286	US	Modulation system having on-lin IQ calibration	29.05.2002
105272	ALU	10/964615	US7463603	US	SYSTEM TO HELP SECURITY SERVICES IN WIRELESS NETWORK	15.10.2004
105272	ALU	200410084083.3	ZL200410084083.3	CN	SYSTEM TO HELP SECURITY SERVICES IN WIRELESS NETWORK	18.10.2004
114324	ALU	11/150127	US7688717	US	Self Routed and Fast Restored Circuit in SDH, SONET and OTH	13.06.2005
114324	ALU	200510080409.X	ZL200510080409.X	CN	Self Routed and Fast Restored Circuit in SDH, SONET and OTH	01.07.2005
137812	ALU	10/888535	US8028052	US	Queue Architecture for Multi-Server Request	09.07.2004
114035	ALU	10/952882	US7064887	US	Gain control for lumped Raman fiber amplifier	30.09.2004
113444	ALU	02360246.9	EP1359692	GB	Optical demultiplexing of VSB based systems	26.08.2002
113444	ALU	02360246.9	EP1359692	DE	Optical demultiplexing of VSB based systems	26.08.2002
113444	ALU	02360246.9	EP1359692	FR	Optical demultiplexing of VSB based systems	26.08.2002
105477	ALU	0451627	FR2873524	FR	OMNI CRYSTAL CHANNEL ALIAS MULTI HOMING LINK AGGREGATION	22.07.2004
139177	ALU	10/894795	US7660241	US	EFFICIENT LOAD BALANCING IN VPLS NETWORKS	20.07.2004
120216	ALU	10/895316	US7110521	US	INTERFACE BETWEEN IN AND CTI.	21.07.2004
121018	ALU	200510084095.0	ZL541685	CN	PROVIDE PROTOCOL BASES AND PORT BASED VLAN CONFIGURATION DYNAMICALLY FROM RADIUS SERVER.	12.07.2005
114401	ALU	200510068132.9	ZL200510068132.9	CN	Inherent Backhauling for Point to Multipoint Radio Base Station	27.04.2005

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
114446	ALU	11/110707	US7765396	US	Data Authentication Method and Agent Based System	21.04.2005
114259	ALU	11/120943	US8393250	US	Tool for stripping off a jacket from tubes or cables	04.05.2005
114053	ALU	11/079082	US8045465	US	Solution to the near far effect in multi mode WLAN for TCP connections	15.03.2005
114274	ALU	11/167792	US7697425	US	Method for efficiently handling downlink multicast traffic in discontinuous networks	28.06.2005
114250	ALU	11/174625	US7378921	US	Symmetrical radio frequency coupling	06.07.2005
114250	ALU	200510083802.4	ZL200510083802.4	CN	Symmetrical radio frequency coupling	07.07.2005
137875	ALU	10/899251	US7676838	US	A Mechanism To Reduce Signaling Latencies For Offering Real-Time Services To Roaming Mobile Corporate Users	26.07.2004
139250	ALU	2005153516	JP4727298	JP	ALTERNATIVE BPON VIDEO OVERLAY USING PACKET VIDEO OVER GIGABIT ETHERNET	26.05.2005
105477	ALU	11/185789	US7457256	US	OMNI CRYSTAL CHANNEL ALIAS MULTI HOMING LINK AGGREGATION	21.07.2005
114104	ALU	03291958.1	EP1505797	GB	Virus Remedy	04.08.2003
114104	ALU	03291958.1	EP1505797	IT	Virus Remedy	04.08.2003
114104	ALU	03291958.1	EP1505797	DE	Virus Remedy	04.08.2003
114104	ALU	03291958.1	EP1505797	FR	Virus Remedy	04.08.2003
105113	ALU	10/553452	US7319746	US	COMMUNICATION CONTACT CENTER	16.04.2004
105113	ALU	2006505802	JP4713463	JP	COMMUNICATION CONTACT CENTER	16.04.2004
105113	ALU	200480013639.8	ZL200480013639.8	CN	COMMUNICATION CONTACT CENTER	16.04.2004
114423	ALU	11/207949	US7529183	US	Self Routed and Fast Restored Circuit in SDH, SONET and OTH	22.08.2005
114423	ALU	200510097935.7	ZL200510097935.7	CN	Self Routed and Fast Restored Circuit in SDH, SONET and OTH	31.08.2005
105462	ALU	11/203976	US7395186	US	ADAPTIVE DIAGNOSIS SYSTEM FOR IP SERVICES	16.08.2005
105299	ALU	0451993	FR2875016	FR	MODE CONVERTER	08.09.2004
105305	ALU	11/219830	US7471699	US	GLUE MAC - IMPROVING DBORN PERFORMANCE BY USE OF GLUING MAC	07.09.2005
134175	ALU	10/941529	US7706302	US	ROUTING FORWARDING DATABASE LARGER THAN THE BCM 56XX FAMILY OF ASICS CAN SUPPORT IN HARDWARE TABLES	14.09.2004
113358	ALU	02360218.8	EP1385296	GB	Common handling of DCC and GCC routing for SDH and OTH Signals	22.07.2002
113358	ALU	02360218.8	EP1385296	DE	Common handling of DCC and GCC routing for SDH and OTH Signals	22.07.2002
113358	ALU	02360218.8	EP1385296	FR	Common handling of DCC and GCC routing for SDH and OTH Signals	22.07.2002
105488	ALU	11/226346	US7536103	US	WAVELENGTH-SWITCH-BASED MODULAR PATCH-PANELS	15.09.2005
105488	ALU	200510103100.8	ZL200510103100.8	CN	WAVELENGTH-SWITCH-BASED MODULAR PATCH-PANELS	19.09.2005
104991	ALU	11/017940	US7746801	US	AUTOMATIC FLOW MEASUREMENT ADAPTATION ACCORDING TO ITS CHARACTERISTICS	22.12.2004
121021	ALU	11/225053	US9118739	US	A WEB SERVICE COMPLIANT ALTERNATIVE FOR THE WT-87 MANAGEMENT PROTOCOL.	14.09.2005
121021	ALU	200510113281.2	ZL200510113281.2	CN	A WEB SERVICE COMPLIANT ALTERNATIVE FOR THE WT-87 MANAGEMENT PROTOCOL.	16.09.2005
104366	ALU	10/510685	US8971236	US	System And Method For Real-Time Interconnection Of Elements Of A Wide Area Monitoring, Measurement Or Data Collection System Through A Direct Digital Satellite Broadcasting Multiplexing System	09.04.2002
104366	ALU	2003582930	JP4439923	JP	System And Method For Real-Time Interconnection Of Elements Of A Wide Area Monitoring, Measurement Or Data Collection System Through A Direct Digital Satellite Broadcasting Multiplexing System	09.04.2002
104366	ALU	02828926.9	ZL02828926.9	CN	System And Method For Real-Time Interconnection Of Elements Of A Wide Area Monitoring, Measurement Or Data Collection System Through A Direct Digital Satellite Broadcasting Multiplexing System	09.04.2002
131247	ALU	03290423.7	EP1450185	GB	LC CONNECTORS UNHOOKING DEVICE	21.02.2003
131247	ALU	03290423.7	EP1450185	DE	LC CONNECTORS UNHOOKING DEVICE	21.02.2003
131247	ALU	03290423.7	EP1450185	FR	LC CONNECTORS UNHOOKING DEVICE	21.02.2003
120996	ALU	11/227229	US7991072	US	DSL MODEM WITH CONTROLLED TRANSMIT SIGNAL QUALITY DEGRADATION.	16.09.2005
120996	ALU	200510105524.8	ZL10105524.8	CN	DSL MODEM WITH CONTROLLED TRANSMIT SIGNAL QUALITY DEGRADATION.	23.09.2005
137915	ALU	10/962488	US7554970	US	Simulated Annealing For Traffic Matrix Estimation (SATIME)	13.10.2004
137988	ALU	11/248147	US7792885	US	Database RAM Cache	13.10.2005
114072	ALU	10/975376	US7477678	US	Resource Efficient Path Searcher for CDMA/UMTS	29.10.2004
114072	ALU	200410086635.4	ZL200410086635.4	CN	Resource Efficient Path Searcher for CDMA/UMTS	19.11.2004

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
139250	ALU	10/974074	US9413487	US	ALTERNATIVE BPON VIDEO OVERLAY USING PACKET VIDEO OVER GIGABIT ETHERNET	27.10.2004
105736	ALU	11/256005	US8005024	US	IP VIDEOCONFERENCE USING PSTN VOICE	24.10.2005
134202	ALU	11/028351	US7417953	US	PORT RE-ENABLING BY MONITORING LINK STATUS	30.12.2004
134202	ALU	05023894.8		EP	PORT RE-ENABLING BY MONITORING LINK STATUS	02.11.2005
105478	ALU	11/269650	US7889736	US	Sanity Proved BGP-update message	09.11.2005
114132	ALU	03290742.0	EP1463235	GB	OSPF Monitor	24.03.2003
114132	ALU	03290742.0	EP1463235	IT	OSPF Monitor	24.03.2003
114132	ALU	03290742.0	EP1463235	DE	OSPF Monitor	24.03.2003
114132	ALU	03290742.0	EP1463235	FR	OSPF Monitor	24.03.2003
					MAC ADDRESS ANTI-SPOOFING FOR A SECURE ETHERNET BROADBAND ACCESS NETWORK	
121005	ALU	11/067941	US8069473	US		01.03.2005
121053	ALU	11/177313	US7593397	US	SECURED MAC LEARNING	11.07.2005
121053	ALU	200510080622.0	ZL10080622.0	CN	SECURED MAC LEARNING	04.07.2005
121075	ALU	11/265247	US7599366	US	FLOW CONCEPT	03.11.2005
121075	ALU	200510126096.7	ZL10126096.7	CN	FLOW CONCEPT	24.11.2005
137641	ALU	11/006558	US7489684	US	IGMP on LT Architecture	08.12.2004
137870	ALU	11/010332	US7675873	US	Enhanced IP-Voice Conferencing	14.12.2004
121037	ALU	11/296451	US7730251	US	INCREASED NUMBER OF POSSIBILITIES WHILE USING FEW PINS.	08.12.2005
121017	ALU	11/302267	US8571094	US	ENHANCED NOISE MEASUREMENT.	14.12.2005
					A METHOD TO SYNCHRONISE DATA AND A TRANSMITTER AND A RECEIVER REALISING SAID METHOD.	
120015	ALU	11/026258	US7372930	US		30.12.2004
					PRESENCE AND PREFERENCE ENABLED AND AUTOMATICALLY CUSTOMIZABLE CALL RESPONSE USING CALLER'S PREFERRED CONTACTING CHANNEL(S)	
139314	ALU	11/016254	US7359496	US		17.12.2004
					PRESENCE AND PREFERENCE ENABLED AND AUTOMATICALLY CUSTOMIZABLE CALL RESPONSE USING CALLER'S PREFERRED CONTACTING CHANNEL(S)	
139314	ALU	05027289.7		EP		14.12.2005
139287	ALU	11/020373	US8180034	US	CTI-ENABLED SIP PHONES FOR CALL CENTER FUNCTIONS	22.12.2004
					SETTING UP AND MODIFYING MULTI-PARTY CONFERENCING SESSIONS (VOICE AND/OR VIDEO).	
121102	ALU	200510137375.3	CN100463406C	CN		23.12.2005
121066	ALU	11/305017	US8023993	US	META SIGNALLING FOR MULTI-RADIO TECHNOLOGIES	19.12.2005
121081	ALU	11/313922	US7567613	US	ACTIVE SELF TEST FOR IN-HOUSE WIRING PROBLEMS.	22.12.2005
121089	ALU	11/305270	US7529176	US	LINE MEASUREMENT IN RT TO DERIVE TRANSMIT PSD AT THE RT.	19.12.2005
139254	ALU	11/020898	US8274899	US	AUTOCONFIGURATION OF ETHERNET OAM LOOPBACK POINTS	22.12.2004
					METHOD TO MINIMIZE LEAKAGE OF OAM FRAMES OUTSIDE ETHERNET OAM DOMAIN	
139255	ALU	200510134038.9	ZL200510134038.9	CN		22.12.2005
134177	ALU	11/011876	US7917944	US	SECURE AUTHENTICATION ADVERTISEMENT PROTOCOL	13.12.2004
134177	ALU	200510134283.X	ZL10134283.X	CN	SECURE AUTHENTICATION ADVERTISEMENT PROTOCOL	13.12.2005
105685	ALU	11/312741	US8498545	US	STABILISED DPSK DEMODULATOR WITH WAVELENGTH TRACKING	21.12.2005
105685	ALU	200510132814.1	ZL200510132814.1	CN	STABILISED DPSK DEMODULATOR WITH WAVELENGTH TRACKING	22.12.2005
139270	ALU	11/023784	US7855968	US	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	28.12.2004
139271	ALU	11/024077	US8054751	US	REMOTE ACCESS LINK FAULT INDICATION	28.12.2004
					OAM DOMAIN CONFIGURATION USING GARP (GENERIC OAM REGISTRATION PROTOCOL - GORP)	
139292	ALU	11/023716	US7512141	US		28.12.2004
134187	ALU	11/027873	US7751421	US	TRAFFIC GENERATOR/MONITOR MODE	29.12.2004
134157	ALU	11/028347	US7536007	US	LADDER STRUCTURE FOR ECHO CANCELLATION APPLICATIONS	30.12.2004
134210	ALU	11/028357	US7596220	US	LADDER STRUCTURE FOR ECHO CANCELLATION APPLICATIONS	30.12.2004
					RETAINING USAGE OF THE PRIMARY ROUTER MAC ADDRESS THROUGHOUT MULTIPLE FAILURE OF THE PRIMARY ELEMENT OF A STACK OF SWITCHES/ROUTERS	
134195	ALU	11/028346	US7630299	US		30.12.2004
139271	ALU	200510069065.2	ZL200510069065.2	CN	REMOTE ACCESS LINK FAULT INDICATION	10.05.2005
					METHOD AND ARCHITECTURE FOR PROVIDING TECHNOLOGY INDEPENDENT WIRELESS SERVICES MIGRATION	
139359	ALU	09/924785	US7054661	US		08.08.2001
137816	ALU	11/032023	US7463587	US	Pre-computed Paths for Policy-Based Routing	11.01.2005
114571	ALU	11/285292	US7620319	US	Distributed PON TDR	23.11.2005
114571	ALU	2005347511	JP4570555	JP	Distributed PON TDR	01.12.2005
104493	ALU	03290638.0	EP1349400	GB	PROVIDING PRIVATE SERVICES TO DISTANT MOBILE TERMINAL	14.03.2003
104493	ALU	03290638.0	EP1349400	IT	PROVIDING PRIVATE SERVICES TO DISTANT MOBILE TERMINAL	14.03.2003
104493	ALU	03290638.0	EP1349400	DE	PROVIDING PRIVATE SERVICES TO DISTANT MOBILE TERMINAL	14.03.2003
104493	ALU	03290638.0	EP1349400	FR	PROVIDING PRIVATE SERVICES TO DISTANT MOBILE TERMINAL	14.03.2003
					METHOD AND SYSTEM FOR PROCESSING LOAD DISTRIBUTION FOR A PACKETIZED TELECOMMUNICATION NETWORK ENTITY	
139363	ALU	09/935228	US6772224	US		22.08.2001
150023	ALU	11/041727	US7323787	US	Off-grid Decoupling of BGA Devices	25.01.2005

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
139364	ALU	10/495008	US8483206	US	METHOD AND SYSTEM FOR PROVIDING A MULTIMEDIA CALL MODEL	15.11.2002
121022	ALU	11/091888	US8509216	US	HOME IP PLUG CONTROLLER.	29.03.2005
121022	ALU	200527958	KR101102192	KR	HOME IP PLUG CONTROLLER.	04.04.2005
121022	ALU	200587760	JP4468848	JP	HOME IP PLUG CONTROLLER.	25.03.2005
121022	ALU	200510055774.5		CN	HOME IP PLUG CONTROLLER.	21.03.2005
137926	ALU	11/102308	US7903638	US	Decentralized Architecture for ATM-Based Bonding of xDSL Lines	08.04.2005
114142	ALU	03292327.8	EP1521370	GB	Pipelined Analog-to-Digital Converter with variable characteristics	23.09.2003
114142	ALU	03292327.8	EP1521370	DE	Pipelined Analog-to-Digital Converter with variable characteristics	23.09.2003
114142	ALU	03292327.8	EP1521370	FR	Pipelined Analog-to-Digital Converter with variable characteristics	23.09.2003
121082	ALU	11/362814	US7529840	US	BI-DIRECTIONAL SOAP SESSION OVER UNI DIRECTIONAL HTTP SESSION.	28.02.2006
121082	ALU	200610058075.0	ZL570122	CN	BI-DIRECTIONAL SOAP SESSION OVER UNI DIRECTIONAL HTTP SESSION.	28.02.2006
114282	ALU	11/192355	US7409166	US	Conversion from alternated-polarization to single-polarization : application to bit-to-bit polarization interleaving	29.07.2005
114282	ALU	200510093716.1	ZL200510093716.1	CN	Conversion from alternated-polarization to single-polarization : application to bit-to-bit polarization interleaving	23.08.2005
131299	ALU	200610057784.7	ZL100493037C	CN	OUTPUT DRIVEN MEMORY BASED SWITCH FOR TDM AND PACKET DATA CROSSCONNECTION	27.02.2006
139378	ALU	10/494912	US7263354	US	METHOD AND SYSTEM FOR PROVIDING WIRELESS SERVICES USING AN ACCESS NETWORK AND A CORE NETWORK BASED ON DIFFERENT TECHNOLOGIES	07.05.2004
139380	ALU	09/934987	US7016359	US	SYSTEM AND METHOD FOR PROVIDING HYBRID VOICE AND PACKET DATA SERVICES TO A MOBILE TELECOMMUNICATIONS DEVICE	22.08.2001
139379	ALU	10/499613	US7369528	US	METHOD AND SYSTEM TO SEND GSM SMS MESSAGE OVER CDMA RADIO NETWORK TO A GSM DESTINATION SMS SERVICE CENTER IN THE CORE NETWORK	19.12.2002
139370	ALU	10/509312	US8417294	US	METHOD AND SYSTEM FOR PROVIDING DATA SERVICES IN A HYBRID NETWORK	27.03.2003
114113	ALU	03292040.7	EP1508983	GB	Optical transmission format with trainings sequence	18.08.2003
114113	ALU	03292040.7	EP1508983	DE	Optical transmission format with trainings sequence	18.08.2003
114113	ALU	03292040.7	EP1508983	FR	Optical transmission format with trainings sequence	18.08.2003
104086	ALU	02704874.3	EP1479183	GB	TOPAZ : TRANSPARENT OPTICAL PATHS PROCESS AND ALGORITHMZ	21.02.2002
104086	ALU	02704874.3	EP1479183	IT	TOPAZ : TRANSPARENT OPTICAL PATHS PROCESS AND ALGORITHMZ	21.02.2002
104086	ALU	02704874.3	EP1479183	DE	TOPAZ : TRANSPARENT OPTICAL PATHS PROCESS AND ALGORITHMZ	21.02.2002
104086	ALU	02704874.3	EP1479183	FR	TOPAZ : TRANSPARENT OPTICAL PATHS PROCESS AND ALGORITHMZ	21.02.2002
139279	ALU	11/229114	US7508757	US	A ROBUST ADAPTIVE SLIDING WINDOW SCHEME FOR MAC TABLE OVERFLOW IN AN AUTHENTICATION ENABLED ETHERNET NETWORK	16.09.2005
121028	ALU	05290778.9		EP	CONTEXT INTERACTION SYSTEM.	06.04.2005
105620	ALU	11/134493	US7620012	US	9763 E1 COMPRESSOR - ROUTAGE LOCAL DU TRAFIC LOCAL	23.05.2005
114739	ALU	11/255203	US7742502	US	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	21.10.2005
114739	ALU	200510116820.8	ZL200510116820.8	CN	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	27.10.2005
104689	ALU	03293179.2	EP1435534	GB	UV TRANSPARENT INTERPENETRATED POLYMER NETWORK COATING FOR FBG	16.12.2003
104689	ALU	03293179.2	EP1435534	IT	UV TRANSPARENT INTERPENETRATED POLYMER NETWORK COATING FOR FBG	16.12.2003
104689	ALU	03293179.2	EP1435534	DE	UV TRANSPARENT INTERPENETRATED POLYMER NETWORK COATING FOR FBG	16.12.2003
104689	ALU	03293179.2	EP1435534	FR	UV TRANSPARENT INTERPENETRATED POLYMER NETWORK COATING FOR FBG	16.12.2003
139360	ALU	10/531527	US7756518	US	METHOD AND SYSTEM FOR MINIMIZING CALL SETUP DELAY FOR CALLS OCCURRING IN ONE OR MULTIPLE WIRELESS NETWORKS	15.10.2003
139360	ALU	200380103343.0	ZL200380103343.0	CN	METHOD AND SYSTEM FOR MINIMIZING CALL SETUP DELAY FOR CALLS OCCURRING IN ONE OR MULTIPLE WIRELESS NETWORKS	15.10.2003
104679	ALU	200510075235.8	ZL200510075235.8	CN	IONIC LIQUIDS USED AS INDEX MATCHING ELEMENT	07.06.2005
104967	ALU	04290706.3	EP1463238	GB	EMBEDDED ASSURANCE SYSTEM	15.03.2004

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
104967	ALU	04290706.3	EP1463238	ES	EMBEDDED ASSURANCE SYSTEM	15.03.2004
104967	ALU	04290706.3	EP1463238	IT	EMBEDDED ASSURANCE SYSTEM	15.03.2004
104967	ALU	04290706.3	EP1463238	DE	EMBEDDED ASSURANCE SYSTEM	15.03.2004
104967	ALU	04290706.3	EP1463238	FR	EMBEDDED ASSURANCE SYSTEM	15.03.2004
113738	ALU	03291119.0	EP1478109	GB	Tilt control of terrestrials EDFA	13.05.2003
113738	ALU	03291119.0	EP1478109	DE	Tilt control of terrestrials EDFA	13.05.2003
113738	ALU	03291119.0	EP1478109	FR	Tilt control of terrestrials EDFA	13.05.2003
114259	ALU	200510074827.8	ZL200510074827.8	CN	Tool for stripping off a jacket from tubes or cables	03.06.2005
114393	ALU	200510068081.X	ZL200510068081.X	CN	Multi-Modal Proxy System	16.05.2005
113647	ALU	02360333.5	EP1426794	GB	Thin film filter/mirror with waveguide substrate	03.12.2002
113647	ALU	02360333.5	EP1426794	DE	Thin film filter/mirror with waveguide substrate	03.12.2002
113647	ALU	02360333.5	EP1426794	FR	Thin film filter/mirror with waveguide substrate	03.12.2002
105278	ALU	04291540.5	EP1489688	GB	SPLASHPLATE FEED	16.06.2004
105278	ALU	04291540.5	EP1489688	IT	SPLASHPLATE FEED	16.06.2004
105278	ALU	04291540.5	EP1489688	DE	SPLASHPLATE FEED	16.06.2004
105278	ALU	04291540.5	EP1489688	FR	SPLASHPLATE FEED	16.06.2004
121012	ALU	04291930.8	EP1622311	GB	ZERO CONFIGURATION OF CPE MANAGEMENT SERVER.	29.07.2004
121012	ALU	04291930.8	EP1622311	DE	ZERO CONFIGURATION OF CPE MANAGEMENT SERVER.	29.07.2004
121012	ALU	04291930.8	EP1622311	FR	ZERO CONFIGURATION OF CPE MANAGEMENT SERVER.	29.07.2004
121080	ALU	11/133297	US7827500	US	ENHANCED EXPANSION FOR COMMAND LINE LANGUAGE.	20.05.2005
105462	ALU	200510082645.5	ZL200510082645.5	CN	ADAPTIVE DIAGNOSIS SYSTEM FOR IP SERVICES	06.07.2005
131302	ALU	11412747	US7881610	US	METHOD FOR TRANSMISSION OF OPTICAL CHANNELS AT HIGH BIT-RATE OVER DISPERSIVE OPTICAL FIBRES THROUGH SELECTION OF SUITABLE WAVELENGTH RANGES	28.04.2006
150039	ALU	11/130171	US8675653	US	Co-Existing Static And Dymanic IP Multicast	17.05.2005
150039	ALU	200610092894.7	ZL200610092894.7	CN	Co-Existing Static And Dymanic IP Multicast	17.05.2006
113914	ALU	03290911.1	EP1467495	GB	Hitless Equipment Protection Switch	11.04.2003
113914	ALU	03290911.1	EP1467495	IT	Hitless Equipment Protection Switch	11.04.2003
113914	ALU	03290911.1	EP1467495	DE	Hitless Equipment Protection Switch	11.04.2003
113914	ALU	03290911.1	EP1467495	FR	Hitless Equipment Protection Switch	11.04.2003
137986	ALU	11/137548	US7881291	US	Packet Classification Acceleration Using Spectral Analysis	26.05.2005
131300	ALU	11/435829	US8270300	US	EXTENSION TO RSVP-TE FOR SUPPORTING OAM CONFIGURATION	18.05.2006
121098	ALU	11/372129	US7724810	US	ON LINE SELF TEST FOR DSLAM	10.03.2006
114035	ALU	03292706.3	EP1528698	GB	Gain control for lumped Raman fiber amplifier	30.10.2003
114035	ALU	03292706.3	EP1528698	DE	Gain control for lumped Raman fiber amplifier	30.10.2003
114035	ALU	03292706.3	EP1528698	FR	Gain control for lumped Raman fiber amplifier	30.10.2003
105957	ALU	11/453794	US8040887	US	E1 OVER ETHERNET TRANSPORT	16.06.2006
105957	ALU	200610092285.1	ZL200610092285.1	CN	E1 OVER ETHERNET TRANSPORT	16.06.2006
105947	ALU	11/453795	US7944945	US	STM-1/STS-3 OVER ETHERNET TRANSPORT	16.06.2006
105947	ALU	200610092287.0	ZL100446498C	CN	STM-1/STS-3 OVER ETHERNET TRANSPORT	16.06.2006
105761	ALU	11/455694	US7761082	US	TIME CREDIT TRANSFER SERVICE BETWEEN MOBILE PHONES	20.06.2006
139292	ALU	200510083063.9	ZL200510083063.9	CN	OAM DOMAIN CONFIGURATION USING GARP (GENERIC OAM REGISTRATION PROTOCOL - GORP)	08.07.2005
104838	ALU	03292020.9	EP1389863	GB	CALL TRANSFER IN SIP/QSIG NETWORK	12.08.2003
104838	ALU	03292020.9	EP1389863	IT	CALL TRANSFER IN SIP/QSIG NETWORK	12.08.2003
104838	ALU	03292020.9	EP1389863	DE	CALL TRANSFER IN SIP/QSIG NETWORK	12.08.2003
104838	ALU	03292020.9	EP1389863	FR	CALL TRANSFER IN SIP/QSIG NETWORK	12.08.2003
104457	ALU	03290056.5	EP1437867	GB	SIGNALING DRIVEN ACTIVE NETWORK.	10.01.2003
104457	ALU	03290056.5	EP1437867	IT	SIGNALING DRIVEN ACTIVE NETWORK.	10.01.2003
104457	ALU	03290056.5	EP1437867	DE	SIGNALING DRIVEN ACTIVE NETWORK.	10.01.2003
104457	ALU	03290056.5	EP1437867	FR	SIGNALING DRIVEN ACTIVE NETWORK.	10.01.2003
114180	ALU	03292957.2	EP1536412	GB	Speech recognition enhancer	27.11.2003
114180	ALU	03292957.2	EP1536412	DE	Speech recognition enhancer	27.11.2003
114180	ALU	03292957.2	EP1536412	FR	Speech recognition enhancer	27.11.2003
114551	ALU	11/192356	US7280188	US	Low cost fibre monitoring by reusing of transceiver components	29.07.2005
105305	ALU	200510102507.9	ZL200510102507.9	CN	GLUE MAC - IMPROVING DBORN PERFORMANCE BY USE OF GLUING MAC	08.09.2005
105477	ALU	200510098039.2	ZL200510098039.2	CN	OMNI CRYSTAL CHANNEL ALIAS MULTI HOMING LINK AGGREGATION	22.07.2005
105657	ALU	11/483184	US7430229	US	STRUCTURE AND PROCESSING OF AN ELECTRO-ABSORPTION MODULATED LASER SUITABLE FOR LOW COST, COOLER-LESS, HIGH SPEED TRANSMITTERS	10.07.2006
139277	ALU	11/182234	US7801126	US	PACKET PRIORITY CODING SCHEME - ** GOVERNMENT FUNDING NIST **	15.07.2005
114860	ALU	11/452405	US7417498	US	Feedback Bridge for RF Amplifier	14.06.2006

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
114860	ALU	200610092289.X	ZL200610092289.X	CN	Feedback Bridge for RF Amplifier	16.06.2006
137999	ALU	11/186866	US7984493	US	DNS-Based Enforcement for Confinement and Detection of Network Malicious Activities	22.07.2005
102819	ALU	09/808025	US7184775	US	Resources allocation based on a weighted fair queueing in a radiocommunications system.	15.03.2001
113804	ALU	02360328.5	EP1427123	GB	Receiver for OTDM transmission systems	27.11.2002
113804	ALU	02360328.5	EP1427123	DE	Receiver for OTDM transmission systems	27.11.2002
113804	ALU	02360328.5	EP1427123	FR	Receiver for OTDM transmission systems	27.11.2002
120763	ALU	02292677.8	EP1416290	GB	MEMORY TRAP TREE.	28.10.2002
120763	ALU	02292677.8	EP1416290	DE	MEMORY TRAP TREE.	28.10.2002
120763	ALU	02292677.8	EP1416290	FR	MEMORY TRAP TREE.	28.10.2002
114608	ALU	11/446263	US7864660	US	Low cost transport for pico cell coverage	05.06.2006
114608	ALU	200610093530.0	ZL200610093530.0	CN	Low cost transport for pico cell coverage	26.06.2006
139384	ALU	11/198115	US7778627	US	CELLPHONE BASED ANTI-SPAM SCHEME	04.08.2005
114161	ALU	03291939.1	EP1503447	GB	Arrangement for coupling adjustment in directional couplers using coupled TEM-mode lines	31.07.2003
114161	ALU	03291939.1	EP1503447	DE	Arrangement for coupling adjustment in directional couplers using coupled TEM-mode lines	31.07.2003
114161	ALU	03291939.1	EP1503447	FR	Arrangement for coupling adjustment in directional couplers using coupled TEM-mode lines	31.07.2003
114701	ALU	11/452406	US7865145	US	Radio base station with multipurpose VSWR measurement unit	14.06.2006
114701	ALU	200610087942.3	ZL200610087942.3	CN	Radio base station with multipurpose VSWR measurement unit	08.06.2006
132110	ALU	05076150.1		EP	ASAM Architecture	17.05.2005
114514	ALU	200510103546.0	ZL200510103546.0	CN	Push to Video	21.09.2005
114731	ALU	11/485297	US7656944	US	Decision feedback equalizer with analog feedback and eye monitor for automatic coefficient and threshold adaptation	13.07.2006
114731	ALU	200610108316.8	ZL10108316.8	CN	Decision feedback equalizer with analog feedback and eye monitor for automatic coefficient and threshold adaptation	01.08.2006
114924	ALU	11/485327	US7843851	US	Distributed routing policy in multi layer networks	13.07.2006
114924	ALU	200610108841.X	ZL200610108841.X	CN	Distributed routing policy in multi layer networks	14.08.2006
134175	ALU	200510102920.5	ZL200510102920.5	CN	ROUTING FORWARDING DATABASE LARGER THAN THE BCM 56XX FAMILY OF ASICS CAN SUPPORT IN HARDWARE TABLES	14.09.2005
105791	ALU	0508386	FR2889636	FR	MONOLITHIC INTEGRATION OF A SEMICONDUCTOR OPTICAL AMPLIFIER (SOA) AND A PHOTODIODE USING A COMMON EVANESCENT WAVEGUIDE STRUCTURE	05.08.2005
105791	ALU	06118344.8		EP	MONOLITHIC INTEGRATION OF A SEMICONDUCTOR OPTICAL AMPLIFIER (SOA) AND A PHOTODIODE USING A COMMON EVANESCENT WAVEGUIDE STRUCTURE	02.08.2006
105791	ALU	11/498254	US7505645	US	MONOLITHIC INTEGRATION OF A SEMICONDUCTOR OPTICAL AMPLIFIER (SOA) AND A PHOTODIODE USING A COMMON EVANESCENT WAVEGUIDE STRUCTURE	03.08.2006
105791	ALU	200610110661.5	ZL200610110661.5	CN	MONOLITHIC INTEGRATION OF A SEMICONDUCTOR OPTICAL AMPLIFIER (SOA) AND A PHOTODIODE USING A COMMON EVANESCENT WAVEGUIDE STRUCTURE	07.08.2006
114782	ALU	11/485454	US7400387	US	Fiber Monitoring in Optical Burst Mode	13.07.2006
114782	ALU	200610115724.6	ZL200610115724.6	CN	Fiber Monitoring in Optical Burst Mode	11.08.2006
121129	ALU	11/514884	US7983331	US	DETECTING MISSING DSL FILTER/SPLITTER.	05.09.2006
139416	ALU	11/227638	US7801284	US	DIAL BY NAME WITH PRESENCE	15.09.2005
137962	ALU	11/213010	US7619989	US	Passive Real-Time Address Space Validation System	26.08.2005
137962	ALU	200610137197.9	ZL200610137197.9	CN	Passive Real-Time Address Space Validation System	25.08.2006
121099	ALU	11/510828	US7702008	US	VIRTUAL BINDER IDENTIFICATION BY MEANS OF CODING INFORMATION.	28.08.2006
121099	ALU	200610115988.1	ZL200610115988.1	CN	VIRTUAL BINDER IDENTIFICATION BY MEANS OF CODING INFORMATION.	22.08.2006
105736	ALU	2005298387	JP4786993	JP	IP VIDEOCONFERENCE USING PSTN VOICE	13.10.2005
105736	ALU	200510116936.1	ZL200510116936.1	CN	IP VIDEOCONFERENCE USING PSTN VOICE	25.10.2005
139405	ALU	11/233987	US7570752	US	CONFERENCE ACTIVITY PRESENCE	23.09.2005
139405	ALU	200610115785.2	ZL200610115785.2	CN	CONFERENCE ACTIVITY PRESENCE	17.08.2006
121117	ALU	11/487306	US7684325	US	QOS EVALUATOR AND CONTROLLER IN NETWORK ANALYZER.	17.07.2006
139418	ALU	11/316001	US9077818	US	TERMINATION CIRCUITRY TO MIGRATE FROM POTS TO VOIP WITHOUT TRUCK ROLL OUT	22.12.2005

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PATENT
REEL: 043877 FRAME: 0246

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
139418	ALU	200610065542.2	ZL10065542.2	CN	TERMINATION CIRCUITRY TO MIGRATE FROM POTS TO VOIP WITHOUT TRUCK ROLL OUT	20.03.2006
121096	ALU	11/295614	US7782748	US	AUTONOMOUS SPECTRUM BALANCING FOR DIGITAL SUBSCRIBER LINES.	07.12.2005
121096	ALU	200510130286.6	ZL200510130286.6	CN	AUTONOMOUS SPECTRUM BALANCING FOR DIGITAL SUBSCRIBER LINES.	08.12.2005
121108	ALU	11/293310	US8125894	US	MULTI-ACS REMOTE MANAGEMENT OF AN HOME NETWORK.	05.12.2005
121108	ALU	200510130011.2	CN100450026C	CN	MULTI-ACS REMOTE MANAGEMENT OF AN HOME NETWORK.	05.12.2005
121089	ALU	200510132674.8	ZL10132674.8	CN	LINE MEASUREMENT IN RT TO DERIVE TRANSMIT PSD AT THE RT.	20.12.2005
121037	ALU	200510134608.4	ZL200510134608.4	CN	INCREASED NUMBER OF POSSIBILITIES WHILE USING FEW PINS.	13.12.2005
121017	ALU	200510130579.4	ZL541847	CN	ENHANCED NOISE MEASUREMENT.	14.12.2005
150029	ALU	11/250455	US7647623	US	Application Layer Ingress Filtering	17.10.2005
137984	ALU	11/234169	US7889669	US	Equalized Network Latency For Multi-Player Gaming	26.09.2005
137945	ALU	11/234167	US7974308	US	Interworking Circuit Emulation Service Over Packet (CESoP)and IP/MPLS Packet Processing	26.09.2005
120810	ALU	02292592.9	EP1411361	GB	PREPROCESSING OF THE MEASURED S11 SCATTERING PARAMETER FOR SUBSCRIBER LINE IDENTIFICATION.	18.10.2002
120810	ALU	02292592.9	EP1411361	ES	PREPROCESSING OF THE MEASURED S11 SCATTERING PARAMETER FOR SUBSCRIBER LINE IDENTIFICATION.	18.10.2002
120810	ALU	02292592.9	EP1411361	NL	PREPROCESSING OF THE MEASURED S11 SCATTERING PARAMETER FOR SUBSCRIBER LINE IDENTIFICATION.	18.10.2002
120810	ALU	02292592.9	EP1411361	IT	PREPROCESSING OF THE MEASURED S11 SCATTERING PARAMETER FOR SUBSCRIBER LINE IDENTIFICATION.	18.10.2002
120810	ALU	02292592.9	EP1411361	DE	PREPROCESSING OF THE MEASURED S11 SCATTERING PARAMETER FOR SUBSCRIBER LINE IDENTIFICATION.	18.10.2002
120810	ALU	02292592.9	EP1411361	FR	PREPROCESSING OF THE MEASURED S11 SCATTERING PARAMETER FOR SUBSCRIBER LINE IDENTIFICATION.	18.10.2002
111762	ALU	01440271.3	EP1191768	ES	Mobile Terminal Display Control (MPD)	20.08.2001
105478	ALU	2005323167	JP4669773	JP	Sanity Proved BGP-update message	08.11.2005
105478	ALU	200510117790.2	ZL200510117790.2	CN	Sanity Proved BGP-update message	10.11.2005
114458	ALU	200610115749.6	ZL200610115749.6	CN	Intelligent Encapsulation and Processing Layer for Signalling Protocols	15.08.2006
114755	ALU	11/517308	US7593826	US	calibration method for smart antenna systems	08.09.2006
114755	ALU	2006253816	JP5344788	JP	calibration method for smart antenna systems	20.09.2006
114755	ALU	200610153895.8	ZL200610153895.8	CN	calibration method for smart antenna systems	14.09.2006
105786	ALU	11/583893	US7609730	US	HALF-RATE MULTIPLEXER ARCHITECTURE SUITABLE TO HIGHER BIT-RATE	20.10.2006
120959	ALU	04290024.1	EP1553743	GB	INCREASING RELIABILITY OF THE BIT SWAP CHANNEL IN DSL.	06.01.2004
120959	ALU	04290024.1	EP1553743	ES	INCREASING RELIABILITY OF THE BIT SWAP CHANNEL IN DSL.	06.01.2004
120959	ALU	04290024.1	EP1553743	NL	INCREASING RELIABILITY OF THE BIT SWAP CHANNEL IN DSL.	06.01.2004
120959	ALU	04290024.1	EP1553743	IT	INCREASING RELIABILITY OF THE BIT SWAP CHANNEL IN DSL.	06.01.2004
120959	ALU	04290024.1	EP1553743	DE	INCREASING RELIABILITY OF THE BIT SWAP CHANNEL IN DSL.	06.01.2004
120959	ALU	04290024.1	EP1553743	FR	INCREASING RELIABILITY OF THE BIT SWAP CHANNEL IN DSL.	06.01.2004
137835	ALU	11/259167	US7542432	US	Improved Neighbour Start-up Synchronization	27.10.2005
134202	ALU	200510117131.9	ZL200510117131.9	CN	PORT RE-ENABLING BY MONITORING LINK STATUS	01.11.2005
114739	ALU	2005135117/09	RU2395907	RU	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	11.11.2005
114739	ALU	2005/012111	MX254186	MX	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	10.11.2005
114739	ALU	3000/DEL/2005		IN	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	09.11.2005
150117	ALU	11/264475	US7583689	US	Distributed Architecture of an Expandable Access Node	01.11.2005
114571	ALU	200510127955.4	ZL200510127955.4	CN	Distributed PON TDR	07.12.2005
150024	ALU	11/268822	US7907518	US	Method For Providing Isolation Between Traffic Flows/Channels On A Highly Channelized Physical Medium	08.11.2005
139406	ALU	11/268362		US	CONFERENCE PRESENCE BASED MUSIC ON HOLD SUPPRESSION	07.11.2005
139406	ALU	200610143797.6	ZL200610143797.6	CN	CONFERENCE PRESENCE BASED MUSIC ON HOLD SUPPRESSION	06.11.2006
120731	ALU	11/289329	US7457388	US	CLOCK DISTRIBUTION.	30.11.2005
129283	ALU	05300911.4		EP	MULTISERVICE ACCESS NETWORKS : COMBINED MULTISERVICE LINE TERMINATION	10.11.2005
139314	ALU	200510131857.8	ZL10131857.8	CN	PRESENCE AND PREFERENCE ENABLED AND AUTOMATICALLY CUSTOMIZABLE CALL RESPONSE USING CALLER'S PREFERRED CONTACTING CHANNEL(S)	15.12.2005
114393	ALU	2006102661	RU2390958	RU	Multi-Modal Proxy System	10.05.2005

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
105952	ALU	11/560463	US7702243	US	FLEXIBLE NODE ARCHITECTURE (R-OADM AND n-BRANCH NODE) WITH FULL PROTECTION (EXPRESS AND ADDED TRAFFIC)	16.11.2006
105952	ALU	200610148516.6	ZL200610148516.6	CN	FLEXIBLE NODE ARCHITECTURE (R-OADM AND n-BRANCH NODE) WITH FULL PROTECTION (EXPRESS AND ADDED TRAFFIC)	17.11.2006
139407	ALU	11/274434	US7974399	US	PRESENCE BASED WHISPER CALLS	15.11.2005
139287	ALU	200510132682.2	ZL200510132682.2	CN	CTI-ENABLED SIP PHONES FOR CALL CENTER FUNCTIONS	20.12.2005
120959	ALU	04290024.1	EP1553743	CZ	INCREASING RELIABILITY OF THE BIT SWAP CHANNEL IN DSL	06.01.2004
134225	ALU	11/288680	US8010994	US	PROVIDING DEDICATED VLAN ACCESS FOR NON-802.1X CAPABLE DEVICES TO CO-EXIST WITH 802.1X CLIENTS ON AN 802.1X ENABLED AUTHENTICATION NETWORK ACCESS PORT	29.11.2005
120377	ALU	00440159.2	EP1130873	GB	PROTOCOL PROFILING AND NEGOTIATION	26.05.2000
120377	ALU	00440159.2	EP1130873	IT	PROTOCOL PROFILING AND NEGOTIATION	26.05.2000
120377	ALU	00440159.2	EP1130873	DE	PROTOCOL PROFILING AND NEGOTIATION	26.05.2000
120377	ALU	00440159.2	EP1130873	FR	PROTOCOL PROFILING AND NEGOTIATION	26.05.2000
134203	ALU	11/291347	US7555562	US	METHOD FOR REMOTE PORT MONITORING	01.12.2005
139348	ALU	11/292825	US8054799	US	SEAMLESS MOBILITY IN L2 RAN FOR WIRELESS NETWORKS	05.12.2005
105680	ALU	200610058679.5	ZL200610058679.5	CN	GUIDED DIAGNOSIS TREE REFINEMENT	08.03.2006
105225	ALU	10/568743	US7580700	US	RACH SLOTTED ALOHA RECEPTION METHOD	30.06.2004
105225	ALU	200480024070.5	ZL688926	CN	RACH SLOTTED ALOHA RECEPTION METHOD	30.06.2004
150038	ALU	11/301590	US7715307	US	Graceful Restart For Source and Destination SPVCs	13.12.2005
114620	ALU	11/583019	US7355787	US	High power double stage submarine EDFA	19.10.2006
114620	ALU	200610143197.X	ZL200610143197.X	CN	High power double stage submarine EDFA	02.11.2006
104624	ALU	04291369.9	EP1494383	GB	OPTICAL CHANNEL SHARED PROTECTION RING CONTROL SCHEME WITHOUT K BYTE PROTOCOL IN METROPOLITAN NETWORKS	01.06.2004
104624	ALU	04291369.9	EP1494383	DE	OPTICAL CHANNEL SHARED PROTECTION RING CONTROL SCHEME WITHOUT K BYTE PROTOCOL IN METROPOLITAN NETWORKS	01.06.2004
104624	ALU	04291369.9	EP1494383	FR	OPTICAL CHANNEL SHARED PROTECTION RING CONTROL SCHEME WITHOUT K BYTE PROTOCOL IN METROPOLITAN NETWORKS	01.06.2004
134187	ALU	200510132972.7	ZL200510132972.7	CN	TRAFFIC GENERATOR/MONITOR MODE	29.12.2005
106098	ALU	11/612188	US7586454	US	METHOD AND DEVICE TO ENSURE THE POLARIZATION PERFORMANCE IN CIRCULAR WAVEGUIDE PIPE FOR MICROWAVE DUAL REFLECTOR ANTENNAS	18.12.2006
106098	ALU	200610064290.1	ZL200610064290.1	CN	METHOD AND DEVICE TO ENSURE THE POLARIZATION PERFORMANCE IN CIRCULAR WAVEGUIDE PIPE FOR MICROWAVE DUAL REFLECTOR ANTENNAS	19.12.2006
134195	ALU	200510134000.1	ZL200510134000.1	CN	RETAINING USAGE OF THE PRIMARY ROUTER MAC ADDRESS THROUGH OUT MULTIPLE FAILURE OF THE PRIMARY ELEMENT OF A STACK OF SWITCHES/ROUTERS	30.12.2005
134157	ALU	200510133998.3	ZL200510133998.3	CN	LADDER STRUCTURE FOR ECHO CANCELLATION APPLICATIONS	30.12.2005
131310	ALU	11/610515	US8165174	US	NEW METHOD TO PASS A SYNCHRONISM BETWEEN TWO DIFFERENT CLOCK DOMAINS	14.12.2006
131310	ALU	200610064374.5	ZL200610064374.5	CN	NEW METHOD TO PASS A SYNCHRONISM BETWEEN TWO DIFFERENT CLOCK DOMAINS	14.12.2006
150073	ALU	11/305111	US7525929	US	FastSATME: A Faster Simulated Annealing For Traffic Matrix Estimation (SATME) Method	19.12.2005
150073	ALU	200610064435.8	ZL200610064435.8	CN	FastSATME: A Faster Simulated Annealing For Traffic Matrix Estimation (SATME) Method	19.12.2006
121238	ALU	05292810.8	EP	EP	TV ASSISTED IVR	23.12.2005
121238	ALU	11/613347	US8379805	US	TV ASSISTED IVR	20.12.2006
121131	ALU	05292808.2	EP	EP	SYNCHRONIZED SELT (SINGLE ENDED LINE TESTING)	23.12.2005
121131	ALU	11/612675	US8041009	US	SYNCHRONIZED SELT (SINGLE ENDED LINE TESTING)	19.12.2006
121131	ALU	200610168780.6	ZL200610168780.6	CN	SYNCHRONIZED SELT (SINGLE ENDED LINE TESTING)	20.12.2006
106185	ALU	11/612680	US7751720	US	AUTOMATIC CHROMATIC DISPERSION TUNING FOR FLEXIBLE SYSTEMS USING RAMAN DISTRIBUTED CO-PUMPING	19.12.2006
106185	ALU	200610168741.6	ZL200610168741.6	CN	AUTOMATIC CHROMATIC DISPERSION TUNING FOR FLEXIBLE SYSTEMS USING RAMAN DISTRIBUTED CO-PUMPING	19.12.2006
139417	ALU	11/315514	US8879691	US	AUTONOMOUS METALLIC SUPERVISION WITH SEALING CURRENT	22.12.2005
137816	ALU	200610000592.2	ZL200610000592.2	CN	Pre-computed Paths for Policy-Based Routing	11.01.2006
139346	ALU	11/305560	US7652991	US	DISTRIBUTED DENIAL OF SERVICE (DDOS) MITIGATION IN 802.1X AUTHENTICATION	16.12.2005

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
134210	ALU	200510133999.8	ZL200510133999.8	CN	LADDER STRUCTURE FOR ECHO CANCELLATION APPLICATIONS	30.12.2005
114172	ALU	03292201.5	EP1513320	GB	Common interaction server	05.09.2003
114172	ALU	03292201.5	EP1513320	DE	Common interaction server	05.09.2003
114172	ALU	03292201.5	EP1513320	FR	Common interaction server	05.09.2003
137926	ALU	200610092892.8	ZL200610092892.8	CN	Decentralized Architecture for ATM-Based Bonding of xDSL Lines	09.02.2006
121130	ALU	11/366381	US7702080	US	LOCALISING HOME NETWORK FAULT.	03.03.2006
121130	ALU	200610057874.6	ZL533441	CN	LOCALISING HOME NETWORK FAULT.	01.03.2006
139444	ALU	11/337372	US7609709	US	VIDEO AWARE TRAFFIC MANAGEMENT WITHIN BROADBAND COMMUNICATIONS ACCESS NETWORK EQUIPMENT **NIST PROJECT GOVERNMENT FUNDING **	23.01.2006
139444	ALU	200710004301.1	ZL10004301.1	CN	VIDEO AWARE TRAFFIC MANAGEMENT WITHIN BROADBAND COMMUNICATIONS ACCESS NETWORK EQUIPMENT **NIST PROJECT GOVERNMENT FUNDING **	22.01.2007
139444	ALU	07000861.0		EP	VIDEO AWARE TRAFFIC MANAGEMENT WITHIN BROADBAND COMMUNICATIONS ACCESS NETWORK EQUIPMENT **NIST PROJECT GOVERNMENT FUNDING **	17.01.2007
106036	ALU	06300062.4		EP	METHOD FOR COMPOSING A WEB SERVICE	24.01.2006
150019	ALU	11/324648		US	Network Security Using Recursive Statistics Collection	03.01.2006
150019	ALU	200610130941.2	ZL200610130941.2	CN	Network Security Using Recursive Statistics Collection	29.12.2006
150023	ALU	200610008961.2	ZL200610008961.2	CN	Off-grid Decoupling of BGA Devices	25.01.2006
114324	ALU	04291693.2	EP1613123	GB	Self Routed and Fast Restored Circuit in SDH, SONET and OTH	02.07.2004
114324	ALU	04291693.2	EP1613123	DE	Self Routed and Fast Restored Circuit in SDH, SONET and OTH	02.07.2004
114324	ALU	04291693.2	EP1613123	FR	Self Routed and Fast Restored Circuit in SDH, SONET and OTH	02.07.2004
113800	ALU	02360343.4	EP1429483	GB	Signaling of Defects for HW Supported Protection Switching Inside an Optical Cross-Connect System	12.12.2002
113800	ALU	02360343.4	EP1429483	DE	Signaling of Defects for HW Supported Protection Switching Inside an Optical Cross-Connect System	12.12.2002
150088	ALU	11/347883	US8793585	US	Object Well For Network Management System GUI	06.02.2006
121239	ALU	06290224.2		EP	RETRANSMISSION WITH AN AGENT AT THE PHYSICAL LAYER.	07.02.2006
121284	ALU	06300137.4		EP	EXTENDED ADF SOLUTION	14.02.2006
135957	ALU	11/354525	US7639697	US	ARCHITECTURE FOR AN ALL DIGITAL SUBSCRIBER LINE WITH MULTIPLE POTS/DATA PORTS A	15.02.2006
121028	ALU	11/395219	US8085981	US	CONTEXT INTERACTION SYSTEM.	03.04.2006
121028	ALU	200682157	JP5000164	JP	CONTEXT INTERACTION SYSTEM.	24.03.2006
121028	ALU	200610066391.2	ZL423795	CN	CONTEXT INTERACTION SYSTEM.	06.04.2006
150153	ALU	11/354972	US7255569	US	Flexible Connector Pinout Design for Multiple-Variant Circuit Boards Optimized for Cost and Space	16.02.2006
121270	ALU	200710078812.8	ZL200710078812.8	CN	DEDICATED ADVERTISEMENT CHANNEL.	15.02.2007
150184	ALU	11/362348	US7526702	US	Improved RAM Test Coverage	27.02.2006
135718	ALU	11/365386	US7593511	US	METHODS AND APPARATUSES FOR TRAINING LINES SO AS TO PREVENT LINK DEGRADE	01.03.2006
106001	ALU	200610164503.8	ZL200610164503.8	CN	Asynchronous, dynamic pseudo-multicast transmission for multimedia content	06.12.2006
150195	ALU	11/366661	US7487344	US	Implementing a Microprocessor Boot Configuraton Prom Within an FPGA	03.03.2006
131283	ALU	11/384493	US7742403	US	DEADLOCK DETECTION IN AN ASON NETWORK	21.03.2006
131283	ALU	200610065426.0	ZL200610065426.0	CN	DEADLOCK DETECTION IN AN ASON NETWORK	21.03.2006
120108	ALU	11/356425	USRE40823	US	DATA RATE ADAPTATION CELLS.	17.02.2006
114609	ALU	11/583018	US7411727	US	Control signal for Raman gain tuning	19.10.2006
114609	ALU	200610143133.X	ZL200610143133.X	CN	Control signal for Raman gain tuning	01.11.2006
150164	ALU	11/378839	US7650546	US	Flexible JTAG Architecture For Programming and Debug	17.03.2006
106241	ALU	11/622260	US7751433	US	UNIVERSAL PACKET TRANSPORT	11.01.2007
150174	ALU	11/386809	US7747954	US	L3VPN Connectivity Verification	23.03.2006
114621	ALU	11/583020	US8041228	US	DQPSK transponder stabilization	19.10.2006
114621	ALU	200610146794.8	ZL200610146794.8	CN	DQPSK transponder stabilization	24.11.2006
132278	ALU	11/278501	US8204063	US	TECHNIQUE TO MANAGE REMOTE IP NES THROUGH THE SONET DCC	03.04.2006
139359	ALU	11/379410	US7197334	US	METHOD AND ARCHITECTURE FOR PROVIDING TECHNOLOGY INDEPENDENT WIRELESS SERVICES MIGRATION	20.04.2006
139343	ALU	200610079009.1	ZL200610079009.1	CN	A MECHANISM FOR CONTROLLING GROUP BEHAVIOR IN RICH PRESENCE SERVICE	28.04.2006
114622	ALU	11/583021	US7382525	US	constant gain EDFA with fixed tilt loss compensation	19.10.2006

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
114622	ALU	200610148634.7	ZL200610148634.7	CN	constant gain EDFA with fixed tilt loss compensation	20.11.2006
139433	ALU	11/279267	US8150014	US	METHOD FOR ESCALATING VOICE-ONLY PBX CALLS TO VOICE-DATA CONFERENCE BRIDGE CALLS	11.04.2006
114805	ALU	11/640936	US7738923	US	Device selection for extensible services by using two level resource reservation	19.12.2006
114805	ALU	200710001359.0	ZL200710001359.0	CN	Device selection for extensible services by using two level resource reservation	11.01.2007
150123	ALU	11/403322	US7970105	US	Narrowband Testing in DSLAM	13.04.2006
150211	ALU	11/408857	US7609630	US	Fast Packet Analysis	21.04.2006
131302	ALU	1863028	ZL200610080205.0	CN	METHOD FOR TRANSMISSION OF OPTICAL CHANNELS AT HIGH BIT-RATE OVER DISPERSIVE OPTICAL FIBRES THROUGH SELECTION OF SUITABLE WAVELENGTH RANGES	11.05.2006
150231	ALU	11/416197	US7779176	US	External Management of Shared Slots	03.05.2006
139356	ALU	10/596264	US8077731	US	INTERWORKING PACKET-BASED TANDEM FREE OPERATION (TFO) WITH NON-TFO CAPABLE NETWORKS	09.12.2004
139356	ALU	200480041457.1	ZL200480041457.1	CN	INTERWORKING PACKET-BASED TANDEM FREE OPERATION (TFO) WITH NON-TFO CAPABLE NETWORKS	09.12.2004
139422	ALU	11/383741	US7733794	US	PERFORMANCE MONITORING OF FRAME TRANSMISSION IN DATA NETWORK OAM PROTOCOLS	16.05.2006
139422	ALU	200610092261.6	ZL200610092261.6	CN	PERFORMANCE MONITORING OF FRAME TRANSMISSION IN DATA NETWORK OAM PROTOCOLS	17.06.2006
150262	ALU	11/434800	US8576855	US	Port Association For Port Operational Status Event Monitoring	17.05.2006
137986	ALU	200610092895.1	ZL200610092895.1	CN	Packet Classification Acceleration Using Spectral Analysis	26.05.2006
140571	ALU	11/452263	US7590749	US	A solution to perfect IGMP zapping performance using intelligent user tracking table algorithm	14.06.2006
139384	ALU	200610093172.3	ZL10093172.3	CN	CELLPHONE BASED ANTI-SPAM SCHEME	23.06.2006
150281	ALU	11/383852	US8086723	US	ISAM Test Resource Manager For Control Of Local And Remote Internal Test Heads	17.05.2006
150194	ALU	11/443413	US7573834	US	Enhanced Bonding Group Rate Split Scheme	31.05.2006
114603	ALU	11/565828	US8032141	US	Enhancements to the method for improving mobility in discontinuous coverage networks	01.12.2006
150109	ALU	11/450348	US7697418	US	Fannie - A Probabilistic Algorithm for Estimating the Fan-In of a Node	12.06.2006
105657	ALU	200610101772.X	ZL200610101772.X	CN	STRUCTURE AND PROCESSING OF AN ELECTRO-ABSORPTION MODULATED LASER SUITABLE FOR LOW COST, COOLER-LESS, HIGH SPEED TRANSMITTERS	10.07.2006
104048	ALU	03290720.6	EP1349416	GB	ON THE FLY DATA INSERTION	21.03.2003
104048	ALU	03290720.6	EP1349416	DE	ON THE FLY DATA INSERTION	21.03.2003
104048	ALU	03290720.6	EP1349416	FR	ON THE FLY DATA INSERTION	21.03.2003
106089	ALU	200610126535.9	ZL200610126535.9	CN	Bump In The Stack SEND implementation	25.08.2006
106089	ALU	11/508188	US7747849	US	Bump In The Stack SEND implementation	23.08.2006
139482	ALU	11/427076	US7693081	US	INTEGRATED DSLAM IPTV TEST MONITOR	28.06.2006
134061	ALU	11/427513	US8737272	US	SIP Call Routing Using Information from INVITE Message Body	29.06.2006
121129	ALU	200610129000.7	ZL200610129000.7	CN	DETECTING MISSING DSL FILTER/SPLITTER.	05.09.2006
137824	ALU	200580009135.3	ZL200580009135.3	CN	Shared Via Decoupling for High-Speed Components	20.01.2005
150029	ALU	200610136325.8	ZL200610136325.8	CN	Application Layer Ingress Filtering	16.10.2006
104923	ALU	04290225.4	EP1445829	GB	IMPROVED SUBREFLECTOR	28.01.2004
104923	ALU	04290225.4	EP1445829	IT	IMPROVED SUBREFLECTOR	28.01.2004
104923	ALU	04290225.4	EP1445829	DE	IMPROVED SUBREFLECTOR	28.01.2004
104923	ALU	04290225.4	EP1445829	FR	IMPROVED SUBREFLECTOR	28.01.2004
121117	ALU	200610126499.6	ZL200610126499.6	CN	QOS EVALUATOR AND CONTROLLER IN NETWORK ANALYZER.	01.09.2006
131320	ALU	11/768672	US7836358	US	Method for improving SNMP error management	26.06.2007
106140	ALU	11/775677	US7689121	US	OPTICAL TIME-TO-LIVE	10.07.2007
106140	ALU	200710128149.8	ZL200710128149.8	CN	OPTICAL TIME-TO-LIVE	09.07.2007
150315	ALU	11/482706	US7634631	US	At-Speed Statistics Collection Using External Memories	10.07.2006
114984	ALU	11/747218	US8750822	US	Emergency services capitalizing on location information statistics in case of wireless network failure	10.05.2007
150282	ALU	11/482697	US7543171	US	Dynamic Temperature Compensation For A Source Synchronous Interface	10.07.2006
129228	ALU	00500265.4	EP1223689	FR	Satellite transmission de fichiers multimedia.	21.12.2000
129228	ALU	00500265.4	EP1223689	DE	Satellite transmission de fichiers multimedia.	21.12.2000
129228	ALU	00500265.4	EP1223689	LU	Satellite transmission de fichiers multimedia.	21.12.2000

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0250

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
129228	ALU	00500265.4	EP1223689	ES	Satellite transmission de fichiers multimedia.	21.12.2000
129228	ALU	00500265.4	EP1223689	GB	Satellite transmission de fichiers multimedia.	21.12.2000
150289	ALU	11/498722	US8996668	US	Pluggable Node	04.08.2006
115166	ALU	200710109156.3	ZL200710109156.3	CN	Tuneable filter control in SDR- Base Stations using the predistortion feedback chain	14.06.2007
115166	ALU	11/749437	US7647027	US	Tuneable filter control in SDR- Base Stations using the predistortion feedback chain	16.05.2007
115153	ALU	200710126962.1	ZL200710126962.1	CN	Virtual conference phone	02.07.2007
115153	ALU	11/752607		US	Virtual conference phone	23.05.2007
150278	ALU	11/496995	US8345683	US	Improved Assert In PIM-SM	31.07.2006
114041	ALU	04290973.9	EP1585237	FR	Generation of NRZ duobinary using a MZ optical filter	08.04.2004
114041	ALU	04290973.9	EP1585237	DE	Generation of NRZ duobinary using a MZ optical filter	08.04.2004
114041	ALU	04290973.9	EP1585237	GB	Generation of NRZ duobinary using a MZ optical filter	08.04.2004
139487	ALU	11/469223	US7843845	US	TROUBLESHOOTING A MULTICAST FLOW PROBLEM	31.08.2006
139501	ALU	11/466516	US7808887	US	VPLS MULTICAST OPTIMIZATION TO AVOID PACKET REPLICATION DURING FAILURE	23.08.2006
150148	ALU	11/519071	US7469317	US	An innovative search architecture for URLs or similar fields	12.09.2006
113387	ALU	02360220.4	EP1385278	FR	Method to control transmission parameters of a WDM system depending on measurements outside the WDM system	22.07.2002
113387	ALU	02360220.4	EP1385278	DE	Method to control transmission parameters of a WDM system depending on measurements outside the WDM system	22.07.2002
113387	ALU	02360220.4	EP1385278	GB	Method to control transmission parameters of a WDM system depending on measurements outside the WDM system	22.07.2002
105296	ALU	200580010696.5	ZL200580010696.5	CN	MICROSTRUCTURED FIBRE WITH REDUCED LEAKAGE LOSSES	01.04.2005
105296	ALU	10/594924	US7627220	US	MICROSTRUCTURED FIBRE WITH REDUCED LEAKAGE LOSSES	01.04.2005
105225	ALU	04291657.7	EP1508981	FR	RACH SLOTTED ALOHA RECEPTION METHOD	30.06.2004
105225	ALU	04291657.7	EP1508981	DE	RACH SLOTTED ALOHA RECEPTION METHOD	30.06.2004
105225	ALU	04291657.7	EP1508981	IT	RACH SLOTTED ALOHA RECEPTION METHOD	30.06.2004
105225	ALU	04291657.7	EP1508981	GB	RACH SLOTTED ALOHA RECEPTION METHOD	30.06.2004
120548	ALU	01400832.0	EP1248383	FR	TDR BASED TRANSFER FUNCTION ESTIMATION OF LOCAL LOOP.	02.04.2001
120548	ALU	01400832.0	EP1248383	DE	TDR BASED TRANSFER FUNCTION ESTIMATION OF LOCAL LOOP.	02.04.2001
120548	ALU	01400832.0	EP1248383	IT	TDR BASED TRANSFER FUNCTION ESTIMATION OF LOCAL LOOP.	02.04.2001
120548	ALU	01400832.0	EP1248383	ES	TDR BASED TRANSFER FUNCTION ESTIMATION OF LOCAL LOOP.	02.04.2001
120548	ALU	01400832.0	EP1248383	GB	TDR BASED TRANSFER FUNCTION ESTIMATION OF LOCAL LOOP.	02.04.2001
139488	ALU	11/534445	US8160218	US	EVENT-DRIVEN SIP CALL GENERATION USING DATABASE TRIGGERS	22.09.2006
135866	ALU	02008458.8	EP1261223	AT	LOCATION ABSTACTION FOR LOCATION-BASED SERVICES	13.04.2002
135866	ALU	02008458.8	EP1261223	FR	LOCATION ABSTACTION FOR LOCATION-BASED SERVICES	13.04.2002
135866	ALU	02008458.8	EP1261223	DE	LOCATION ABSTACTION FOR LOCATION-BASED SERVICES	13.04.2002
135866	ALU	02008458.8	EP1261223	IT	LOCATION ABSTACTION FOR LOCATION-BASED SERVICES	13.04.2002
135866	ALU	02008458.8	EP1261223	ES	LOCATION ABSTACTION FOR LOCATION-BASED SERVICES	13.04.2002
135866	ALU	02008458.8	EP1261223	GB	LOCATION ABSTACTION FOR LOCATION-BASED SERVICES	13.04.2002
104527	ALU	04292957.0	EP1545079	FR	HANDLING INFORMATION FOR ROUTING OPTICAL NETWORKS	09.12.2004
104527	ALU	04292957.0	EP1545079	DE	HANDLING INFORMATION FOR ROUTING OPTICAL NETWORKS	09.12.2004
104527	ALU	04292957.0	EP1545079	IT	HANDLING INFORMATION FOR ROUTING OPTICAL NETWORKS	09.12.2004
104527	ALU	04292957.0	EP1545079	GB	HANDLING INFORMATION FOR ROUTING OPTICAL NETWORKS	09.12.2004
150117	ALU	200610064032.3	ZL200610064032.3	CN	Distributed Architecture of an Expandable Access Node	01.11.2006
106311	ALU	0608334	FR2906412	FR	DBR LASER WITH COMPRESSIVELY STRAINED MATERIAL PROVIDING ENHANCED TUNABILITY	22.09.2006
105610	ALU	200580017800.3	ZL200580017800.3	CN	NEAREST SERVER DETECTION	31.05.2005
137794	ALU	04300223.7	EP1473875	FR	Injecting Addresses Into a Virtual Private Network Forwarding Database To Enable Operational, Administrative, and Management Functions	26.04.2004
137794	ALU	04300223.7	EP1473875	DE	Injecting Addresses Into a Virtual Private Network Forwarding Database To Enable Operational, Administrative, and Management Functions	26.04.2004
137794	ALU	04300223.7	EP1473875	IT	Injecting Addresses Into a Virtual Private Network Forwarding Database To Enable Operational, Administrative, and Management Functions	26.04.2004
131326	ALU	11/523553	US7465175	US	GIG-Array Connectors unhooking device	20.09.2006
139407	ALU	2006304841	JP5225575	JP	PRESENCE BASED WHISPER CALLS	10.11.2006
135780	ALU	02009322.5	EP1263242	FR	MULTIMEDIA CALL WAITING	02.05.2002
135780	ALU	02009322.5	EP1263242	DE	MULTIMEDIA CALL WAITING	02.05.2002
135780	ALU	02009322.5	EP1263242	IT	MULTIMEDIA CALL WAITING	02.05.2002
135780	ALU	02009322.5	EP1263242	GB	MULTIMEDIA CALL WAITING	02.05.2002
139407	ALU	200610148466.1	ZL200610148466.1	CN	PRESENCE BASED WHISPER CALLS	14.11.2006

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
121127	ALU	200610143107.7	ZL10143107.7	CN	ADVANCED ADSL SPLITTER.	31.10.2006
121127	ALU	11/592310	US8165283	US	ADVANCED ADSL SPLITTER.	03.11.2006
105324	ALU	11/569045	US7965713	US	SUGGESTION MODE FOR BGP ROUTER AGGREGATION	13.05.2005
121018	ALU	04291996.9	EP1624638	FR	PROVIDE PROTOCOL BASES AND PORT BASED VLAN CONFIGURATION DYNAMICALLY FROM RADIUS SERVER.	05.08.2004
121018	ALU	04291996.9	EP1624638	DE	PROVIDE PROTOCOL BASES AND PORT BASED VLAN CONFIGURATION DYNAMICALLY FROM RADIUS SERVER.	05.08.2004
121018	ALU	04291996.9	EP1624638	IT	PROVIDE PROTOCOL BASES AND PORT BASED VLAN CONFIGURATION DYNAMICALLY FROM RADIUS SERVER.	05.08.2004
121018	ALU	04291996.9	EP1624638	NL	PROVIDE PROTOCOL BASES AND PORT BASED VLAN CONFIGURATION DYNAMICALLY FROM RADIUS SERVER.	05.08.2004
121018	ALU	04291996.9	EP1624638	GB	PROVIDE PROTOCOL BASES AND PORT BASED VLAN CONFIGURATION DYNAMICALLY FROM RADIUS SERVER.	05.08.2004
106330	ALU	0653675	FR2905771	FR	SPEED-UP OF TRANSPARENT OPTICAL NODES PROTECTION BASED ON WAVELENGTH SELECTIVE SWITCHES	12.09.2006
120820	ALU	11/525970	US7307428	US	IMPROVE DYNAMIC RANGE OF SINGLE-ENDED LINE TESTING	25.09.2006
121336	ALU	200710153511.7	ZL10153511.7	CN	SINGLE COIL MULTIPLE ORDER DSL SPLITTER BASED ON COIL ENHANCEMENT.	20.09.2007
121336	ALU	11/855106	US7683704	US	SINGLE COIL MULTIPLE ORDER DSL SPLITTER BASED ON COIL ENHANCEMENT.	13.09.2007
106373	ALU	0653587	FR2905551	FR	QoS SERVER FOR WLAN AND WIRELESS CONVERGENCE	06.09.2006
106373	ALU	07115739.0		EP	QoS SERVER FOR WLAN AND WIRELESS CONVERGENCE	05.09.2007
129283	ALU	200610144532.8	ZL200610144532.8	CN	MULTISERVICE ACCESS NETWORKS : COMBINED MULTISERVICE LINE TERMINATION	10.11.2006
129283	ALU	11/557967	US8259754	US	MULTISERVICE ACCESS NETWORKS : COMBINED MULTISERVICE LINE TERMINATION	08.11.2006
139357	ALU	200580018686.6	ZL200580018686.6	CN	MEDIA GATEWAY INTERCONNECT ROUTING IN A SOFTSWITCH ENVIRONMENT	21.04.2005
139376	ALU	200580018382.X	ZL200580018382.X	CN	METHOD AND SYSTEM FOR PROVIDING PUSH-TO-TALK COMMUNICATIONS IN A TELECOMMUNICATIONS NETWORK	21.04.2005
139357	ALU	10/599972	US7706802	US	MEDIA GATEWAY INTERCONNECT ROUTING IN A SOFTSWITCH ENVIRONMENT	21.04.2005
139358	ALU	200580018910.1	ZL200580018910.1	CN	MEDIA GATEWAY SELECTION IN A SOFTSWITCH ENVIRONMENT BASED ON TARGET BASE STATION	21.04.2005
132489	ALU	02007393.8	EP1251656	FR	ARCHITECTURE AND DESIGN FOR AN INTEGRATED TELECOMMUNICATIONS EQUIPMENT MANAGEMENT SYSTEM	10.04.2002
132489	ALU	02007393.8	EP1251656	DE	ARCHITECTURE AND DESIGN FOR AN INTEGRATED TELECOMMUNICATIONS EQUIPMENT MANAGEMENT SYSTEM	10.04.2002
132489	ALU	02007393.8	EP1251656	IT	ARCHITECTURE AND DESIGN FOR AN INTEGRATED TELECOMMUNICATIONS EQUIPMENT MANAGEMENT SYSTEM	10.04.2002
132489	ALU	02007393.8	EP1251656	GB	ARCHITECTURE AND DESIGN FOR AN INTEGRATED TELECOMMUNICATIONS EQUIPMENT MANAGEMENT SYSTEM	10.04.2002
139376	ALU	11/568069	US7941171	US	METHOD AND SYSTEM FOR PROVIDING PUSH-TO-TALK COMMUNICATIONS IN A TELECOMMUNICATIONS NETWORK	21.04.2005
114259	ALU	04291397.0	EP1603208	FR	Tool for stripping off a jacket from tubes or cables	04.06.2004
114259	ALU	04291397.0	EP1603208	DE	Tool for stripping off a jacket from tubes or cables	04.06.2004
114259	ALU	04291397.0	EP1603208	IT	Tool for stripping off a jacket from tubes or cables	04.06.2004
114259	ALU	04291397.0	EP1603208	GB	Tool for stripping off a jacket from tubes or cables	04.06.2004
150110	ALU	11/585880	US7733790	US	Self-Test Mechanism For Access Multiplexers	25.10.2006
106137	ALU	0607393	FR2905036	FR	INTEGRATED AND TUNABLE FILTER TO ENLARGE THE OPTICAL BANDWIDTH OF SEMICONDUCTOR OPTICAL AMPLIFIERS	18.08.2006
106320	ALU	0653775	FR2906101	FR	PUBLIC TV SERVICES EXTENSION WITH MOBILE DEVICE	15.09.2006
106320	ALU	07115937.0		EP	PUBLIC TV SERVICES EXTENSION WITH MOBILE DEVICE	07.09.2007
131142	ALU	01401270.2	EP1158831	FR	NETWORK ELEMENT FOR INTERCONNECTING MS-SPRING AND SNCP RINGS	16.05.2001
131142	ALU	01401270.2	EP1158831	DE	NETWORK ELEMENT FOR INTERCONNECTING MS-SPRING AND SNCP RINGS	16.05.2001
131142	ALU	01401270.2	EP1158831	IT	NETWORK ELEMENT FOR INTERCONNECTING MS-SPRING AND SNCP RINGS	16.05.2001
131142	ALU	01401270.2	EP1158831	ES	NETWORK ELEMENT FOR INTERCONNECTING MS-SPRING AND SNCP RINGS	16.05.2001
131142	ALU	01401270.2	EP1158831	GB	NETWORK ELEMENT FOR INTERCONNECTING MS-SPRING AND SNCP RINGS	16.05.2001
139270	ALU	200580019607.3	ZL200580019607.3	CN	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	03.05.2005
139270	ALU	2007513193	JP4764420	JP	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	03.05.2005
120272	ALU	99400201.2	EP1024591	FR	ADSL LINE DRIVER CIRCUIT.	28.01.1999
120272	ALU	99400201.2	EP1024591	DE	ADSL LINE DRIVER CIRCUIT.	28.01.1999
120272	ALU	99400201.2	EP1024591	IT	ADSL LINE DRIVER CIRCUIT.	28.01.1999
120272	ALU	99400201.2	EP1024591	GB	ADSL LINE DRIVER CIRCUIT.	28.01.1999
103191	ALU	01401724.8	EP1168685	FR	Dispersion compensating fiber	28.06.2001

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
103191	ALU	01401724.8	EP1168685	DE	Dispersion compensating fiber	28.06.2001
103191	ALU	01401724.8	EP1168685	IT	Dispersion compensating fiber	28.06.2001
103191	ALU	01401724.8	EP1168685	GB	Dispersion compensating fiber	28.06.2001
139509	ALU	11/555736	US7539386	US	HINGED FIBER OPTIC CABLE ROUTING GUIDE	02.11.2006
104968	ALU	04290794.9	EP1469635	FR	CROSS-AREA END-TO-END FLOW MEASUREMENT SYSTEM BASED ON MULTI-TECHNOLOGY MONITORING	24.03.2004
104968	ALU	04290794.9	EP1469635	DE	CROSS-AREA END-TO-END FLOW MEASUREMENT SYSTEM BASED ON MULTI-TECHNOLOGY MONITORING	24.03.2004
104968	ALU	04290794.9	EP1469635	GB	CROSS-AREA END-TO-END FLOW MEASUREMENT SYSTEM BASED ON MULTI-TECHNOLOGY MONITORING	24.03.2004
139270	ALU	6581/DELNP/2006	IN279941	IN	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	03.05.2005
139270	ALU	PA/a/2006/013033	MX283857	MX	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	03.05.2005
139270	ALU	2006143638	RU2390947	RU	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	03.05.2005
					COMMUNICATION METHOD HAVING IP PHONE LOCATION ASSOCIATION	
134122	ALU	03293349.1	EP1435707	FR	COMMUNICATION METHOD HAVING IP PHONE LOCATION ASSOCIATION	23.12.2003
134122	ALU	03293349.1	EP1435707	DE	COMMUNICATION METHOD HAVING IP PHONE LOCATION ASSOCIATION	23.12.2003
134122	ALU	03293349.1	EP1435707	IT	COMMUNICATION METHOD HAVING IP PHONE LOCATION ASSOCIATION	23.12.2003
134122	ALU	03293349.1	EP1435707	GB	COMMUNICATION METHOD HAVING IP PHONE LOCATION ASSOCIATION	23.12.2003
120897	ALU	03292316.1	EP1517473	FR	FILTERING AGENT FOR TRUSTED/ALLOWED PEERS IN ACCESS NETWORKS.	22.09.2003
120897	ALU	03292316.1	EP1517473	DE	FILTERING AGENT FOR TRUSTED/ALLOWED PEERS IN ACCESS NETWORKS.	22.09.2003
120897	ALU	03292316.1	EP1517473	GB	FILTERING AGENT FOR TRUSTED/ALLOWED PEERS IN ACCESS NETWORKS.	22.09.2003
139487	ALU	200610163987.4	ZL10163987.4	CN	TROUBLESHOOTING A MULTICAST FLOW PROBLEM	27.11.2006
139348	ALU	200610163358.1	ZL200610163358.1	CN	SEAMLESS MOBILITY IN L2 RAN FOR WIRELESS NETWORKS	01.12.2006
139455	ALU	200610169252.2	ZL200610169252.2	CN	CUSTOM PRESENCE ICONS	21.12.2006
150038	ALU	200610064449.X	ZL10064449.X	CN	Graceful Restart For Source and Destination SPVCs	13.12.2006
113709	ALU	03290493.0	EP1458067	FR	Raman fiber laser with stable output power	03.03.2003
113709	ALU	03290493.0	EP1458067	DE	Raman fiber laser with stable output power	03.03.2003
113709	ALU	03290493.0	EP1458067	GB	Raman fiber laser with stable output power	03.03.2003
139417	ALU	200610169250.3	ZL10169250.3	CN	AUTONOMOUS METALLIC SUPERVISION WITH SEALING CURRENT	21.12.2006
114997	ALU	200710001991.5	ZL200710001991.5	CN	Transmission line made of plastic foil laminated with a metal layer	16.01.2007
114997	ALU	11/638487	US7683744	US	Transmission line made of plastic foil laminated with a metal layer	14.12.2006
114949	ALU	200710004390.X	ZL200710004390.X	CN	Software defined concept for a multi-band multi-standard transceiver for wireless communication base-stations	24.01.2007
114949	ALU	11/638502		US	Software defined concept for a multi-band multi-standard transceiver for wireless communication base-stations	14.12.2006
139069	ALU	03027240.5	EP1434460	FR	LOOK-AHEAD CONTENTION RESOLUTION SCHEME FOR OBS	28.11.2003
139069	ALU	03027240.5	EP1434460	DE	LOOK-AHEAD CONTENTION RESOLUTION SCHEME FOR OBS	28.11.2003
139069	ALU	03027240.5	EP1434460	GB	LOOK-AHEAD CONTENTION RESOLUTION SCHEME FOR OBS	28.11.2003
105694	ALU	200580023522.2	ZL200580023522.2	CN	TERRESTRIAL REPEATER WITH CODES REDISTRIBUTION ON CARRIERS OF DIFFERENT FREQUENCIES	29.04.2005
105694	ALU	11/570590	US7733946	US	TERRESTRIAL REPEATER WITH CODES REDISTRIBUTION ON CARRIERS OF DIFFERENT FREQUENCIES	29.04.2005
135983	ALU	03013619.6	EP1379017	FR	HIGH-SPEED DATA-SIGNAL CLASSIFICATION USING LOW-FREQUENCY ELECTRICAL SPECTRAL FINGERPRINTING	16.06.2003
135983	ALU	03013619.6	EP1379017	DE	HIGH-SPEED DATA-SIGNAL CLASSIFICATION USING LOW-FREQUENCY ELECTRICAL SPECTRAL FINGERPRINTING	16.06.2003
135983	ALU	03013619.6	EP1379017	GB	HIGH-SPEED DATA-SIGNAL CLASSIFICATION USING LOW-FREQUENCY ELECTRICAL SPECTRAL FINGERPRINTING	16.06.2003
106054	ALU	11/617078	US7432852	US	SATELLITE BASED BTS	28.12.2006
137488	ALU	02293123.2	EP1322068	FR	IP Link Auto-Discovery	17.12.2002
137488	ALU	02293123.2	EP1322068	DE	IP Link Auto-Discovery	17.12.2002
137488	ALU	02293123.2	EP1322068	IT	IP Link Auto-Discovery	17.12.2002
137488	ALU	02293123.2	EP1322068	GB	IP Link Auto-Discovery	17.12.2002
121239	ALU	200710007026.9	ZL200710007026.9	CN	RETRANSMISSION WITH AN AGENT AT THE PHYSICAL LAYER.	07.02.2007
121239	ALU	11/624958	US9455800	US	RETRANSMISSION WITH AN AGENT AT THE PHYSICAL LAYER.	19.01.2007

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
104305	ALU	03290240.5	EP1341360	FR	TRAFFIC ENGINEERING FOR MULTIPLE GATEWAY SELECTION	31.01.2003
104305	ALU	03290240.5	EP1341360	DE	TRAFFIC ENGINEERING FOR MULTIPLE GATEWAY SELECTION	31.01.2003
104305	ALU	03290240.5	EP1341360	IT	TRAFFIC ENGINEERING FOR MULTIPLE GATEWAY SELECTION	31.01.2003
104305	ALU	03290240.5	EP1341360	GB	TRAFFIC ENGINEERING FOR MULTIPLE GATEWAY SELECTION	31.01.2003
139058	ALU	04007606.9	EP1465314	FR	DC BLOCKING PROTECTOR WITH BYPASS	30.03.2004
139058	ALU	04007606.9	EP1465314	DE	DC BLOCKING PROTECTOR WITH BYPASS	30.03.2004
139058	ALU	04007606.9	EP1465314	GB	DC BLOCKING PROTECTOR WITH BYPASS	30.03.2004
101913	ALU	99402064.2	EP0982891	FR	OPTIMISED OPTICAL WAVELENGTH ADD DROP MULTIPLEXEUR	16.08.1999
101913	ALU	99402064.2	EP0982891	DE	OPTIMISED OPTICAL WAVELENGTH ADD DROP MULTIPLEXEUR	16.08.1999
101913	ALU	99402064.2	EP0982891	GB	OPTIMISED OPTICAL WAVELENGTH ADD DROP MULTIPLEXEUR	16.08.1999
135815	ALU	11/620905	US7313088	US	COMMON PROTECTION ARCHITECTURE ON SHARED PROTECTION RINGS	08.01.2007
120454	ALU	00401853.7	EP1168720	FR	Use of ATM header fields for process addressing and in-band control	28.06.2000
120454	ALU	00401853.7	EP1168720	DE	Use of ATM header fields for process addressing and in-band control	28.06.2000
120454	ALU	00401853.7	EP1168720	IT	Use of ATM header fields for process addressing and in-band control	28.06.2000
120454	ALU	00401853.7	EP1168720	GB	Use of ATM header fields for process addressing and in-band control	28.06.2000
120868	ALU	03291538.1	EP1492381	FR	NEW RADIUS ATTRIBUTES THAT ALLOW FLEXIBLE AUTHORIZATION/CONFIGURATION FOR MULTICAST SERVICES.	24.06.2003
120868	ALU	03291538.1	EP1492381	DE	NEW RADIUS ATTRIBUTES THAT ALLOW FLEXIBLE AUTHORIZATION/CONFIGURATION FOR MULTICAST SERVICES.	24.06.2003
120868	ALU	03291538.1	EP1492381	IT	NEW RADIUS ATTRIBUTES THAT ALLOW FLEXIBLE AUTHORIZATION/CONFIGURATION FOR MULTICAST SERVICES.	24.06.2003
120868	ALU	03291538.1	EP1492381	ES	NEW RADIUS ATTRIBUTES THAT ALLOW FLEXIBLE AUTHORIZATION/CONFIGURATION FOR MULTICAST SERVICES.	24.06.2003
120868	ALU	03291538.1	EP1492381	GB	NEW RADIUS ATTRIBUTES THAT ALLOW FLEXIBLE AUTHORIZATION/CONFIGURATION FOR MULTICAST SERVICES.	24.06.2003
121347	ALU	200710160418.9	ZL200710160418.9	CN	NETWORK PRESENCE AWARE IPTV SERVICES	19.12.2007
121347	ALU	11/958366		US	NETWORK PRESENCE AWARE IPTV SERVICES	17.12.2007
105480	ALU	11/572904	US8149718	US	SELF-REPAIR : SEMI-AUTOMATIC TROUBLE TRACKING AND RESOLUTION OF NETWORK FAILURES	01.07.2005
113409	ALU	02360221.2	EP1385240	FR	Raman laser with improved efficiency	24.07.2002
113409	ALU	02360221.2	EP1385240	DE	Raman laser with improved efficiency	24.07.2002
113409	ALU	02360221.2	EP1385240	GB	Raman laser with improved efficiency	24.07.2002
800994	ALU	11/169948	US8494539	US	CONGESTION MANAGEMENT IN RADIO ACCESS NETWORKS	30.06.2005
105189	ALU	03293270.9	EP1545080	FR	OPTIMAL TRANSFER OF SDH/SONET FRAMES OVER A MPLS NETWORK USING AN AUTO-ADAPTIVE LOAD BALANCING SESSION	19.12.2003
105189	ALU	03293270.9	EP1545080	DE	OPTIMAL TRANSFER OF SDH/SONET FRAMES OVER A MPLS NETWORK USING AN AUTO-ADAPTIVE LOAD BALANCING SESSION	19.12.2003
105189	ALU	03293270.9	EP1545080	IT	OPTIMAL TRANSFER OF SDH/SONET FRAMES OVER A MPLS NETWORK USING AN AUTO-ADAPTIVE LOAD BALANCING SESSION	19.12.2003
105189	ALU	03293270.9	EP1545080	GB	OPTIMAL TRANSFER OF SDH/SONET FRAMES OVER A MPLS NETWORK USING AN AUTO-ADAPTIVE LOAD BALANCING SESSION	19.12.2003
121053	ALU	04291831.8	EP1617619	FR	SECURED MAC LEARNING	16.07.2004
121053	ALU	04291831.8	EP1617619	DE	SECURED MAC LEARNING	16.07.2004
121053	ALU	04291831.8	EP1617619	IT	SECURED MAC LEARNING	16.07.2004
121053	ALU	04291831.8	EP1617619	GB	SECURED MAC LEARNING	16.07.2004
150139	ALU	11/654615	US8369339	US	XML Tagged 3rd Party Transport Payment Mechanism	18.01.2007
120775	ALU	02291586.2	EP1376926	FR	SOLUTION FOR BROADCAST MODE OF MULTIMEDIA BROADCAST MULTICAST SERVICE.	25.06.2002
120775	ALU	02291586.2	EP1376926	DE	SOLUTION FOR BROADCAST MODE OF MULTIMEDIA BROADCAST MULTICAST SERVICE.	25.06.2002
120775	ALU	02291586.2	EP1376926	GB	SOLUTION FOR BROADCAST MODE OF MULTIMEDIA BROADCAST MULTICAST SERVICE.	25.06.2002
120877	ALU	03292986.1	EP1538800	FR	INTELLIGENT ECHO REDUCTION AGENT	01.12.2003
120877	ALU	03292986.1	EP1538800	DE	INTELLIGENT ECHO REDUCTION AGENT	01.12.2003
120877	ALU	03292986.1	EP1538800	IT	INTELLIGENT ECHO REDUCTION AGENT	01.12.2003
120877	ALU	03292986.1	EP1538800	ES	INTELLIGENT ECHO REDUCTION AGENT	01.12.2003
120877	ALU	03292986.1	EP1538800	GB	INTELLIGENT ECHO REDUCTION AGENT	01.12.2003
120797	ALU	02293229.7	EP1434347	FR	LVDS DRIVER WITH PRE-EMPHASIS	23.12.2002
120797	ALU	02293229.7	EP1434347	DE	LVDS DRIVER WITH PRE-EMPHASIS	23.12.2002
120797	ALU	02293229.7	EP1434347	IT	LVDS DRIVER WITH PRE-EMPHASIS	23.12.2002
120797	ALU	02293229.7	EP1434347	GB	LVDS DRIVER WITH PRE-EMPHASIS	23.12.2002

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PATENT
REEL: 043877 FRAME: 0254

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
800987	ALU	11/588384	US8650336	US	DMA BASED TIMER SUBSYSTEM	27.10.2006
800988	ALU	10/961058	US7307453	US	METHOD AND SYSTEM FOR PARALLEL STATE MACHINE IMPLEMENTATION	12.10.2004
105299	ALU	200580030060.7	ZL200580030060.7	CN	MODE CONVERTER	04.08.2005
105299	ALU	2007530690	JP5285908	JP	MODE CONVERTER	04.08.2005
105299	ALU	11/574803	US7835603	US	MODE CONVERTER	04.08.2005
102819	ALU	01400640.7	EP1134954	FR	Resources allocation based on a weighted fair queuing in a radiocommunications system.	12.03.2001
102819	ALU	01400640.7	EP1134954	DE	Resources allocation based on a weighted fair queuing in a radiocommunications system.	12.03.2001
102819	ALU	01400640.7	EP1134954	GB	Resources allocation based on a weighted fair queuing in a radiocommunications system.	12.03.2001
129127	ALU	00401545.9	EP1065898	FR	PACKET IN WIRELESS NETWORK	31.05.2000
129127	ALU	00401545.9	EP1065898	DE	PACKET IN WIRELESS NETWORK	31.05.2000
129127	ALU	00401545.9	EP1065898	CH	PACKET IN WIRELESS NETWORK	31.05.2000
129127	ALU	00401545.9	EP1065898	GB	PACKET IN WIRELESS NETWORK	31.05.2000
800981	ALU	0404393	FR2869496	FR	Method for controlling transmission power on communication channels and base station to implement the method	26.04.2004
800981	ALU	11/114809	US7634289	US	Method for controlling transmission power on communication channels and base station to implement the method	26.04.2005
800979	ALU	10/887264	US7157963	US	METHODS AND APPARATUS FOR CONTROLLING THE OUTPUT VOLTAGE OF A SWITCHED-MODE POWER SUPPLY	08.07.2004
113150	ALU	01440225.9	EP1278314	FR	Procedure for Q-factor measurement on optical burst signals	17.07.2001
113150	ALU	01440225.9	EP1278314	DE	Procedure for Q-factor measurement on optical burst signals	17.07.2001
113150	ALU	01440225.9	EP1278314	IT	Procedure for Q-factor measurement on optical burst signals	17.07.2001
113150	ALU	01440225.9	EP1278314	GB	Procedure for Q-factor measurement on optical burst signals	17.07.2001
800972	ALU	10/980721	US7599326	US	Method for distributing a set of data, radiocommunication network and wireless station for implementing the method	03.11.2004
800971	ALU	0311248	FR2860381	FR	Method of allocating resources in a radiocommunication system and base station for implementing the said method	25.09.2003
800971	ALU	10/948912	US7397767	US	Method of allocating resources in a radiocommunication system and base station for implementing the said method	24.09.2004
800968	ALU	10/728875	US7082302	US	METHODS AND SYSTEMS FOR COMBINING DATA FRAMES IN DIVERSITY HAND-OFF	08.12.2003
800967	ALU	10/728874	US7240175	US	SCHEDULING DATA FRAMES FOR PROCESSING : APPARATUS, SYSTEM AND METHOD	08.12.2003
800963	ALU	10/860256	US7113782	US	METHOD AND DEVICE FOR SELECTING PARAMETERS FOR A CELLULAR RADIO COMMUNICATION NETWORK BASED ON OCCURRENCE FREQUENCIES	03.06.2004
800958	ALU	10/780403	US7418260	US	Method of controlling a mode of reporting of measurements on a radio	17.02.2004
121053	ALU	04291831.8	EP1617619	ES	SECURED MAC LEARNING	16.07.2004
112046	ALU	02360117.2	EP1351527	FR	TOPOLOGY SERVER	03.04.2002
112046	ALU	02360117.2	EP1351527	DE	TOPOLOGY SERVER	03.04.2002
112046	ALU	02360117.2	EP1351527	GB	TOPOLOGY SERVER	03.04.2002
800941	ALU	10/436064	US7103310	US	Method for restricting the use of a radio terminal and associated restriction device	13.05.2003
800947	ALU	10/654182	US7433386	US	Method for allocating resources in a radio communication system using spatial division and apparatus implementing the method	03.09.2003
137401	ALU	02292312.2	EP1298863	FR	CELL ROUTING INTERNAL HEADER TO SUPPORT IS SWITCH FABRIC UPGRADE	20.09.2002
137401	ALU	02292312.2	EP1298863	DE	CELL ROUTING INTERNAL HEADER TO SUPPORT IS SWITCH FABRIC UPGRADE	20.09.2002
137401	ALU	02292312.2	EP1298863	GB	CELL ROUTING INTERNAL HEADER TO SUPPORT IS SWITCH FABRIC UPGRADE	20.09.2002
801008	ALU	9714717	FR2771585	FR	PRIVATE BASE STATION FOR MOBILE PHONE	24.11.1997
801008	ALU	98955713.7	EP1033046	GB	PRIVATE BASE STATION FOR MOBILE PHONE	28.11.1998
801008	ALU	09/555324	US6615035	US	PRIVATE BASE STATION FOR MOBILE PHONE	20.09.2000
801010	ALU	09/107354	US6216010	US	UP-LINK POWER CONTROL FOR FIXED WIRELESS ACCESS	30.06.1998
120270	ALU	99400210.3	EP1024592	FR	ADSL LINE DRIVER.	29.01.1999
120270	ALU	99400210.3	EP1024592	DE	ADSL LINE DRIVER.	29.01.1999
120270	ALU	99400210.3	EP1024592	IT	ADSL LINE DRIVER.	29.01.1999
120270	ALU	99400210.3	EP1024592	GB	ADSL LINE DRIVER.	29.01.1999
800953	ALU	10/718423	US7372920	US	Method for detecting a signal and receiver system for the implementation of the method	20.11.2003
800955	ALU	10/807664	US7613230	US	Method of processing a signal by a radio receiver and radio receiver for the implementation of the method	24.03.2004
800932	ALU	10/001877	US6961395	US	Time variant filter implementation	16.11.2001

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
800923	ALU	10/416175	US8126404	US	METHOD AND DEVICE FOR EVALUATING THE ENERGY LEVEL OF A RADIO SIGNAL	07.11.2001
800925	ALU	0016925	FR2818835	FR	Signal receiver for digital signals with spectral spreading includes preliminary and further symbol estimation based on instantaneous amplitudes	22.12.2000
800925	ALU	10/024953	US6925110	US	Signal receiver for digital signals with spectral spreading includes preliminary and further symbol estimation based on instantaneous amplitudes	19.12.2001
800928	ALU	0100487	FR2819661	FR	Mobile radio communications digital word transmission having receipt signal sent showing correct transmission/where incorrect receipt sending redundant blocks/where non coherent reception indicated starting transmission command.	15.01.2001
800928	ALU	10/046527	US7079489	US	Mobile radio communications digital word transmission having receipt signal sent showing correct transmission/where incorrect receipt sending redundant blocks/where non coherent reception indicated starting transmission command.	14.01.2002
800916	ALU	10/312058	US7167529	US	Interference cancellation technique for CDMA Rake receivers has recursive correction for non orthogonality due to propagation	20.06.2001
114634	ALU	200710102228.1	ZL200710102228.1	CN	Adaptive Pre/Post compensation rules for Intelligent transponder applied to systems migration to higher bit rates than 10Gb/s.	30.04.2007
114634	ALU	11/733161	US7848656	US	Adaptive Pre/Post compensation rules for Intelligent transponder applied to systems migration to higher bit rates than 10Gb/s.	09.04.2007
800908	ALU	09/762149	US7142850	US	RADIO ESTIMATION METHOD OF A MOBILE STATION VELOCITY	04.08.1999
800908	ALU	99936684.2	EP1105746	DE	RADIO ESTIMATION METHOD OF A MOBILE STATION VELOCITY	04.08.1999
800908	ALU	9810224	FR2782227	FR	RADIO ESTIMATION METHOD OF A MOBILE STATION VELOCITY	04.08.1998
800908	ALU	99936684.2	EP1105746	GB	RADIO ESTIMATION METHOD OF A MOBILE STATION VELOCITY	04.08.1999
137459	ALU	11/623720	US7596093	US	FABRIC BOUNCE TEST	16.01.2007
120563	ALU	01400572.2	EP1133132	FR	BANDWIDTH EFFICIENT LDP END-TO-END AUTHENTICATION.	06.03.2001
120563	ALU	01400572.2	EP1133132	DE	BANDWIDTH EFFICIENT LDP END-TO-END AUTHENTICATION.	06.03.2001
120563	ALU	01400572.2	EP1133132	GB	BANDWIDTH EFFICIENT LDP END-TO-END AUTHENTICATION.	06.03.2001
132277	ALU	99120997.4	EP1087563	GB	TIME-WALKING PREVENTION IN A DIGITAL SWITCHING IMPLEMENTATION FOR CLOCK SELECTION	04.11.1999
150203	ALU	11/702554	US7706375	US	Fast Adaptive TCAM Sorting Algorithm For IPv4 And IPv6 Longest Prefix Matching	06.02.2007
120256	ALU	00400310.9	EP1122884	FR	PHASE EQUALIZATION.	02.02.2000
120256	ALU	00400310.9	EP1122884	DE	PHASE EQUALIZATION.	02.02.2000
120256	ALU	00400310.9	EP1122884	GB	PHASE EQUALIZATION.	02.02.2000
150304	ALU	11/702555	US8280020	US	Delegation Of Authenticated Caller ID	06.02.2007
120966	ALU	04290017.5	EP1553737	FR	DSL PHYSICAL LAYER SESSION RESOURCE BROKER AND STABLE VIDEO LINK IMPLEMENTATION.	06.01.2004
120966	ALU	04290017.5	EP1553737	DE	DSL PHYSICAL LAYER SESSION RESOURCE BROKER AND STABLE VIDEO LINK IMPLEMENTATION.	06.01.2004
120966	ALU	04290017.5	EP1553737	GB	DSL PHYSICAL LAYER SESSION RESOURCE BROKER AND STABLE VIDEO LINK IMPLEMENTATION.	06.01.2004
120944	ALU	03293174.3	EP1545059	FR	USE OF IPV6 HEADER FOR ENFORCED FORWARDING IN ACCESS.	16.12.2003
120944	ALU	03293174.3	EP1545059	DE	USE OF IPV6 HEADER FOR ENFORCED FORWARDING IN ACCESS.	16.12.2003
120944	ALU	03293174.3	EP1545059	GB	USE OF IPV6 HEADER FOR ENFORCED FORWARDING IN ACCESS.	16.12.2003
114282	ALU	04292104.9	EP1630985	FR	Conversion from alternated-polarization to single-polarization : application to bit-to-bit polarization interleaving	27.08.2004
114282	ALU	04292104.9	EP1630985	DE	Conversion from alternated-polarization to single-polarization : application to bit-to-bit polarization interleaving	27.08.2004
114282	ALU	04292104.9	EP1630985	GB	Conversion from alternated-polarization to single-polarization : application to bit-to-bit polarization interleaving	27.08.2004
114401	ALU	04291112.3	EP1592268	FR	Inherent Backhauling for Point to Multipoint Radio Base Station	28.04.2004
114401	ALU	04291112.3	EP1592268	DE	Inherent Backhauling for Point to Multipoint Radio Base Station	28.04.2004
114401	ALU	04291112.3	EP1592268	GB	Inherent Backhauling for Point to Multipoint Radio Base Station	28.04.2004
105299	ALU	1684/DELNP/2007		IN	MODE CONVERTER	04.08.2005
105299	ALU	20077005417	KR101233597	KR	MODE CONVERTER	04.08.2005
150221	ALU	11/711471	US8230047	US	Method to Configure IP Protocols and Transport Between Routers	27.02.2007
150261	ALU	11/709891	US7602615	US	In-Grid Decoupling For Ball Grid Array (BGA) Devices	23.02.2007
800817	ALU	11/679582	US8345552	US	Mechanism To Dynamically Optimize Pseudowires Based On The Collected End-to-End Cost	27.02.2007
800691	ALU	11/711682	US7659757	US	Glitch Free Clock Re-Generator	28.02.2007
120851	ALU	03291558.9	EP1492268	FR	ARCHITECTURE FOR BRIDGED ETHERNET RESIDENTIAL ACCESS NETWORKS.	25.06.2003
120851	ALU	03291558.9	EP1492268	DE	ARCHITECTURE FOR BRIDGED ETHERNET RESIDENTIAL ACCESS NETWORKS.	25.06.2003

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
120851	ALU	03291558.9	EP1492268	GB	ARCHITECTURE FOR BRIDGED ETHERNET RESIDENTIAL ACCESS NETWORKS.	25.06.2003
150209	ALU	11/713732	US7853687	US	Access Control List Generation And Validation Tool	05.03.2007
137498	ALU	11/698082	US7519662	US	IGMPv2 in PIM-SSM environment	26.01.2007
120887	ALU	03291755.1	EP1499156	FR	VC SELECTION WITH ONE MAC ADDRESS AT EDGE POINT.	15.07.2003
120887	ALU	03291755.1	EP1499156	DE	VC SELECTION WITH ONE MAC ADDRESS AT EDGE POINT.	15.07.2003
120887	ALU	03291755.1	EP1499156	GB	VC SELECTION WITH ONE MAC ADDRESS AT EDGE POINT.	15.07.2003
137373	ALU	02290878.4	EP1261169	FR	Collection reordering (polling improvement)	08.04.2002
137373	ALU	02290878.4	EP1261169	DE	Collection reordering (polling improvement)	08.04.2002
137373	ALU	02290878.4	EP1261169	IT	Collection reordering (polling improvement)	08.04.2002
137373	ALU	02290878.4	EP1261169	GB	Collection reordering (polling improvement)	08.04.2002
129101	ALU	99402218.4	EP0991243	FR	METHOD FOR ADDRESSING OF DATE IN A LOCAL AREA NETWORK.	09.09.1999
129101	ALU	99402218.4	EP0991243	DE	METHOD FOR ADDRESSING OF DATE IN A LOCAL AREA NETWORK.	09.09.1999
129101	ALU	99402218.4	EP0991243	GB	METHOD FOR ADDRESSING OF DATE IN A LOCAL AREA NETWORK.	09.09.1999
121276	ALU	200710103872.0	ZL200710103872.0	CN	APPLICATION CONTROLLED RESYNCHRONIZATION OF A COMMUNICATION SYSTEM.	17.05.2007
121276	ALU	11/744202	US9031225	US	APPLICATION CONTROLLED RESYNCHRONIZATION OF A COMMUNICATION SYSTEM.	03.05.2007
800646	ALU	11/717909	US8385194	US	Network Level Admission Control	13.03.2007
800652	ALU	11/717881	US8374082	US	System Architecture for Admission Control	13.03.2007
800761	ALU	11/717880	US8320245	US	Policy Enforcement Points For Network Level Admission Control	13.03.2007
102937	ALU	00403517.6	EP1113632	FR	VOIP jitter buffer turning with VAD deactivation	14.12.2000
102937	ALU	00403517.6	EP1113632	DE	VOIP jitter buffer turning with VAD deactivation	14.12.2000
102937	ALU	00403517.6	EP1113632	GB	VOIP jitter buffer turning with VAD deactivation	14.12.2000
801040	ALU	11/727299	US7746769	US	MANAGEMENT OF REDUNDANT AND MULTI-SEGMENT PSEUDO-WIRE	26.03.2007
114423	ALU	04292117.1	EP1633068	FR	Self Routed and Fast Restored Circuit in SDH, SONET and OTH	01.09.2004
114423	ALU	04292117.1	EP1633068	DE	Self Routed and Fast Restored Circuit in SDH, SONET and OTH	01.09.2004
114423	ALU	04292117.1	EP1633068	GB	Self Routed and Fast Restored Circuit in SDH, SONET and OTH	01.09.2004
801041	ALU	11/692578	US9031085	US	Distributed Computing Method For Multi-Area Shortest Path First With Fault Management	28.03.2007
114608	ALU	05291456.1	EP1742434	FR	Low cost transport for pico cell coverage	05.07.2005
114608	ALU	05291456.1	EP1742434	DE	Low cost transport for pico cell coverage	05.07.2005
114608	ALU	05291456.1	EP1742434	GB	Low cost transport for pico cell coverage	05.07.2005
121117	ALU	05291927.1	EP1764948	FR	QOS EVALUATOR AND CONTROLLER IN NETWORK ANALYZER.	16.09.2005
121117	ALU	05291927.1	EP1764948	DE	QOS EVALUATOR AND CONTROLLER IN NETWORK ANALYZER.	16.09.2005
121117	ALU	05291927.1	EP1764948	IT	QOS EVALUATOR AND CONTROLLER IN NETWORK ANALYZER.	16.09.2005
121117	ALU	05291927.1	EP1764948	ES	QOS EVALUATOR AND CONTROLLER IN NETWORK ANALYZER.	16.09.2005
121117	ALU	05291927.1	EP1764948	GB	QOS EVALUATOR AND CONTROLLER IN NETWORK ANALYZER.	16.09.2005
134174	ALU	04029931.5	EP1548979	FR	GLOBAL NETWORK MANAGEMENT CONFIGURATION **REVISED 134139**	17.12.2004
134174	ALU	04029931.5	EP1548979	DE	GLOBAL NETWORK MANAGEMENT CONFIGURATION **REVISED 134139**	17.12.2004
134174	ALU	04029931.5	EP1548979	GB	GLOBAL NETWORK MANAGEMENT CONFIGURATION **REVISED 134139**	17.12.2004
150311	ALU	11/712592	US7724651	US	Redundant Far-End Pseudo-Wire Connectivity	27.02.2007
137600	ALU	04300386.2	EP1492267	FR	Real-Time Policy Evaluation Mechanism	18.06.2004
137600	ALU	04300386.2	EP1492267	DE	Real-Time Policy Evaluation Mechanism	18.06.2004
137600	ALU	04300386.2	EP1492267	GB	Real-Time Policy Evaluation Mechanism	18.06.2004
801224	ALU	11/730588	US8266530	US	Multiple Displays Of Large Dynamic Alarm Windows	03.04.2007
139305	ALU	200580038262.6	ZL200580038262.6	CN	CYCLED SEALING CURRENT	19.05.2005
139305	ALU	20077010484	KR101222274	KR	CYCLED SEALING CURRENT	19.05.2005
139305	ALU	11/576770	US7991123	US	CYCLED SEALING CURRENT	19.05.2005
114096	ALU	04290047.2	EP1553791	FR	Delay Compensation for distributed Radio units in UMTS	08.01.2004
114096	ALU	04290047.2	EP1553791	DE	Delay Compensation for distributed Radio units in UMTS	08.01.2004
114096	ALU	04290047.2	EP1553791	GB	Delay Compensation for distributed Radio units in UMTS	08.01.2004
111071	ALU	99402417.2	EP0994580	FR	CDMA WITH IMPROVED CAPACITY	04.10.1999
111071	ALU	99402417.2	EP0994580	DE	CDMA WITH IMPROVED CAPACITY	04.10.1999
111071	ALU	99402417.2	EP0994580	GB	CDMA WITH IMPROVED CAPACITY	04.10.1999
102365	ALU	00400441.2	EP1032226	FR	DECT/GSM emulator.	17.02.2000
102365	ALU	00400441.2	EP1032226	DE	DECT/GSM emulator.	17.02.2000
102365	ALU	00400441.2	EP1032226	GB	DECT/GSM emulator.	17.02.2000
800647	ALU	11/717879	US8320381	US	Application Optimized Admission Control	13.03.2007
103924	ALU	02291748.8	EP1278343	FR	MULTI-PLATFORM ACTIVE CODE REPOSITORY	11.07.2002
103924	ALU	02291748.8	EP1278343	DE	MULTI-PLATFORM ACTIVE CODE REPOSITORY	11.07.2002
103924	ALU	02291748.8	EP1278343	IT	MULTI-PLATFORM ACTIVE CODE REPOSITORY	11.07.2002
103924	ALU	02291748.8	EP1278343	GB	MULTI-PLATFORM ACTIVE CODE REPOSITORY	11.07.2002

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0257

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
800653	ALU	11/717876	US8320380	US	Virtual Topologies for Network Admission Control	13.03.2007
800657	ALU	11/717878	US8446845	US	Audit Of In-Class Overutilization For Network Admission Control	13.03.2007
131204	ALU	02291057.4	EP1357698	FR	CONNECTION DELETION MANAGEMENT IN A CENTRALIZED POLICY MANAGER WITH COPS PROTOCOL	25.04.2002
131204	ALU	02291057.4	EP1357698	DE	CONNECTION DELETION MANAGEMENT IN A CENTRALIZED POLICY MANAGER WITH COPS PROTOCOL	25.04.2002
131204	ALU	02291057.4	EP1357698	IT	CONNECTION DELETION MANAGEMENT IN A CENTRALIZED POLICY MANAGER WITH COPS PROTOCOL	25.04.2002
131204	ALU	02291057.4	EP1357698	GB	CONNECTION DELETION MANAGEMENT IN A CENTRALIZED POLICY MANAGER WITH COPS PROTOCOL	25.04.2002
120874	ALU	03291559.7	EP1492261	FR	AUTONOMOUS POWER BACK-OFF FOR REMOTELY DEPLOYED DSL.	25.06.2003
120874	ALU	03291559.7	EP1492261	DE	AUTONOMOUS POWER BACK-OFF FOR REMOTELY DEPLOYED DSL.	25.06.2003
120874	ALU	03291559.7	EP1492261	GB	AUTONOMOUS POWER BACK-OFF FOR REMOTELY DEPLOYED DSL.	25.06.2003
113880	ALU	03005283.1	EP1420598	FR	Two-Phase Approach	11.03.2003
113880	ALU	03005283.1	EP1420598	DE	Two-Phase Approach	11.03.2003
113880	ALU	03005283.1	EP1420598	IT	Two-Phase Approach	11.03.2003
113880	ALU	03005283.1	EP1420598	NL	Two-Phase Approach	11.03.2003
113880	ALU	03005283.1	EP1420598	ES	Two-Phase Approach	11.03.2003
113880	ALU	03005283.1	EP1420598	GB	Two-Phase Approach	11.03.2003
131326	ALU	200710104768.3	ZL200710104768.3	CN	GIG-Array Connectors unhooking device	26.04.2007
137960	ALU	11/799507	US7804724	US	Method to Reduce Flash Programming Time With Boundary Scan	02.05.2007
801211	ALU	11/741678	US7707277	US	METHOD OF USING DHCP FOR PSEUDOWIRE LABEL EXCHANGE	27.04.2007
137816	ALU	06704327.3	EP1839415	EP	Pre-computed Paths for Policy-Based Routing	05.01.2006
801521	ALU	200710181693.9	ZL200710181693.9	CN	Methods for Simplifying Prepaid Calling Card Procedures in VoIP and IMS Networks	24.10.2007
100965	ALU	98400867.2	EP0871341	DE	HANDOVER WITH PREEMPTION	09.04.1998
100965	ALU	98400867.2	EP0871341	GB	HANDOVER WITH PREEMPTION	09.04.1998
801369	ALU	11/748358	US7860085	US	Dual OSS Management of an Ethernet Access Network	14.05.2007
105305	ALU	05108011.7	EP1635605	FR	GLUE MAC - IMPROVING DBORN PERFORMANCE BY USE OF GLUING MAC	01.09.2005
105305	ALU	05108011.7	EP1635605	DE	GLUE MAC - IMPROVING DBORN PERFORMANCE BY USE OF GLUING MAC	01.09.2005
105305	ALU	05108011.7	EP1635605	IT	GLUE MAC - IMPROVING DBORN PERFORMANCE BY USE OF GLUING MAC	01.09.2005
105305	ALU	05108011.7	EP1635605	NL	GLUE MAC - IMPROVING DBORN PERFORMANCE BY USE OF GLUING MAC	01.09.2005
105305	ALU	05108011.7	EP1635605	ES	GLUE MAC - IMPROVING DBORN PERFORMANCE BY USE OF GLUING MAC	01.09.2005
105305	ALU	05108011.7	EP1635605	GB	GLUE MAC - IMPROVING DBORN PERFORMANCE BY USE OF GLUING MAC	01.09.2005
105685	ALU	04293100.6	EP1675281	FR	STABILISED DPSK DEMODULATOR WITH WAVELENGTH TRACKING	22.12.2004
105685	ALU	04293100.6	EP1675281	DE	STABILISED DPSK DEMODULATOR WITH WAVELENGTH TRACKING	22.12.2004
105685	ALU	04293100.6	EP1675281	GB	STABILISED DPSK DEMODULATOR WITH WAVELENGTH TRACKING	22.12.2004
800503	ALU	11/800279	US7934230	US	New Mechanisms for Commerical Insertion	04.05.2007
120668	ALU	02291967.4	EP1388953	FR	TDR BASED CUSTOMER PREMISES LOCALIZATION	05.08.2002
120668	ALU	02291967.4	EP1388953	DE	TDR BASED CUSTOMER PREMISES LOCALIZATION	05.08.2002
120668	ALU	02291967.4	EP1388953	GB	TDR BASED CUSTOMER PREMISES LOCALIZATION	05.08.2002
800374	ALU	11/749810	US8539498	US	InterProcess Resource Based Dynamic Scheduling	17.05.2007
121075	ALU	4091/DELNP/2007	IN259726	IN	FLOW CONCEPT	11.11.2005
121075	ALU	20077015104	KR1156855	KR	FLOW CONCEPT	11.11.2005
121108	ALU	4273/DELNP/2007		IN	MULTI-ACS REMOTE MANAGEMENT OF AN HOME NETWORK.	02.12.2005
121108	ALU	20077015628	KR10-1188037	KR	MULTI-ACS REMOTE MANAGEMENT OF AN HOME NETWORK.	02.12.2005
800318	ALU	07290649.8	EP1993240	EP	Security assurance icon for services on end-user terminals	18.05.2007
114250	ALU	04360063.4	EP1615335	FR	Symmetrical radio frequency coupling	08.07.2004
114250	ALU	04360063.4	EP1615335	DE	Symmetrical radio frequency coupling	08.07.2004
114250	ALU	04360063.4	EP1615335	GB	Symmetrical radio frequency coupling	08.07.2004
800119	ALU	11/802965	US7917957	US	SlowBlow: An Efficient Way Of Counting New Destination IP Addresses	29.05.2007
134061	ALU	02400025.9	EP1248440	FR	SIP Call Routing Using Information from INVITE Message Body	02.04.2002
134061	ALU	02400025.9	EP1248440	GB	SIP Call Routing Using Information from INVITE Message Body	02.04.2002
134061	ALU	02400025.9	EP1248440	DE	SIP Call Routing Using Information from INVITE Message Body	02.04.2002

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0258

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
120820	ALU	03291656.1	EP1494037	FR	IMPROVE DYNAMIC RANGE OF SINGLE-ENDED LINE TESTING	03.07.2003
120820	ALU	03291656.1	EP1494037	DE	IMPROVE DYNAMIC RANGE OF SINGLE-ENDED LINE TESTING	03.07.2003
120820	ALU	03291656.1	EP1494037	GB	IMPROVE DYNAMIC RANGE OF SINGLE-ENDED LINE TESTING	03.07.2003
801163	ALU	11/806117	US7724673	US	PW SIGNALING SUPPORT ON ETHERNET OAM 802.3AH OVER ETHERNET PSEUDOWIRE	30.05.2007
137642	ALU	04300406.8	EP1494389	FR	Centralized IGMP GMQ Audit Timing	29.06.2004
137642	ALU	04300406.8	EP1494389	DE	Centralized IGMP GMQ Audit Timing	29.06.2004
137642	ALU	04300406.8	EP1494389	GB	Centralized IGMP GMQ Audit Timing	29.06.2004
120576	ALU	01401313.0	EP1258982	FR	DIGITAL QUIESCENT CURRENT CONTROL FOR CLASS AB AMPLIFIERS.	18.05.2001
120576	ALU	01401313.0	EP1258982	DE	DIGITAL QUIESCENT CURRENT CONTROL FOR CLASS AB AMPLIFIERS.	18.05.2001
120576	ALU	01401313.0	EP1258982	GB	DIGITAL QUIESCENT CURRENT CONTROL FOR CLASS AB AMPLIFIERS.	18.05.2001
121185	ALU	07290682.9		EP	REAL-TIME REMOTE CONTROL ADAPTATION TO IPTV SERVICE OPTIONS AND PROFILE	31.05.2007
137926	ALU	06744730.0		EP	Decentralized Architecture for ATM-Based Bonding of xDSL Lines	06.02.2006
114393	ALU	04291272.5	EP1599007	FR	Multi-Modal Proxy System	18.05.2004
114393	ALU	04291272.5	EP1599007	DE	Multi-Modal Proxy System	18.05.2004
131164	ALU	02290739.8	EP1248420	FR	METHOD FOR MAPPING DIFFERENT DATA INTERFACED (ETHERNET,FAST-ETHERNET AND Nx1 OR NxDS1) IN A SINGLE VC-4 OF A SYNCHRONOUS STM-1 PAYLOAD TRANSMITTED IN A RADIO-RELAY SYSTEM.	25.03.2002
131164	ALU	02290739.8	EP1248420	DE	METHOD FOR MAPPING DIFFERENT DATA INTERFACED (ETHERNET,FAST-ETHERNET AND Nx1 OR NxDS1) IN A SINGLE VC-4 OF A SYNCHRONOUS STM-1 PAYLOAD TRANSMITTED IN A RADIO-RELAY SYSTEM.	25.03.2002
131164	ALU	02290739.8	EP1248420	GB	METHOD FOR MAPPING DIFFERENT DATA INTERFACED (ETHERNET,FAST-ETHERNET AND Nx1 OR NxDS1) IN A SINGLE VC-4 OF A SYNCHRONOUS STM-1 PAYLOAD TRANSMITTED IN A RADIO-RELAY SYSTEM.	25.03.2002
105749	ALU	200580047436.5	ZL200580047436.5	CN	SYMBOLOLOGY-BASED ORIGINAL CARTOGRAPHIC ZOOMING	22.12.2005
105749	ALU	2007548878	JP4732465	JP	SYMBOLOLOGY-BASED ORIGINAL CARTOGRAPHIC ZOOMING	22.12.2005
121081	ALU	4875/DELNP/2007	IN264426	IN	ACTIVE SELF TEST FOR IN-HOUSE WIRING PROBLEMS.	15.12.2005
137875	ALU	200580032107.3	ZL200580032107.3	CN	A Mechanism To Reduce Signaling Latencies For Offering Real-Time Services To Roaming Mobile Corporate Users	22.07.2005
137875	ALU	795/DELNP/2007		IN	A Mechanism To Reduce Signaling Latencies For Offering Real-Time Services To Roaming Mobile Corporate Users	22.07.2005
137875	ALU	MX/A/2007/000931	MX275008	MX	A Mechanism To Reduce Signaling Latencies For Offering Real-Time Services To Roaming Mobile Corporate Users	22.07.2005
121066	ALU	4908/DELNP/2007		IN	META SIGNALLING FOR MULTI-RADIO TECHNOLOGIES	15.12.2005
121066	ALU	2007547349	JP5044413	JP	META SIGNALLING FOR MULTI-RADIO TECHNOLOGIES	15.12.2005
121066	ALU	20077016701	KR101226383	KR	META SIGNALLING FOR MULTI-RADIO TECHNOLOGIES	15.12.2005
121332	ALU	07290760.3		EP	TRACKING SYSTEM FUNCTIONS AS PERIPHERAL VISION IN VIDEO CONFERENCE SYSTEM	20.06.2007
121333	ALU	200810110222.3	ZL200810110222.3	CN	INTERACTIVE EXPERIENCES FOR GEOGRAPHIC DISPERSED NOMADIC GROUPS	18.06.2008
121333	ALU	12/137730	US9413844	US	INTERACTIVE EXPERIENCES FOR GEOGRAPHIC DISPERSED NOMADIC GROUPS	12.06.2008
800734	ALU	11/776661	US7940766	US	Multicasting Unicast Traffic/Multiple Classification of a Packet	12.07.2007
137561	ALU	03300023.3	EP1367799	FR	SECRET HASHING FOR TCP SYN/FIN CORRESPONDENCE	30.05.2003
137561	ALU	03300023.3	EP1367799	DE	SECRET HASHING FOR TCP SYN/FIN CORRESPONDENCE	30.05.2003
137561	ALU	03300023.3	EP1367799	GB	SECRET HASHING FOR TCP SYN/FIN CORRESPONDENCE	30.05.2003
121217	ALU	200710140226.1	ZL200710140226.1	CN	ANYCAST ADDRESS RESOLUTION BASED ON AA INFORMATION	06.08.2007
103956	ALU	02292671.1	EP1317097	FR	ADAPTATIVE MEASUREMENT SYSTEM FOR TELECOM NETWORK	28.10.2002
103956	ALU	02292671.1	EP1317097	DE	ADAPTATIVE MEASUREMENT SYSTEM FOR TELECOM NETWORK	28.10.2002
103956	ALU	02292671.1	EP1317097	GB	ADAPTATIVE MEASUREMENT SYSTEM FOR TELECOM NETWORK	28.10.2002
121082	ALU	05290453.9	EP1696633	FR	BI-DIRECTIONAL SOAP SESSION OVER UNI DIRECTIONAL HTTP SESSION.	28.02.2005
121082	ALU	05290453.9	EP1696633	DE	BI-DIRECTIONAL SOAP SESSION OVER UNI DIRECTIONAL HTTP SESSION.	28.02.2005
134093	ALU	02022904.3	EP1303120	FR	Novel Usage of Digital Telephone Set Keyboard/Display for Generating Text Messages to Alphanumeric Pagers, Cellphones and Pdas.	10.10.2002
134093	ALU	02022904.3	EP1303120	DE	Novel Usage of Digital Telephone Set Keyboard/Display for Generating Text Messages to Alphanumeric Pagers, Cellphones and Pdas.	10.10.2002

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0259

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
134093	ALU	02022904.3	EP1303120	GB	Novel Usage of Digital Telephone Set Keyboard/Display for Generating Text Messages to Alphanumeric Pagers, Cellphones and Pdas.	10.10.2002
114879	ALU	06290063.4	EP1806875	FR	Call Admission Control for stimuli VoWLAN phones	10.01.2006
114879	ALU	06290063.4	EP1806875	DE	Call Admission Control for stimuli VoWLAN phones	10.01.2006
114879	ALU	06290063.4	EP1806875	GB	Call Admission Control for stimuli VoWLAN phones	10.01.2006
120731	ALU	04293126.1	EP1675290	FR	CLOCK DISTRIBUTION.	23.12.2004
120731	ALU	04293126.1	EP1675290	DE	CLOCK DISTRIBUTION.	23.12.2004
120731	ALU	04293126.1	EP1675290	GB	CLOCK DISTRIBUTION.	23.12.2004
800319	ALU	11/878981	US7668802	US	A Method And Tool For XML Policy Matching	30.07.2007
801044	ALU	11/878982	US8345559	US	MPLS Diagnostics Tool	30.07.2007
137252	ALU	11/826220	US8018939	US	MULTIPROTOCOL LABEL SWITCHING (MPLS)	13.07.2007
800824	ALU	11/882515	US7725646	US	Method Of Using A FLASH Memory For A Circular Buffer	02.08.2007
150039	ALU	7215/DELNP/2007		IN	Co-Existing Static And Dymanic IP Multicast	15.05.2006
150039	ALU	1020077029226	KR101168369	KR	Co-Existing Static And Dymanic IP Multicast	15.05.2006
114393	ALU	04291272.5	EP1599007	GB	Multi-Modal Proxy System	18.05.2004
105620	ALU	05104318.0	EP1603351	FR	9763 E1 COMPRESSOR - ROUTAGE LOCAL DU TRAFIC LOCAL	20.05.2005
105620	ALU	05104318.0	EP1603351	DE	9763 E1 COMPRESSOR - ROUTAGE LOCAL DU TRAFIC LOCAL	20.05.2005
105620	ALU	05104318.0	EP1603351	GB	9763 E1 COMPRESSOR - ROUTAGE LOCAL DU TRAFIC LOCAL	20.05.2005
103957	ALU	02293187.7	EP1326374	FR	AUTOMATIC NETWORK TRAFFIC ENGINEERING BASED ON TRENDS	20.12.2002
103957	ALU	02293187.7	EP1326374	DE	AUTOMATIC NETWORK TRAFFIC ENGINEERING BASED ON TRENDS	20.12.2002
103957	ALU	02293187.7	EP1326374	GB	AUTOMATIC NETWORK TRAFFIC ENGINEERING BASED ON TRENDS	20.12.2002
137639	ALU	04300405.0	EP1494388	FR	IGMP GMQ Audit Load Balancing	29.06.2004
137639	ALU	04300405.0	EP1494388	DE	IGMP GMQ Audit Load Balancing	29.06.2004
137639	ALU	04300405.0	EP1494388	GB	IGMP GMQ Audit Load Balancing	29.06.2004
802236	ALU	10/259597	US6754413	US	OPTICAL MULTIPLEXER DEMULTIPLEXER AND METHODS	30.09.2002
137593	ALU	03300247.8	EP1432211	FR	Improvement to SPI4.2 Protocol For Communicating POS non-user data	09.12.2003
137593	ALU	03300247.8	EP1432211	DE	Improvement to SPI4.2 Protocol For Communicating POS non-user data	09.12.2003
137593	ALU	03300247.8	EP1432211	GB	Improvement to SPI4.2 Protocol For Communicating POS non-user data	09.12.2003
137928	ALU	05300421.4	EP1601134	FR	OAM CC on Multicast and Multi-Endpoint Paths	26.05.2005
137928	ALU	05300421.4	EP1601134	DE	OAM CC on Multicast and Multi-Endpoint Paths	26.05.2005
137928	ALU	05300421.4	EP1601134	GB	OAM CC on Multicast and Multi-Endpoint Paths	26.05.2005
106320	ALU	11/855367	US8429705	US	PUBLIC TV SERVICES EXTENSION WITH MOBILE DEVICE	14.09.2007
114571	ALU	04293072.7	EP1675280	FR	Distributed PON TDR	21.12.2004
114571	ALU	04293072.7	EP1675280	DE	Distributed PON TDR	21.12.2004
114571	ALU	04293072.7	EP1675280	GB	Distributed PON TDR	21.12.2004
800666	ALU	11/893224	US7836203	US	Automatic route setup via snooping DHCP addresses	15.08.2007
131266	ALU	03292848.3	EP1531567	FR	SDH SYSTEM ARCHITECTURE COMPLIANT WITH ITU G783 SPEC	17.11.2003
131266	ALU	03292848.3	EP1531567	DE	SDH SYSTEM ARCHITECTURE COMPLIANT WITH ITU G783 SPEC	17.11.2003
131266	ALU	03292848.3	EP1531567	GB	SDH SYSTEM ARCHITECTURE COMPLIANT WITH ITU G783 SPEC	17.11.2003
131299	ALU	05290508.0	EP1699257	FR	OUTPUT DRIVEN MEMORY BASED SWITCH FOR TDM AND PACKET DATA CROSSCONNECTION	04.03.2005
131299	ALU	05290508.0	EP1699257	DE	OUTPUT DRIVEN MEMORY BASED SWITCH FOR TDM AND PACKET DATA CROSSCONNECTION	04.03.2005
131299	ALU	05290508.0	EP1699257	GB	OUTPUT DRIVEN MEMORY BASED SWITCH FOR TDM AND PACKET DATA CROSSCONNECTION	04.03.2005
801048	ALU	07290999.7		EP	CROSSTALK CHANNEL ESTIMATION BEFORE MODEM INITIALIZATION	10.08.2007
801048	ALU	12/184730	US8571184	US	CROSSTALK CHANNEL ESTIMATION BEFORE MODEM INITIALIZATION	01.08.2008
137869	ALU	200580016193.9	ZL200580016193.9	CN	Open Service Discovery And Routing Mechanism For Configuring Cross-Domain Telecommunication Services	19.05.2005
131099	ALU	00401499.9	EP1059750	DE	OPTIMIZATION TIME MANAGEMENT OF INFORMATION DISTRIBUTED ON K BYTES IN A SDH FRAME	26.05.2000
131099	ALU	00401499.9	EP1059750	FR	OPTIMIZATION TIME MANAGEMENT OF INFORMATION DISTRIBUTED ON K BYTES IN A SDH FRAME	26.05.2000
131099	ALU	00401499.9	EP1059750	GB	OPTIMIZATION TIME MANAGEMENT OF INFORMATION DISTRIBUTED ON K BYTES IN A SDH FRAME	26.05.2000

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0260

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
120961	ALU	03293172.7	EP1545052	FR	PROGRAMMABLE SERVICE SUBSTITUTION FOR SLEEPING DEVICES IN A RESIDENTIAL CONTEXT	15.12.2003
120961	ALU	03293172.7	EP1545052	DE	PROGRAMMABLE SERVICE SUBSTITUTION FOR SLEEPING DEVICES IN A RESIDENTIAL CONTEXT	15.12.2003
120961	ALU	03293172.7	EP1545052	GB	PROGRAMMABLE SERVICE SUBSTITUTION FOR SLEEPING DEVICES IN A RESIDENTIAL CONTEXT	15.12.2003
105324	ALU	05762563.4	EP1749381	FR	SUGGESTION MODE FOR BGP ROUTER AGGREGATION	13.05.2005
105324	ALU	05762563.4	EP1749381	DE	SUGGESTION MODE FOR BGP ROUTER AGGREGATION	13.05.2005
105324	ALU	05762563.4	EP1749381	GB	SUGGESTION MODE FOR BGP ROUTER AGGREGATION	13.05.2005
121130	ALU	6932/DELNP/2007	IN261349	IN	LOCALISING HOME NETWORK FAULT.	21.02.2006
121130	ALU	20077022710	KR10222293	KR	LOCALISING HOME NETWORK FAULT.	21.02.2006
103235	ALU	01310386.6	EP1217764	FR	Wavelength tuneable pump laser for broadband gain controlled Raman amplifiers by selective reflector switching.	12.12.2001
103235	ALU	01310386.6	EP1217764	DE	Wavelength tuneable pump laser for broadband gain controlled Raman amplifiers by selective reflector switching.	12.12.2001
103235	ALU	01310386.6	EP1217764	GB	Wavelength tuneable pump laser for broadband gain controlled Raman amplifiers by selective reflector switching.	12.12.2001
114621	ALU	05292532.8	EP1791274	FR	DQPSK transponder stabilization	25.11.2005
114621	ALU	05292532.8	EP1791274	DE	DQPSK transponder stabilization	25.11.2005
114621	ALU	05292532.8	EP1791274	GB	DQPSK transponder stabilization	25.11.2005
802377	ALU	11/620726	US8561166	US	Efficient Implementation of Security Applications in a Networked Environment	07.01.2007
103745	ALU	02290985.7	EP1271972	FR	INTERFACE BETWEEN MSC AND BSC	18.04.2002
103745	ALU	02290985.7	EP1271972	DE	INTERFACE BETWEEN MSC AND BSC	18.04.2002
103745	ALU	02290985.7	EP1271972	GB	INTERFACE BETWEEN MSC AND BSC	18.04.2002
135957	ALU	03008815.7	EP1357730	FR	ARCHITECTURE FOR AN ALL DIGITAL SUBSCRIBER LINE WITH MULTIPLE POTS/DATA PORTS A	24.04.2003
135957	ALU	03008815.7	EP1357730	DE	ARCHITECTURE FOR AN ALL DIGITAL SUBSCRIBER LINE WITH MULTIPLE POTS/DATA PORTS A	24.04.2003
135957	ALU	03008815.7	EP1357730	GB	ARCHITECTURE FOR AN ALL DIGITAL SUBSCRIBER LINE WITH MULTIPLE POTS/DATA PORTS A	24.04.2003
131269	ALU	04290902.8	EP1585272	FR	IMPROVED MEMORY BASED SWITCH	05.04.2004
131269	ALU	04290902.8	EP1585272	DE	IMPROVED MEMORY BASED SWITCH	05.04.2004
131269	ALU	04290902.8	EP1585272	GB	IMPROVED MEMORY BASED SWITCH	05.04.2004
131244	ALU	03293052.1	EP1538765	FR	PROCEDURE FOR IN-BAND SIGNALLING TO ALLOW ODU-FORWARD PROTECTION INDICATION AND ODU-LINK DEGRADATION INDICATION FOR NEW OTN PROTECTION MECHANISM	05.12.2003
131244	ALU	03293052.1	EP1538765	DE	PROCEDURE FOR IN-BAND SIGNALLING TO ALLOW ODU-FORWARD PROTECTION INDICATION AND ODU-LINK DEGRADATION INDICATION FOR NEW OTN PROTECTION MECHANISM	05.12.2003
131244	ALU	03293052.1	EP1538765	GB	PROCEDURE FOR IN-BAND SIGNALLING TO ALLOW ODU-FORWARD PROTECTION INDICATION AND ODU-LINK DEGRADATION INDICATION FOR NEW OTN PROTECTION MECHANISM	05.12.2003
801686	ALU	0757700	FR2921503	FR	Automatic user profile-based content indexing	20.09.2007
800304	ALU	11/886979	US7782762	US	RSVP-TE Enhancements For MPLS/FRR Bandwidth Optimization	21.09.2007
135702	ALU	01116898.6	EP1174951	FR	A METHOD OF ACHIEVING HIGH VOLTAGE WITHSTAND BETWEEN PINS OF A HIGH DENSITY COMPLIANT PIN CONNECTOR	11.07.2001
135702	ALU	01116898.6	EP1174951	DE	A METHOD OF ACHIEVING HIGH VOLTAGE WITHSTAND BETWEEN PINS OF A HIGH DENSITY COMPLIANT PIN CONNECTOR	11.07.2001
135702	ALU	01116898.6	EP1174951	GB	A METHOD OF ACHIEVING HIGH VOLTAGE WITHSTAND BETWEEN PINS OF A HIGH DENSITY COMPLIANT PIN CONNECTOR	11.07.2001
800819	ALU	11/902710	US7843814	US	Mechanism for Non-Service Affecting APS Protection For MLPPP Bundles On Routing Systems	25.09.2007
114159	ALU	04015932.9	EP1513294	FR	METHOD FOR OBTAINING USER DATA TO BE TRANSMITTED TO NETWORK IN UMTS SYSTEM	07.07.2004
114159	ALU	04015932.9	EP1513294	DE	METHOD FOR OBTAINING USER DATA TO BE TRANSMITTED TO NETWORK IN UMTS SYSTEM	07.07.2004
114159	ALU	04015932.9	EP1513294	GB	METHOD FOR OBTAINING USER DATA TO BE TRANSMITTED TO NETWORK IN UMTS SYSTEM	07.07.2004
800566	ALU	11/864971	US8737596	US	Real-Time Collaboration Center	29.09.2007
137596	ALU	03300237.9	EP1427132	FR	Fast Service Restoration for Lost IGMP Leave Requests	01.12.2003
137596	ALU	03300237.9	EP1427132	DE	Fast Service Restoration for Lost IGMP Leave Requests	01.12.2003
137596	ALU	03300237.9	EP1427132	GB	Fast Service Restoration for Lost IGMP Leave Requests	01.12.2003
137690	ALU	04300593.3	EP1519541	FR	DoS Attack Mitigation Using Upstream Router Suggested Remedies	10.09.2004

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0261

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
137690	ALU	04300593.3	EP1519541	DE	DoS Attack Mitigation Using Upstream Router Suggested Remedies	10.09.2004
137690	ALU	04300593.3	EP1519541	GB	DoS Attack Mitigation Using Upstream Router Suggested Remedies	10.09.2004
802516	ALU	09/880811	US6674935	US	Optical Connection Arrangements	15.06.2001
129111	ALU	99402046.9	EP0984582	FR	METHOD FOR ERROR ESTIMATION IN TRANSMISSION OF DATA INFORMATION.	12.08.1999
129111	ALU	99402046.9	EP0984582	DE	METHOD FOR ERROR ESTIMATION IN TRANSMISSION OF DATA INFORMATION.	12.08.1999
129111	ALU	99402046.9	EP0984582	GB	METHOD FOR ERROR ESTIMATION IN TRANSMISSION OF DATA INFORMATION.	12.08.1999
137353	ALU	01402704.9	EP1202541	FR	Metallic Test Access	18.10.2001
137353	ALU	01402704.9	EP1202541	DE	Metallic Test Access	18.10.2001
137353	ALU	01402704.9	EP1202541	GB	Metallic Test Access	18.10.2001
132278	ALU	00440158.4	EP1065848	FR	TECHNIQUE TO MANAGE REMOTE IP NEs THROUGH THE SONET DCC	26.05.2000
132278	ALU	00440158.4	EP1065848	DE	TECHNIQUE TO MANAGE REMOTE IP NEs THROUGH THE SONET DCC	26.05.2000
132278	ALU	00440158.4	EP1065848	GB	TECHNIQUE TO MANAGE REMOTE IP NEs THROUGH THE SONET DCC	26.05.2000
801595	ALU	0758340	FR2922403	FR	Users counter in Multicast Broadcast Services Zones	16.10.2007
801274	ALU	0758458	FR2922710	FR	Receiver Architecture for scalable video streams over TDMA/TDMA-OFDM/OFDMA communication system providing multimedia broadcast and multicast services	22.10.2007
800571	ALU	11/877388	US8248922	US	System and Method for Avoiding Duplication of MAC Addresses in a Stack	23.10.2007
137812	ALU	05300555.9	EP1615378	FR	Queue Architecture for Multi-Server Request	04.07.2005
137812	ALU	05300555.9	EP1615378	DE	Queue Architecture for Multi-Server Request	04.07.2005
137812	ALU	05300555.9	EP1615378	GB	Queue Architecture for Multi-Server Request	04.07.2005
137833	ALU	05300252.3	EP1587263	FR	Scaling VPRN for Thousands of BGP Peers	06.04.2005
137833	ALU	05300252.3	EP1587263	DE	Scaling VPRN for Thousands of BGP Peers	06.04.2005
137833	ALU	05300252.3	EP1587263	GB	Scaling VPRN for Thousands of BGP Peers	06.04.2005
800011	ALU	200710188772.2	ZL200710188772.2	CN	Adaptive Indoor System	20.11.2007
800011	ALU	11/942442	US8032148	US	Adaptive Indoor System	19.11.2007
800504	ALU	0758946	FR2924866	FR	S-band EDFA	09.11.2007
137637	ALU	04300647.7	EP1523138	FR	Improved Access Control Listing Mechanism for Routers	04.10.2004
137637	ALU	04300647.7	EP1523138	DE	Improved Access Control Listing Mechanism for Routers	04.10.2004
137637	ALU	04300647.7	EP1523138	GB	Improved Access Control Listing Mechanism for Routers	04.10.2004
131250	ALU	02292721.4	EP1416651	FR	HIGH DYNAMIC RECEIVER FOR FREE SPACE OPTICS APPLICATIONS	31.10.2002
131250	ALU	02292721.4	EP1416651	DE	HIGH DYNAMIC RECEIVER FOR FREE SPACE OPTICS APPLICATIONS	31.10.2002
131250	ALU	02292721.4	EP1416651	GB	HIGH DYNAMIC RECEIVER FOR FREE SPACE OPTICS APPLICATIONS	31.10.2002
800701	ALU	11/940114	US7751676	US	Cable Entry Seal	14.11.2007
801907	ALU	07291342.9	EP2058960	EP	General broadcasting of fake channels	08.11.2007
114061	ALU	03291778.3	EP1499041	FR	Optical Data Packet source	17.07.2003
114061	ALU	03291778.3	EP1499041	DE	Optical Data Packet source	17.07.2003
114061	ALU	03291778.3	EP1499041	GB	Optical Data Packet source	17.07.2003
121117	ALU	1020077030249	KR101194149	KR	QOS EVALUATOR AND CONTROLLER IN NETWORK ANALYZER.	12.07.2006
114062	ALU	03291785.8	EP1499049	FR	Temporary SNCP for Restoration	18.07.2003
114062	ALU	03291785.8	EP1499049	DE	Temporary SNCP for Restoration	18.07.2003
114062	ALU	03291785.8	EP1499049	IT	Temporary SNCP for Restoration	18.07.2003
114062	ALU	03291785.8	EP1499049	GB	Temporary SNCP for Restoration	18.07.2003
135984	ALU	11/985266	US7995609	US	MODULAR SERVICE PROVISIONING WITHIN AN ACCESS NODE	14.11.2007
135740	ALU	02012578.7	EP1276263	FR	SIGNALING IN A SHARED PROTECTION RING ARCHITECTURE	06.06.2002
135740	ALU	02012578.7	EP1276263	DE	SIGNALING IN A SHARED PROTECTION RING ARCHITECTURE	06.06.2002
135740	ALU	02012578.7	EP1276263	GB	SIGNALING IN A SHARED PROTECTION RING ARCHITECTURE	06.06.2002
800790	ALU	200810001638.1	ZL200810001638.1	CN	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	07.01.2008
800790	ALU	11/966186	US7787483	US	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	28.12.2007
115236	ALU	200810004077.0	ZL200810004077.0	CN	Cognitive Radio Access Network	15.01.2008
115236	ALU	12/017482	US8121645	US	Cognitive Radio Access Network	22.01.2008
801473	ALU	11/987458	US7929574	US	ADVANCED CLOCK DISTRIBUTION MECHANISM FOR CIRCUIT EMULATION APPLICATIONS	30.11.2007
801472	ALU	11/987457	US7966510	US	Dynamic Frequency Adjustment For Interoperability Of Differential Clock Recovery Methods	30.11.2007
801677	ALU	07291446.8		EP	USE CHANGE IN DIRECT CHANNEL TO ESTIMATE/TRACK CHANGE IN CROSSTALK CHANNEL	03.12.2007

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0262

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
113838	ALU	03290787.5	EP1463370	FR	SELF ROUTED AND FAST RESTORED CIRCUIT IN SDH; SONET AND OTH	28.03.2003
113838	ALU	03290787.5	EP1463370	DE	SELF ROUTED AND FAST RESTORED CIRCUIT IN SDH; SONET AND OTH	28.03.2003
113838	ALU	03290787.5	EP1463370	GB	SELF ROUTED AND FAST RESTORED CIRCUIT IN SDH; SONET AND OTH	28.03.2003
114924	ALU	05291730.9	EP1755286	FR	Distributed routing policy in multi layer networks	15.08.2005
114924	ALU	05291730.9	EP1755286	DE	Distributed routing policy in multi layer networks	15.08.2005
114924	ALU	05291730.9	EP1755286	GB	Distributed routing policy in multi layer networks	15.08.2005
801741	ALU	07291440.1	EP2066103	EP	SIS SPLITTER	30.11.2007
801276	ALU	07291471.6		EP	Optical OFDM receiver channel monitor	07.12.2007
114782	ALU	05291727.5	EP1753159	FR	Fiber Monitoring in Optical Burst Mode	12.08.2005
114782	ALU	05291727.5	EP1753159	DE	Fiber Monitoring in Optical Burst Mode	12.08.2005
114782	ALU	05291727.5	EP1753159	GB	Fiber Monitoring in Optical Burst Mode	12.08.2005
801079	ALU	200810088620.X	ZL200810088620.X	CN	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	31.03.2008
801079	ALU	12/060468	US8441946	US	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	01.04.2008
121075	ALU	04292820.0	EP1662718	FR	FLOW CONCEPT	30.11.2004
121075	ALU	04292820.0	EP1662718	DE	FLOW CONCEPT	30.11.2004
121075	ALU	04292820.0	EP1662718	GB	FLOW CONCEPT	30.11.2004
113581	ALU	02360348.3	EP1432179	FR	Queue Architecture for High-Speed Routing Network Elements	16.12.2002
113581	ALU	02360348.3	EP1432179	DE	Queue Architecture for High-Speed Routing Network Elements	16.12.2002
113581	ALU	02360348.3	EP1432179	GB	Queue Architecture for High-Speed Routing Network Elements	16.12.2002
802624	ALU	12/000489	US7697332	US	PLACEMENT AND ROUTING OF ECC MEMORY DEVICES FOR IMPROVED SIGNAL TIMING	13.12.2007
114514	ALU	04292339.1	EP1643711	FR	Push to Video	30.09.2004
114514	ALU	04292339.1	EP1643711	IT	Push to Video	30.09.2004
114514	ALU	04292339.1	EP1643711	ES	Push to Video	30.09.2004
114514	ALU	04292339.1	EP1643711	GB	Push to Video	30.09.2004
106067	ALU	20077030633	KR1306369	KR	SPREADING TECHNIQUE APPLIED TO BROADBAND MOBILE COMMUNICATIONS BY SATELLITE RELYING ON DVB-RCS	06.11.2006
106067	ALU	11/993450	US8711955	US	SPREADING TECHNIQUE APPLIED TO BROADBAND MOBILE COMMUNICATIONS BY SATELLITE RELYING ON DVB-RCS	06.11.2006
801291	ALU	12/000823	US7696879	US	USE OF GPS OR SIMILAR GEOGRAPHIC INFORMATION SYSTEM IN A CABLE MANAGEMENT SYSTEM	18.12.2007
801125	ALU	12/004924	US8054766	US	A METHOD AND TOOL FOR IP MULTICAST NETWORK ADDRESS TRANSLATION (MNAT)	21.12.2007
802475	ALU	12/000961	US8264951	US	Resilient PPP/ML-PPP Services Over Multi-Chassis APS Protected Routers	19.12.2007
800953	ALU	03292839.2	EP1427156	FR	Method for detecting a signal and receiver system for the implementation of the method	14.11.2003
800953	ALU	03292839.2	EP1427156	DE	Method for detecting a signal and receiver system for the implementation of the method	14.11.2003
800953	ALU	03292839.2	EP1427156	GB	Method for detecting a signal and receiver system for the implementation of the method	14.11.2003
801848	ALU	07291478.1		EP	SYSTEM AND METHOD TO SEAMLESSLY INJECT SERVICES IN CONTENT FLOWS	10.12.2007
801848	ALU	200810177103.X	ZL200810177103.X	CN	SYSTEM AND METHOD TO SEAMLESSLY INJECT SERVICES IN CONTENT FLOWS	05.12.2008
801848	ALU	12/330785	US8856242	US	SYSTEM AND METHOD TO SEAMLESSLY INJECT SERVICES IN CONTENT FLOWS	09.12.2008
801848	ALU	3540/CHENP/2010		IN	SYSTEM AND METHOD TO SEAMLESSLY INJECT SERVICES IN CONTENT FLOWS	24.11.2008
801848	ALU	2010-537277	JP5501246	JP	SYSTEM AND METHOD TO SEAMLESSLY INJECT SERVICES IN CONTENT FLOWS	24.11.2008
801848	ALU	20107012772	KR10-1560426	KR	SYSTEM AND METHOD TO SEAMLESSLY INJECT SERVICES IN CONTENT FLOWS	24.11.2008
106089	ALU	05300694.6	EP1758338	FR	Bump In The Stack SEND implementation	25.08.2005
106089	ALU	05300694.6	EP1758338	DE	Bump In The Stack SEND implementation	25.08.2005
106089	ALU	05300694.6	EP1758338	GB	Bump In The Stack SEND implementation	25.08.2005
801450	ALU	11/956328	US8161541	US	Ethernet Connectivity Fault Management with User Verification Option	13.12.2007
801604	ALU	07291605.9	EP2075952	EP	CONTENT BASED REVERSED SERVICE BILLING	24.12.2007
800744	ALU	200810009596.6	ZL200810009596.6	CN	Squelching optimization for packet ring protection	03.03.2008
800744	ALU	12042053	US8264952	US	Squelching optimization for packet ring protection	04.03.2008
102708	ALU	01400062.4	EP1117199	FR	3R regenerator based on an all-optical XOR gate.	11.01.2001
102708	ALU	01400062.4	EP1117199	DE	3R regenerator based on an all-optical XOR gate.	11.01.2001
102708	ALU	01400062.4	EP1117199	GB	3R regenerator based on an all-optical XOR gate.	11.01.2001
801470	ALU	12/008535	US8180874	US	MAC ADDRESS FLOODING DEFENCE	11.01.2008
105957	ALU	06115517.2	EP1734701	FR	E1 OVER ETHERNET TRANSPORT	15.06.2006

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0263

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
105957	ALU	06115517.2	EP1734701	DE	E1 OVER ETHERNET TRANSPORT	15.06.2006
105957	ALU	06115517.2	EP1734701	GB	E1 OVER ETHERNET TRANSPORT	15.06.2006
103526	ALU	02290221.7	EP1249889	FR	TELECOM ANTENNA WITH FREQUENCY REJECTION	31.01.2002
103526	ALU	02290221.7	EP1249889	DE	TELECOM ANTENNA WITH FREQUENCY REJECTION	31.01.2002
103526	ALU	02290221.7	EP1249889	GB	TELECOM ANTENNA WITH FREQUENCY REJECTION	31.01.2002
802030	ALU	0800098		FR	Automatic Ads Correlation	08.01.2008
105272	ALU	03292584.4	EP1524798	FR	SYSTEM TO HELP SECURITY SERVICES IN WIRELESS NETWORK	17.10.2003
105272	ALU	03292584.4	EP1524798	DE	SYSTEM TO HELP SECURITY SERVICES IN WIRELESS NETWORK	17.10.2003
105272	ALU	03292584.4	EP1524798	IT	SYSTEM TO HELP SECURITY SERVICES IN WIRELESS NETWORK	17.10.2003
105272	ALU	03292584.4	EP1524798	ES	SYSTEM TO HELP SECURITY SERVICES IN WIRELESS NETWORK	17.10.2003
105272	ALU	03292584.4	EP1524798	GB	SYSTEM TO HELP SECURITY SERVICES IN WIRELESS NETWORK	17.10.2003
104682	ALU	04291001.8	EP1471379	FR	OPTICALLY RECONFIGURABLE FIBRE GRATING	14.04.2004
104682	ALU	04291001.8	EP1471379	DE	OPTICALLY RECONFIGURABLE FIBRE GRATING	14.04.2004
104682	ALU	04291001.8	EP1471379	GB	OPTICALLY RECONFIGURABLE FIBRE GRATING	14.04.2004
106098	ALU	06126245.7	EP1798813	FR	METHOD AND DEVICE TO ENSURE THE POLARIZATION PERFORMANCE IN CIRCULAR WAVEGUIDE PIPE FOR MICROWAVE DUAL REFLECTOR ANTENNAS	15.12.2006
106098	ALU	06126245.7	EP1798813	DE	METHOD AND DEVICE TO ENSURE THE POLARIZATION PERFORMANCE IN CIRCULAR WAVEGUIDE PIPE FOR MICROWAVE DUAL REFLECTOR ANTENNAS	15.12.2006
106098	ALU	06126245.7	EP1798813	GB	METHOD AND DEVICE TO ENSURE THE POLARIZATION PERFORMANCE IN CIRCULAR WAVEGUIDE PIPE FOR MICROWAVE DUAL REFLECTOR ANTENNAS	15.12.2006
800008	ALU	200810081502.6	ZL200810081502.6	CN	Multi-band Low Noise Amplifier RF IC Module including electronic for digital control, for diversity antenna systems	26.02.2008
800008	ALU	12/037497	US8045940	US	Multi-band Low Noise Amplifier RF IC Module including electronic for digital control, for diversity antenna systems	26.02.2008
106361	ALU	12/027640	US8225322	US	EVALUATION ENGINE FOR ADEQUACY OF RESOURCES AGAINST NON BINARY, HETEROGENEOUS CONSTRAINTS	07.02.2008
104743	ALU	03292358.3	EP1408646	FR	HIERARCHICAL AND DYNAMICAL DESCRIPTOR OF MANAGED NETWORK ELEMENT FOR NETWORK MANAGEMENT SYSTEM USING A JAVA BASED FRAMEWORK	26.09.2003
104743	ALU	03292358.3	EP1408646	DE	HIERARCHICAL AND DYNAMICAL DESCRIPTOR OF MANAGED NETWORK ELEMENT FOR NETWORK MANAGEMENT SYSTEM USING A JAVA BASED FRAMEWORK	26.09.2003
104743	ALU	03292358.3	EP1408646	GB	HIERARCHICAL AND DYNAMICAL DESCRIPTOR OF MANAGED NETWORK ELEMENT FOR NETWORK MANAGEMENT SYSTEM USING A JAVA BASED FRAMEWORK	26.09.2003
802506	ALU	0800282	FR2926695	FR	User generated and shared content	21.01.2008
802329	ALU	12/164646	US8424036	US	TARGETED/ADDRESSABLE AD INSERTION BY MEANS OF THE FAST CHANNEL CHANGE METHOD	30.06.2008
105657	ALU	06116861.3	EP1764887	FR	STRUCTURE AND PROCESSING OF AN ELECTRO-ABSORPTION MODULATED LASER SUITABLE FOR LOW COST, COOLER-LESS, HIGH SPEED TRANSMITTERS	07.07.2006
105657	ALU	06116861.3	EP1764887	DE	STRUCTURE AND PROCESSING OF AN ELECTRO-ABSORPTION MODULATED LASER SUITABLE FOR LOW COST, COOLER-LESS, HIGH SPEED TRANSMITTERS	07.07.2006
105657	ALU	06116861.3	EP1764887	IT	STRUCTURE AND PROCESSING OF AN ELECTRO-ABSORPTION MODULATED LASER SUITABLE FOR LOW COST, COOLER-LESS, HIGH SPEED TRANSMITTERS	07.07.2006
105657	ALU	06116861.3	EP1764887	GB	STRUCTURE AND PROCESSING OF AN ELECTRO-ABSORPTION MODULATED LASER SUITABLE FOR LOW COST, COOLER-LESS, HIGH SPEED TRANSMITTERS	07.07.2006
131134	ALU	01401932.7	EP1176745	FR	Lambda concatenation in WDM networks	19.07.2001
131134	ALU	01401932.7	EP1176745	DE	Lambda concatenation in WDM networks	19.07.2001
131134	ALU	01401932.7	EP1176745	GB	Lambda concatenation in WDM networks	19.07.2001
801430	ALU	12/008856	US9451036	US	FINGERPRINTING SYSTEMS AND OPERATING SYSTEMS IN A NETWORK	15.01.2008
801731	ALU	12/007304	US7520778	US	Pressure Ring in Plastic Clamping Plate to Overcome Compression Stress Relaxation (CSR) Between Polymer Gasket and Plastic Plate to Seal a DIN 7/16 Connector	09.01.2008
801664	ALU	12/010489	US7751408	US	Circuit Emulation Over An IP Interworking VLL	25.01.2008
114755	ALU	05292023.8	EP1770827	FR	calibration method for smart antenna systems	28.09.2005
114755	ALU	05292023.8	EP1770827	DE	calibration method for smart antenna systems	28.09.2005
114755	ALU	05292023.8	EP1770827	GB	calibration method for smart antenna systems	28.09.2005
103492	ALU	02290144.1	EP1271890	FR	CONFIGURATION OF EDGE ROUTERS FOR CONTROL OF ACTIVE PACKETS	21.01.2002
103492	ALU	02290144.1	EP1271890	DE	CONFIGURATION OF EDGE ROUTERS FOR CONTROL OF ACTIVE PACKETS	21.01.2002
103492	ALU	02290144.1	EP1271890	GB	CONFIGURATION OF EDGE ROUTERS FOR CONTROL OF ACTIVE PACKETS	21.01.2002

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0264

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
105896	ALU	12/066776	US7657142	US	OPTICAL FIBER DRAWING STEP IMPROVEMENT	28.08.2006
802935	ALU	0851173	FR2928061	FR	Interaction between handsets and urban furnitures	25.02.2008
134187	ALU	05027717.7	EP1677454	FR	TRAFFIC GENERATOR/MONITOR MODE	19.12.2005
134187	ALU	05027717.7	EP1677454	DE	TRAFFIC GENERATOR/MONITOR MODE	19.12.2005
134187	ALU	05027717.7	EP1677454	GB	TRAFFIC GENERATOR/MONITOR MODE	19.12.2005
114609	ALU	05292482.6	EP1788729	FR	Control signal for Raman gain tuning	21.11.2005
114609	ALU	05292482.6	EP1788729	DE	Control signal for Raman gain tuning	21.11.2005
114609	ALU	05292482.6	EP1788729	GB	Control signal for Raman gain tuning	21.11.2005
802152	ALU	0851121	FR2928064	FR	SIM-less device access for security services	21.02.2008
120996	ALU	04292292.2	EP1641173	FR	DSL MODEM WITH CONTROLLED TRANSMIT SIGNAL QUALITY DEGRADATION.	23.09.2004
120996	ALU	04292292.2	EP1641173	DE	DSL MODEM WITH CONTROLLED TRANSMIT SIGNAL QUALITY DEGRADATION.	23.09.2004
120996	ALU	04292292.2	EP1641173	IT	DSL MODEM WITH CONTROLLED TRANSMIT SIGNAL QUALITY DEGRADATION.	23.09.2004
120996	ALU	04292292.2	EP1641173	NL	DSL MODEM WITH CONTROLLED TRANSMIT SIGNAL QUALITY DEGRADATION.	23.09.2004
120996	ALU	04292292.2	EP1641173	PL	DSL MODEM WITH CONTROLLED TRANSMIT SIGNAL QUALITY DEGRADATION.	23.09.2004
120996	ALU	04292292.2	EP1641173	ES	DSL MODEM WITH CONTROLLED TRANSMIT SIGNAL QUALITY DEGRADATION.	23.09.2004
120996	ALU	04292292.2	EP1641173	GB	DSL MODEM WITH CONTROLLED TRANSMIT SIGNAL QUALITY DEGRADATION.	23.09.2004
104398	ALU	02719856.3	EP1474878	FR	SYSTEME HYBRIDE MULTI-SPOTS A REUTILISATION DE FREQUENCE	01.02.2002
104398	ALU	02719856.3	EP1474878	DE	SYSTEME HYBRIDE MULTI-SPOTS A REUTILISATION DE FREQUENCE	01.02.2002
104398	ALU	02719856.3	EP1474878	IT	SYSTEME HYBRIDE MULTI-SPOTS A REUTILISATION DE FREQUENCE	01.02.2002
104398	ALU	02719856.3	EP1474878	ES	SYSTEME HYBRIDE MULTI-SPOTS A REUTILISATION DE FREQUENCE	01.02.2002
104398	ALU	02719856.3	EP1474878	GB	SYSTEME HYBRIDE MULTI-SPOTS A REUTILISATION DE FREQUENCE	01.02.2002
801658	ALU	12/039817	US8181249	US	Malware Detection System and Method	29.02.2008
802741	ALU	12/071982	US8885644	US	Compressed IP Flow Recognition For In-Line, Integrated Mobile DPI	28.02.2008
802921	ALU	12/071983	US7889665	US	Bridgeport Private MAC Address Discovery Mechanism In Ethernet Access Networks	28.02.2008
803003	ALU	12/073106	US7929450	US	In-Bound Mechanism That Monitors End-To-End QOE Of Services With Application Awareness	29.02.2008
803004	ALU	12/073107	US7940683	US	In-Bound Mechanism That Verifies End-To-End Service Configuration With Application Awareness	29.02.2008
803007	ALU	12/073108	US7953017	US	APPLICATION SPECIFIC SERVICE PING PACKAGE	29.02.2008
803027	ALU	12/071861	US9100268	US	Application Aware MPLS Tunnel Selection	27.02.2008
114949	ALU	06290214.3	EP1816752	FR	Software defined concept for a multi-band multi-standard transceiver for wireless communication base-stations	06.02.2006
114949	ALU	06290214.3	EP1816752	DE	Software defined concept for a multi-band multi-standard transceiver for wireless communication base-stations	06.02.2006
114949	ALU	06290214.3	EP1816752	GB	Software defined concept for a multi-band multi-standard transceiver for wireless communication base-stations	06.02.2006
802578	ALU	12/075375	US7746657	US	10G XFP Compliant PCB	11.03.2008
121082	ALU	05290453.9	EP1696633	GB	BI-DIRECTIONAL SOAP SESSION OVER UNI DIRECTIONAL HTTP SESSION.	28.02.2005
139405	ALU	2374/DELNP/2008		IN	CONFERENCE ACTIVITY PRESENCE	02.08.2006
150117	ALU	06847267.9		EP	Distributed Architecture of an Expandable Access Node	30.10.2006
102612	ALU	00403012.8	EP1098293	FR	Asiatic character presence indicator in a displayable WML-Card.	30.10.2000
102612	ALU	00403012.8	EP1098293	DE	Asiatic character presence indicator in a displayable WML-Card.	30.10.2000
102612	ALU	00403012.8	EP1098293	IT	Asiatic character presence indicator in a displayable WML-Card.	30.10.2000
102612	ALU	00403012.8	EP1098293	ES	Asiatic character presence indicator in a displayable WML-Card.	30.10.2000
102612	ALU	00403012.8	EP1098293	GB	Asiatic character presence indicator in a displayable WML-Card.	30.10.2000
114984	ALU	06300537.5	EP1863227	FR	Emergency services capitalizing on location information statistics in case of wireless network failure	31.05.2006
114984	ALU	06300537.5	EP1863227	DE	Emergency services capitalizing on location information statistics in case of wireless network failure	31.05.2006
114984	ALU	06300537.5	EP1863227	GB	Emergency services capitalizing on location information statistics in case of wireless network failure	31.05.2006
801433	ALU	12/049743	US8155028	US	MPLS LSP Automation Engine For Ring Topologies	17.03.2008
802946	ALU	08300152.9		EP	Microwave Universal Packet Compression	21.03.2008
800830	ALU	200810098479.1	ZL200810098479.1	CN	Adaptive jitter buffer for asynchronous connection support	28.05.2008

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
105107	ALU	04291814.4	EP1503541	FR	FLEXIBLE PERSISTENCY MECHANISM FOR NETWORK ELEMENT MANAGEMENT	15.07.2004
105107	ALU	04291814.4	EP1503541	DE	FLEXIBLE PERSISTENCY MECHANISM FOR NETWORK ELEMENT MANAGEMENT	15.07.2004
105107	ALU	04291814.4	EP1503541	GB	FLEXIBLE PERSISTENCY MECHANISM FOR NETWORK ELEMENT MANAGEMENT	15.07.2004
121276	ALU	06300570.6	EP1865647	FR	APPLICATION CONTROLLED RESYNCHRONIZATION OF A COMMUNICATION SYSTEM.	09.06.2006
121276	ALU	06300570.6	EP1865647	DE	APPLICATION CONTROLLED RESYNCHRONIZATION OF A COMMUNICATION SYSTEM.	09.06.2006
121276	ALU	06300570.6	EP1865647	IT	APPLICATION CONTROLLED RESYNCHRONIZATION OF A COMMUNICATION SYSTEM.	09.06.2006
121276	ALU	06300570.6	EP1865647	NL	APPLICATION CONTROLLED RESYNCHRONIZATION OF A COMMUNICATION SYSTEM.	09.06.2006
121276	ALU	06300570.6	EP1865647	ES	APPLICATION CONTROLLED RESYNCHRONIZATION OF A COMMUNICATION SYSTEM.	09.06.2006
121276	ALU	06300570.6	EP1865647	GB	APPLICATION CONTROLLED RESYNCHRONIZATION OF A COMMUNICATION SYSTEM.	09.06.2006
800752	ALU	0801812	FR2929798	FR	Intelligent directory	02.04.2008
802740	ALU	12/078701	US8165024	US	VIDEO DENTING ON NETWORK CONGESTION USING IN-LINE DPI APPLIANCE	03.04.2008
802507	ALU	0852523		FR	Customer positioning management in an advertising system	15.04.2008
115130	ALU	06300793.4	EP1879307	FR	Passive optical protection box	11.07.2006
115130	ALU	06300793.4	EP1879307	DE	Passive optical protection box	11.07.2006
115130	ALU	06300793.4	EP1879307	GB	Passive optical protection box	11.07.2006
105831	ALU	12/092857	US7782756	US	NEW FAMILY OF OPTIMISED CODES	06.10.2008
131173	ALU	01401963.2	EP1278315	FR	ACTIVE GAIN EQUALIZATION OF TWO STAGE EDFA USING THE RAMAN AMPLIFICATION.	20.07.2001
131173	ALU	01401963.2	EP1278315	DE	ACTIVE GAIN EQUALIZATION OF TWO STAGE EDFA USING THE RAMAN AMPLIFICATION.	20.07.2001
131173	ALU	01401963.2	EP1278315	GB	ACTIVE GAIN EQUALIZATION OF TWO STAGE EDFA USING THE RAMAN AMPLIFICATION.	20.07.2001
131272	ALU	04290901.0	EP1585271	FR	SWITCHING TIME IMPROVEMENTS OF SECTION/LINE AND EQUIPMENT PROTECTIONS IN SDH AND SONET TECHNOLOGIES.	05.04.2004
131272	ALU	04290901.0	EP1585271	DE	SWITCHING TIME IMPROVEMENTS OF SECTION/LINE AND EQUIPMENT PROTECTIONS IN SDH AND SONET TECHNOLOGIES.	05.04.2004
131272	ALU	04290901.0	EP1585271	GB	SWITCHING TIME IMPROVEMENTS OF SECTION/LINE AND EQUIPMENT PROTECTIONS IN SDH AND SONET TECHNOLOGIES.	05.04.2004
121096	ALU	04292930.7	EP1670202	FR	AUTONOMOUS SPECTRUM BALANCING FOR DIGITAL SUBSCRIBER LINES.	08.12.2004
121096	ALU	04292930.7	EP1670202	DE	AUTONOMOUS SPECTRUM BALANCING FOR DIGITAL SUBSCRIBER LINES.	08.12.2004
121096	ALU	04292930.7	EP1670202	GB	AUTONOMOUS SPECTRUM BALANCING FOR DIGITAL SUBSCRIBER LINES.	08.12.2004
115062	ALU	06300895.7	EP1892877	FR	Hardware efficient Q-Monitor Circuit / Adaptive Receiver	25.08.2006
115062	ALU	06300895.7	EP1892877	DE	Hardware efficient Q-Monitor Circuit / Adaptive Receiver	25.08.2006
115062	ALU	06300895.7	EP1892877	GB	Hardware efficient Q-Monitor Circuit / Adaptive Receiver	25.08.2006
115166	ALU	06291217.5	EP1883163	FR	Tuneable filter control in SDR- Base Stations using the predistortion feedback chain	25.07.2006
115166	ALU	06291217.5	EP1883163	DE	Tuneable filter control in SDR- Base Stations using the predistortion feedback chain	25.07.2006
115166	ALU	06291217.5	EP1883163	GB	Tuneable filter control in SDR- Base Stations using the predistortion feedback chain	25.07.2006
135815	ALU	02010160.6	EP1259011	FR	COMMON PROTECTION ARCHITECTURE ON SHARED PROTECTION RINGS	14.05.2002
135815	ALU	02010160.6	EP1259011	DE	COMMON PROTECTION ARCHITECTURE ON SHARED PROTECTION RINGS	14.05.2002
135815	ALU	02010160.6	EP1259011	GB	COMMON PROTECTION ARCHITECTURE ON SHARED PROTECTION RINGS	14.05.2002
801297	ALU	12/112939	US7940182	US	METHOD FOR WRITING CABLE RFID INFORMATION	30.04.2008
121284	ALU	200680046280.3	ZL200680046280.3	CN	EXTENDED ADF SOLUTION	10.11.2006
121284	ALU	12/093205	US8718041	US	EXTENDED ADF SOLUTION	10.11.2006
104303	ALU	03778412.1	EP1557068	FR	ADD-DROP COMBINED WITH A SWITCH	21.10.2003
104303	ALU	03778412.1	EP1557068	DE	ADD-DROP COMBINED WITH A SWITCH	21.10.2003
104303	ALU	03778412.1	EP1557068	GB	ADD-DROP COMBINED WITH A SWITCH	21.10.2003
800280	ALU	12/107836	US8045852	US	Channel Balancing Algorithm	23.04.2008
803000	ALU	200810187148.5	ZL200810187148.5	CN	Packet transport with reduced header processing	17.12.2008
803000	ALU	12/316285	US7876785	US	Packet transport with reduced header processing	11.12.2008

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
801571	ALU	12/116480	US8055129	US	Alien Wavelength Channel Balancing and Line Amplifier Optimization	07.05.2008
115051	ALU	06300752.0	EP1876781	FR	Absolute-Mean-Method for pilot based OFDMA-tracking	04.07.2006
115051	ALU	06300752.0	EP1876781	DE	Absolute-Mean-Method for pilot based OFDMA-tracking	04.07.2006
115051	ALU	06300752.0	EP1876781	GB	Absolute-Mean-Method for pilot based OFDMA-tracking	04.07.2006
802870	ALU	08155322.4		EP	An ROADM structure with additional filtering to combat signal degradation induced by group delay ripple distortions of the switching elements of the ROADM	29.04.2008
802829	ALU	0852781	FR2930703	FR	Anticipated resource scheduling for interactive traffic schemes	25.04.2008
802668	ALU	08290434.3		EP	PREQUALIFICATION AND GROOMING ADVICE FOR DSM 2 AND 3	07.05.2008
802915	ALU	08290436.8		EP	LOCAL ROUTING FOR FEMTO	07.05.2008
802915	ALU	200910137875.5		CN	LOCAL ROUTING FOR FEMTO	05.05.2009
802915	ALU	12/385989	US8189606	US	LOCAL ROUTING FOR FEMTO	27.04.2009
802915	ALU	6827/CHENP/2010		IN	LOCAL ROUTING FOR FEMTO	27.04.2009
802915	ALU	10-2010-7027080	KR10-1495063	KR	LOCAL ROUTING FOR FEMTO	27.04.2009
801686	ALU	08162516.2		EP	Automatic user profile-based content indexing	18.08.2008
801686	ALU	2008231803	JP5280776	JP	Automatic user profile-based content indexing	10.09.2008
801841	ALU	08290437.6		EP	Dynamic preemption	07.05.2008
802714	ALU	10/134382	US6732058	US	Method and Apparatus of Computation Reduction for Tone Detection	30.04.2002
150019	ALU	06849513.4		EP	Network Security Using Recursive Statistics Collection	26.12.2006
801444	ALU	12/133126	US8792346	US	CENTRAL ADMISSION CONTROL FOR MULTICAST TRAFFIC	04.06.2008
801444	ALU	200810109650.4	ZL200810109650.4	CN	CENTRAL ADMISSION CONTROL FOR MULTICAST TRAFFIC	11.06.2008
803482	ALU	10/635544	US7139486	US	Method and Apparatus for Optical Add/Drop Multiplexing in Optical Networks	07.08.2003
106178	ALU	200680052222.1	ZL200680052222.1	CN	DAMA AVEC RESERVATION IMPLICITE DE CAPACITE	29.12.2006
106178	ALU	12/159941	US8649392	US	DAMA AVEC RESERVATION IMPLICITE DE CAPACITE	29.12.2006
150039	ALU	06795340.6	EP1884064	FR	Co-Existing Static And Dymanic IP Multicast	15.05.2006
150039	ALU	06795340.6	EP1884064	DE	Co-Existing Static And Dymanic IP Multicast	15.05.2006
150039	ALU	06795340.6	EP1884064	IT	Co-Existing Static And Dymanic IP Multicast	15.05.2006
150039	ALU	06795340.6	EP1884064	GB	Co-Existing Static And Dymanic IP Multicast	15.05.2006
121238	ALU	5246/DELNP/2008		IN	TV ASSISTED IVR	20.12.2006
121238	ALU	2008546275	JP5400389	JP	TV ASSISTED IVR	20.12.2006
121238	ALU	20087018073	KR101318471	KR	TV ASSISTED IVR	20.12.2006
115241	ALU	06301076.3	EP1916789	FR	Synchronization method for MAC PDUs in a WiMAX System (IEEE 802.16-2004, IEEE 802.16e-2005)	23.10.2006
115241	ALU	06301076.3	EP1916789	DE	Synchronization method for MAC PDUs in a WiMAX System (IEEE 802.16-2004, IEEE 802.16e-2005)	23.10.2006
115241	ALU	06301076.3	EP1916789	GB	Synchronization method for MAC PDUs in a WiMAX System (IEEE 802.16-2004, IEEE 802.16e-2005)	23.10.2006
139059	ALU	03018815.5	EP1395003	FR	A CONSTRAINT-BASED SHORTEST PATH FIRST ALGORITHM FOR FIBER SWITCHING	19.08.2003
139059	ALU	03018815.5	EP1395003	DE	A CONSTRAINT-BASED SHORTEST PATH FIRST ALGORITHM FOR FIBER SWITCHING	19.08.2003
139059	ALU	03018815.5	EP1395003	IT	A CONSTRAINT-BASED SHORTEST PATH FIRST ALGORITHM FOR FIBER SWITCHING	19.08.2003
139059	ALU	03018815.5	EP1395003	NL	A CONSTRAINT-BASED SHORTEST PATH FIRST ALGORITHM FOR FIBER SWITCHING	19.08.2003
139059	ALU	03018815.5	EP1395003	ES	A CONSTRAINT-BASED SHORTEST PATH FIRST ALGORITHM FOR FIBER SWITCHING	19.08.2003
139059	ALU	03018815.5	EP1395003	GB	A CONSTRAINT-BASED SHORTEST PATH FIRST ALGORITHM FOR FIBER SWITCHING	19.08.2003
131116	ALU	01400220.8	EP1122903	DE	Method to calculate the current route of paths on MS SP rings	29.01.2001
803465	ALU	0853827	FR2932343	FR	Communication Hyperlink System	10.06.2008
802512	ALU	08290463.2		EP	SYSTEM AND METHOD FOR RFID APPLICATION MANAGEMENT	19.05.2008
150286	ALU	12/141432	US8514880	US	Multi-Shelf Hybrid IP/ATM DSLAM Architecture	18.06.2008
121239	ALU	2007214028	AU2007214028	AU	RETRANSMISSION WITH AN AGENT AT THE PHYSICAL LAYER.	02.02.2007
121239	ALU	2008553663	JP4959725	JP	RETRANSMISSION WITH AN AGENT AT THE PHYSICAL LAYER.	02.02.2007
121239	ALU	MX/a/2008/00805	MX280389	MX	RETRANSMISSION WITH AN AGENT AT THE PHYSICAL LAYER.	02.02.2007
121239	ALU	2008136016	RU2449479	RU	RETRANSMISSION WITH AN AGENT AT THE PHYSICAL LAYER.	02.02.2007
121239	ALU	20087019050	KR101291523	KR	RETRANSMISSION WITH AN AGENT AT THE PHYSICAL LAYER.	02.02.2007
105761	ALU	06012993.9	EP1737157	FR	TIME CREDIT TRANSFER SERVICE BETWEEN MOBILE PHONES	23.06.2006
105761	ALU	06012993.9	EP1737157	DE	TIME CREDIT TRANSFER SERVICE BETWEEN MOBILE PHONES	23.06.2006
105761	ALU	06012993.9	EP1737157	IT	TIME CREDIT TRANSFER SERVICE BETWEEN MOBILE PHONES	23.06.2006
105761	ALU	06012993.9	EP1737157	ES	TIME CREDIT TRANSFER SERVICE BETWEEN MOBILE PHONES	23.06.2006
105761	ALU	06012993.9	EP1737157	GB	TIME CREDIT TRANSFER SERVICE BETWEEN MOBILE PHONES	23.06.2006

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
121005	ALU	04290567.9	EP1571799	FR	MAC ADDRESS ANTI-SPOOFING FOR A SECURE ETHERNET BROADBAND ACCESS NETWORK	02.03.2004
121005	ALU	04290567.9	EP1571799	DE	MAC ADDRESS ANTI-SPOOFING FOR A SECURE ETHERNET BROADBAND ACCESS NETWORK	02.03.2004
121005	ALU	04290567.9	EP1571799	GB	MAC ADDRESS ANTI-SPOOFING FOR A SECURE ETHERNET BROADBAND ACCESS NETWORK	02.03.2004
802939	ALU	0854124	FR2932942	FR	Communication release interactive task creation	23.06.2008
803607	ALU	10/635561	US7224909	US	Method and System for Selective Optical Payload Cancellation	07.08.2003
803626	ALU	10/612908	US6912340	US	Optical Ring Interconnect	07.07.2003
803045	ALU	0854399	FR2933255	FR	Added-value label manager implementation for RSVP-TE in WDM networks	30.06.2008
802399	ALU	12/164703	US8108893	US	USER INTERACTIVE TARGETED ADS	30.06.2008
803066	ALU	12/165150	US8438582	US	Soft Denial Of Application Actions Over The Network Communications	30.06.2008
106264	ALU	12/278090	US8340012	US	MBMS CONTROL CHANNEL MONITORING WITHOUT MBMS INDICATION CHANNEL	28.10.2008
121021	ALU	04292239.3	EP1638288	FR	A WEB SERVICE COMPLIANT ALTERNATIVE FOR THE WT-87 MANAGEMENT PROTOCOL.	17.09.2004
121021	ALU	04292239.3	EP1638288	DE	A WEB SERVICE COMPLIANT ALTERNATIVE FOR THE WT-87 MANAGEMENT PROTOCOL.	17.09.2004
121021	ALU	04292239.3	EP1638288	IT	A WEB SERVICE COMPLIANT ALTERNATIVE FOR THE WT-87 MANAGEMENT PROTOCOL.	17.09.2004
121021	ALU	04292239.3	EP1638288	GB	A WEB SERVICE COMPLIANT ALTERNATIVE FOR THE WT-87 MANAGEMENT PROTOCOL.	17.09.2004
114701	ALU	05291497.5	EP1744168	FR	Radio base station with multipurpose VSWR measurement unit	11.07.2005
114701	ALU	05291497.5	EP1744168	DE	Radio base station with multipurpose VSWR measurement unit	11.07.2005
114701	ALU	05291497.5	EP1744168	GB	Radio base station with multipurpose VSWR measurement unit	11.07.2005
114973	ALU	06290395.0	EP1832905	FR	Protected optical interface in a wall of a housing	07.03.2006
114973	ALU	06290395.0	EP1832905	DE	Protected optical interface in a wall of a housing	07.03.2006
114973	ALU	06290395.0	EP1832905	IT	Protected optical interface in a wall of a housing	07.03.2006
114973	ALU	06290395.0	EP1832905	ES	Protected optical interface in a wall of a housing	07.03.2006
114973	ALU	06290395.0	EP1832905	CH	Protected optical interface in a wall of a housing	07.03.2006
114973	ALU	06290395.0	EP1832905	GB	Protected optical interface in a wall of a housing	07.03.2006
802836	ALU	08013004.0		EP	Polarization insensitive injection locked laser diodes for access applications	18.07.2008
131121	ALU	00403544.0	EP1113616	FR	Clock recovery method and apparatus	14.12.2000
131121	ALU	00403544.0	EP1113616	DE	Clock recovery method and apparatus	14.12.2000
131121	ALU	00403544.0	EP1113616	GB	Clock recovery method and apparatus	14.12.2000
803141	ALU	0855102	FR2934451	FR	Proxy-based SIP third party call control	25.07.2008
803797	ALU	10/435458	US7317731	US	System and Method for Distributed Resource Reservation Protocol - Traffic Engineering (RSVP-TE) Hitless Restart in Multi-Protocol Label Switching (MPLS) Network	12.05.2003
121270	ALU	2008555659	JP5136992	JP	DEDICATED ADVERTISEMENT CHANNEL.	02.02.2007
121270	ALU	20087020413	KR101310536	KR	DEDICATED ADVERTISEMENT CHANNEL.	02.02.2007
105296	ALU	05749199.5	EP1735882	FR	MICROSTRUCTURED FIBRE WITH REDUCED LEAKAGE LOSSES	01.04.2005
105296	ALU	05749199.5	EP1735882	DE	MICROSTRUCTURED FIBRE WITH REDUCED LEAKAGE LOSSES	01.04.2005
105296	ALU	05749199.5	EP1735882	IT	MICROSTRUCTURED FIBRE WITH REDUCED LEAKAGE LOSSES	01.04.2005
105296	ALU	05749199.5	EP1735882	GB	MICROSTRUCTURED FIBRE WITH REDUCED LEAKAGE LOSSES	01.04.2005
803279	ALU	0855453	FR2934939	FR	ISLS - Identifying Service Level Specification at the Network layer	06.08.2008
121017	ALU	04292999.2	EP1672827	FR	ENHANCED NOISE MEASUREMENT.	15.12.2004
121017	ALU	04292999.2	EP1672827	DE	ENHANCED NOISE MEASUREMENT.	15.12.2004
121017	ALU	04292999.2	EP1672827	GB	ENHANCED NOISE MEASUREMENT.	15.12.2004
129210	ALU	01402848.4	EP1206053	FR	Common burst synchronization method	05.11.2001
129210	ALU	01402848.4	EP1206053	DE	Common burst synchronization method	05.11.2001
129210	ALU	01402848.4	EP1206053	IT	Common burst synchronization method	05.11.2001
129210	ALU	01402848.4	EP1206053	ES	Common burst synchronization method	05.11.2001
129210	ALU	01402848.4	EP1206053	GB	Common burst synchronization method	05.11.2001
114564	ALU	05291569.1	EP1746742	FR	Training Sequence Code Detection for GSM Access Bursts	20.07.2005
114564	ALU	05291569.1	EP1746742	DE	Training Sequence Code Detection for GSM Access Bursts	20.07.2005
114564	ALU	05291569.1	EP1746742	GB	Training Sequence Code Detection for GSM Access Bursts	20.07.2005
106043	ALU	200780013090.6	ZL200780013090.6	CN	INTERACTIVE USER PROFILE COMMUNITY	16.03.2007
106043	ALU	2009500892	JP5313864	JP	INTERACTIVE USER PROFILE COMMUNITY	16.03.2007
106043	ALU	12/293721	US8424039	US	INTERACTIVE USER PROFILE COMMUNITY	16.03.2007
150262	ALU	200780017661.3	ZL200780017661.3	CN	Port Association For Port Operational Status Event Monitoring	14.05.2007
106463	ALU	200810173756.0	ZL200810173756.0	CN	HOW TO IMPROVE THE BALANCE OF LATENCY ON TDM TRAFFIC VS. TRANSPORT EFFICIENCY	27.09.2008

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
106463	ALU	12/239157	US8023505	US	HOW TO IMPROVE THE BALANCE OF LATENCY ON TDM TRAFFIC VS. TRANSPORT EFFICIENCY	26.09.2008
803524	ALU	12/200711	US8477718	US	System And Method Of Serving Gateway Having Mobile Packet Protocol Application-Aware Packet Management	28.08.2008
803525	ALU	12/200658	US8626954	US	Application-Aware M:N Hot Redundancy For DPI-Based Application Engines	28.08.2008
803138	ALU	12/200598	US8159941	US	In-Band DPI Media Reservation Modifications To RFC3313	28.08.2008
803722	ALU	12/192553	US9032433	US	Personalized Ads Insertion During Start Over Service	15.08.2008
801271	ALU	12/194589	US8289996	US	Multi-Purpose PDU Container For Delineating PDU Datagrams And PDU Datagram Attributes In An 8B10B Coded System	20.08.2008
803837	ALU	12/461847	US7940120	US	POWER AMPLIFIER LINEARIZATION USING RF FEEDBACK	26.08.2009
803981	ALU	10/191548	US7274656	US	Protection System and Method for Resilient Packet Ring (RPR) Interconnection	10.07.2002
803335	ALU	0856104	FR2935858	FR	IMS call control from Enterprise	11.09.2008
804005	ALU	09/900153	US6789097	US	Real-Time Method For Bit-Reversal of Large Size Arrays	09.07.2001
801623	ALU	200810175637.9	ZL101431470	CN	Digital RF Combining Device for Indoor Wireless Systems	07.11.2008
801623	ALU	12265511	US8085782	US	Digital RF Combining Device for Indoor Wireless Systems	05.11.2008
139279	ALU	05022018.5	EP1648118	FR	A ROBUST ADAPTIVE SLIDING WINDOW SCHEME FOR MAC TABLE OVERFLOW IN AN AUTHENTICATION ENABLED ETHERNET NETWORK	10.10.2005
139279	ALU	05022018.5	EP1648118	DE	A ROBUST ADAPTIVE SLIDING WINDOW SCHEME FOR MAC TABLE OVERFLOW IN AN AUTHENTICATION ENABLED ETHERNET NETWORK	10.10.2005
139279	ALU	05022018.5	EP1648118	GB	A ROBUST ADAPTIVE SLIDING WINDOW SCHEME FOR MAC TABLE OVERFLOW IN AN AUTHENTICATION ENABLED ETHERNET NETWORK	10.10.2005
139292	ALU	05014353.6	EP1615377	FR	OAM DOMAIN CONFIGURATION USING GARP (GENERIC OAM REGISTRATION PROTOCOL - GORP)	01.07.2005
139292	ALU	05014353.6	EP1615377	DE	OAM DOMAIN CONFIGURATION USING GARP (GENERIC OAM REGISTRATION PROTOCOL - GORP)	01.07.2005
139292	ALU	05014353.6	EP1615377	GB	OAM DOMAIN CONFIGURATION USING GARP (GENERIC OAM REGISTRATION PROTOCOL - GORP)	01.07.2005
120292	ALU	99402898.3	EP1102514	FR	SMART XDSL/POTS SPLITTER.	19.11.1999
120292	ALU	99402898.3	EP1102514	DE	SMART XDSL/POTS SPLITTER.	19.11.1999
120292	ALU	99402898.3	EP1102514	GB	SMART XDSL/POTS SPLITTER.	19.11.1999
134195	ALU	05028426.4	EP1677468	FR	RETAINING USAGE OF THE PRIMARY ROUTER MAC ADDRESS THROUGH OUT MULTIPLE FAILURE OF THE PRIMARY ELEMENT OF A STACK OF SWITCHES/ROUTERS	23.12.2005
134195	ALU	05028426.4	EP1677468	DE	RETAINING USAGE OF THE PRIMARY ROUTER MAC ADDRESS THROUGH OUT MULTIPLE FAILURE OF THE PRIMARY ELEMENT OF A STACK OF SWITCHES/ROUTERS	23.12.2005
134195	ALU	05028426.4	EP1677468	GB	RETAINING USAGE OF THE PRIMARY ROUTER MAC ADDRESS THROUGH OUT MULTIPLE FAILURE OF THE PRIMARY ELEMENT OF A STACK OF SWITCHES/ROUTERS	23.12.2005
803950	ALU	12/212868	US8542581	US	AP-INTRUSION PREVENTION: A PROACTIVE METHOD TO EXPOSE MALICIOUS CLIENTS IN WIRELESS ACCESS NETWORKS	18.09.2008
804028	ALU	10/107333	US7184434	US	Label Distribution Protocol Supporting Multiple Classes of Service in a Multi Protocol Label Switching (MPLS) Network, Methods and MPLS Network Using Thereof	28.03.2002
114218	ALU	03292571.1	EP1524781	FR	Low-cost optical link monitoring functionality integrated into transmission equipment	15.10.2003
114218	ALU	03292571.1	EP1524781	DE	Low-cost optical link monitoring functionality integrated into transmission equipment	15.10.2003
114218	ALU	03292571.1	EP1524781	GB	Low-cost optical link monitoring functionality integrated into transmission equipment	15.10.2003
803973	ALU	12/233561	US8769682	US	MECHANISM FOR IDENTIFYING MALICIOUS CONTENT, DOS ATTACKS AND ILLEGAL IPTV SERVICES	18.09.2008
803949	ALU	12/233474	US8650630	US	WORM FISHING: A PROACTIVE METHOD TO HELP EXPOSE WORMS USING MOBILE IP MESSAGES	18.09.2008
137794	ALU	200810095852.8	ZL200810095852.8	CN	Injecting Addresses Into a Virtual Private Network Forwarding Database To Enable Operational, Administrative, and Management Functions	28.04.2004
104054	ALU	03291322.0	EP1369725	FR	HYDROGEN GETTER FOR OPTICAL CABLE	03.06.2003
104054	ALU	03291322.0	EP1369725	DE	HYDROGEN GETTER FOR OPTICAL CABLE	03.06.2003
104054	ALU	03291322.0	EP1369725	IT	HYDROGEN GETTER FOR OPTICAL CABLE	03.06.2003
104054	ALU	03291322.0	EP1369725	GB	HYDROGEN GETTER FOR OPTICAL CABLE	03.06.2003
103863	ALU	02290420.5	EP1241491	FR	Double-clad photonic optical fiber	21.02.2002
103863	ALU	02290420.5	EP1241491	DE	Double-clad photonic optical fiber	21.02.2002
103863	ALU	02290420.5	EP1241491	GB	Double-clad photonic optical fiber	21.02.2002
135594	ALU	00126462.1	EP1113299	FR	WIDE TUNING RANGE FIBER BRAGG GRATING FILTER (FBGF) USING MUSCLE WIRE ACTUATOR	07.12.2000

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PATENT
REEL: 043877 FRAME: 0269

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
135594	ALU	00126462.1	EP1113299	DE	WIDE TUNING RANGE FIBER BRAGG GRATING FILTER (FBGF) USING MUSCLE WIRE ACTUATOR	07.12.2000
135594	ALU	00126462.1	EP1113299	GB	WIDE TUNING RANGE FIBER BRAGG GRATING FILTER (FBGF) USING MUSCLE WIRE ACTUATOR	07.12.2000
106067	ALU	05300895.9	EP1783928	FR	SPREADING TECHNIQUE APPLIED TO BROADBAND MOBILE COMMUNICATIONS BY SATELLITE RELYING ON DVB-RCS	07.11.2005
106067	ALU	05300895.9	EP1783928	DE	SPREADING TECHNIQUE APPLIED TO BROADBAND MOBILE COMMUNICATIONS BY SATELLITE RELYING ON DVB-RCS	07.11.2005
106067	ALU	05300895.9	EP1783928	GB	SPREADING TECHNIQUE APPLIED TO BROADBAND MOBILE COMMUNICATIONS BY SATELLITE RELYING ON DVB-RCS	07.11.2005
135785	ALU	02009324.1	EP1263244	FR	CALL PARTY ID/PROFILE PRESENTATION	02.05.2002
135785	ALU	02009324.1	EP1263244	DE	CALL PARTY ID/PROFILE PRESENTATION	02.05.2002
135785	ALU	02009324.1	EP1263244	IT	CALL PARTY ID/PROFILE PRESENTATION	02.05.2002
135785	ALU	02009324.1	EP1263244	NL	CALL PARTY ID/PROFILE PRESENTATION	02.05.2002
135785	ALU	02009324.1	EP1263244	ES	CALL PARTY ID/PROFILE PRESENTATION	02.05.2002
135785	ALU	02009324.1	EP1263244	GB	CALL PARTY ID/PROFILE PRESENTATION	02.05.2002
804121	ALU	09/310795	US6999990	US	Technical Support Chain Automation With Guided Self-Help Capability, Escalation to Live Help and Active Journaling	12.05.1999
804122	ALU	09/310399	US6542898	US	Technical Support Chain Automation With Guided Self-Help Capability Using Active Content Developed for Specific Audiences	12.05.1999
804123	ALU	09/215873	US6615240	US	Technical Support Chain Automation With Guided Self-Help Capability and Option to Escalate to Live Help	18.12.1998
804124	ALU	09/215880	US6694314	US	Technical Support Chain Automation With Guided Self-Help Capability via a System Supplied Search String	18.12.1998
804125	ALU	09/216212	US6477531	US	Technical Support Chain Automation With Guided Self-Help Capability Using Active Content	18.12.1998
804126	ALU	09/505502	US6658598	US	Technical Support Chain Automation with Guided Self-Help Capability Using Active Content Assertions	17.02.2000
131120	ALU	01401538.2	EP1168688	FR	Transceiver telescope for through-air communication bidirectional link	14.06.2001
131120	ALU	01401538.2	EP1168688	DE	Transceiver telescope for through-air communication bidirectional link	14.06.2001
131120	ALU	01401538.2	EP1168688	GB	Transceiver telescope for through-air communication bidirectional link	14.06.2001
803035	ALU	200910211666.0	ZL200910211666.0	CN	7TH ORDER UNIVERSAL ISDN/POTS SPLITTER	10.10.2009
803035	ALU	12/588112	US8467522	US	7TH ORDER UNIVERSAL ISDN/POTS SPLITTER	05.10.2009
801248	ALU	200810174003.1	ZL200810174003.1	CN	Method of efficiency improvement for switch mode power amplifiers by input signal interleaving	11.11.2008
801926	ALU	200810184169.1	ZL200810184169.1	CN	DYNAMIC TRACKING OF A MOBILE GROUP COHESION	16.12.2008
801926	ALU	12/335955	US8121608	US	DYNAMIC TRACKING OF A MOBILE GROUP COHESION	16.12.2008
803212	ALU	08290962.3		EP	Power-based ad pre-selection for delivery on mobile devices	14.10.2008
121217	ALU	06291279.5	EP1885088	FR	ANYCAST ADDRESS RESOLUTION BASED ON AA INFORMATION	04.08.2006
121217	ALU	06291279.5	EP1885088	DE	ANYCAST ADDRESS RESOLUTION BASED ON AA INFORMATION	04.08.2006
121217	ALU	06291279.5	EP1885088	GB	ANYCAST ADDRESS RESOLUTION BASED ON AA INFORMATION	04.08.2006
803070	ALU	0857383	FR2938143	FR	Security Assurance and Control at Network Management Layer	30.10.2008
137869	ALU	05783095.2	EP1751935	FR	Open Service Discovery And Routing Mechanism For Configuring Cross-Domain Telecommunication Services	19.05.2005
137869	ALU	05783095.2	EP1751935	DE	Open Service Discovery And Routing Mechanism For Configuring Cross-Domain Telecommunication Services	19.05.2005
137869	ALU	05783095.2	EP1751935	GB	Open Service Discovery And Routing Mechanism For Configuring Cross-Domain Telecommunication Services	19.05.2005
137915	ALU	05300816.5	EP1655893	FR	Simulated Annealing For Traffic Matrix Estimation (SATME)	13.10.2005
137915	ALU	05300816.5	EP1655893	DE	Simulated Annealing For Traffic Matrix Estimation (SATME)	13.10.2005
137915	ALU	05300816.5	EP1655893	GB	Simulated Annealing For Traffic Matrix Estimation (SATME)	13.10.2005
803815	ALU	12/258342	US7887241	US	Dual-Use Adapter for Fiber-Optic Connections	24.10.2008
804275	ALU	10/128290	US7092404	US	Interposer Chip for Protocol Conversion	24.04.2002
800797	ALU	12/261396	US7872993	US	Method And System For Classifying Data Packets	30.10.2008
804279	ALU	10/143780	US7120165	US	Method and System for Allocating and Controlling Labels in Multi-Protocol Label Switched Networks	14.05.2002
804286	ALU	11/452922	US8055746	US	Improved Management of Optical Equipment in an Optical Network	15.06.2006
804288	ALU	10/247472	US7751418	US	An Apparatus and Method for Controlling Data Transmission	20.09.2002
803946	ALU	12/263111	US7876792	US	COMMON TIMING REFERENCE	31.10.2008
804296	ALU	09/991683	US6597161	US	Method and Apparatus for Spectrum Analysis with Variable Detection Latency and Multiple Layer Coherent Integrations	06.11.2001
804313	ALU	09/963501	US6968131	US	Topology Discovery in Optical WDM Networks	27.09.2001
804314	ALU	10/259290	US7248798	US	Method and System for Identification of Channels in an Optical Network	30.09.2002

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
804314	ALU	2430797	CA2430797	CA	Method and System for Identification of Channels in an Optical Network	02.06.2003
804314	ALU	10/452511	US7142783	US	Method and System for Identification of Channels in an Optical Network	03.06.2003
802886	ALU	12/266705	US8351337	US	Tools that Facilitate Diagnostics for Mobile Backhaul Networks	07.11.2008
804336	ALU	09/972991	US7054556	US	Channel Identification in Communications Networks	10.10.2001
804336	ALU	10/067748	US7158723	US	Channel Identification in Communications Networks	02.02.2002
804336	ALU	10/263959	US7155122	US	Channel Identification in Communications Networks	04.10.2002
804336	ALU	11/511248	US7551858	US	Channel Identification in Communications Networks	29.08.2006
802622	ALU	12/316187	US8138748	US	Differenzgetriebe als Absolutwertgeber	10.12.2008
802622	ALU	200810184371.4	ZL200810184371.4	CN	Differenzgetriebe als Absolutwertgeber	10.12.2008
115147	ALU	06300930.2	EP1898554	FR	GMPLS Resilience Expert Tool	06.09.2006
115147	ALU	06300930.2	EP1898554	DE	GMPLS Resilience Expert Tool	06.09.2006
115147	ALU	06300930.2	EP1898554	GB	GMPLS Resilience Expert Tool	06.09.2006
804336	ALU	2764461.6	EP1433278	FR	Channel Identification in Communications Networks	04.10.2002
804336	ALU	2764461.6	EP1433278	DE	Channel Identification in Communications Networks	04.10.2002
804336	ALU	2764461.6	EP1433278	GB	Channel Identification in Communications Networks	04.10.2002
804336	ALU	04027996.0	EP1508988	FR	Channel Identification in Communications Networks	10.04.2002
804336	ALU	04027996.0	EP1508988	DE	Channel Identification in Communications Networks	10.04.2002
804336	ALU	04027996.0	EP1508988	GB	Channel Identification in Communications Networks	10.04.2002
121276	ALU	6649/CHENP/2008		IN	APPLICATION CONTROLLED RESYNCHRONIZATION OF A COMMUNICATION SYSTEM.	21.03.2007
121276	ALU	20097000382	KR101320914	KR	APPLICATION CONTROLLED RESYNCHRONIZATION OF A COMMUNICATION SYSTEM.	21.03.2007
803993	ALU	0857978	FR2938995	FR	Application to select dynamically the best Wireless Network Interface in a dual-mode handset	25.11.2008
131338	ALU	06291800.8	EP1926256	FR	Phase aligner for Virtual Concatenation termination	22.11.2006
131338	ALU	06291800.8	EP1926256	DE	Phase aligner for Virtual Concatenation termination	22.11.2006
131338	ALU	06291800.8	EP1926256	GB	Phase aligner for Virtual Concatenation termination	22.11.2006
150289	ALU	200780029014.4	ZL200780029014.4	CN	Pluggable Node	31.07.2007
106140	ALU	2009518849	JP4711203	JP	OPTICAL TIME-TO-LIVE	04.07.2007
802923	ALU	200910005708.5	ZL200910005708.5	CN	Method to retrieve SVC RTP packets decoding order when using RTP sessions multiplexing	03.02.2009
802923	ALU	12/364118	US8681854	US	Method to retrieve SVC RTP packets decoding order when using RTP sessions multiplexing	02.02.2009
131249	ALU	03292543.0	EP1411653	FR	AN AUTOMATIC ADJUSTABLE VARIABLE GAIN ANTENNA FOR FREE SPACE OPTICS	14.10.2003
131249	ALU	03292543.0	EP1411653	DE	AN AUTOMATIC ADJUSTABLE VARIABLE GAIN ANTENNA FOR FREE SPACE OPTICS	14.10.2003
131249	ALU	03292543.0	EP1411653	GB	AN AUTOMATIC ADJUSTABLE VARIABLE GAIN ANTENNA FOR FREE SPACE OPTICS	14.10.2003
131116	ALU	01400220.8	EP1122903	FR	Method to calculate the current route of paths on MS SP rings	29.01.2001
131116	ALU	01400220.8	EP1122903	GB	Method to calculate the current route of paths on MS SP rings	29.01.2001
106140	ALU	20087032195	KR1022640	KR	OPTICAL TIME-TO-LIVE	04.07.2007
114072	ALU	03027017.7	EP1533912	FR	Resource Efficient Path Searcher for CDMA/UMTS	22.11.2003
114072	ALU	03027017.7	EP1533912	DE	Resource Efficient Path Searcher for CDMA/UMTS	22.11.2003
114072	ALU	03027017.7	EP1533912	GB	Resource Efficient Path Searcher for CDMA/UMTS	22.11.2003
802719	ALU	12/321081	US8320764	US	Coherent PoSK-PSK modulation format for improved tolerance to both linear and non linear effects.	14.01.2009
801849	ALU	200810187093.8	ZL200810187093.8	CN	Diversity bROADBAND rADIATING eLEMENT	22.12.2008
801849	ALU	12/339576	US8416141	US	Diversity bROADBAND rADIATING eLEMENT	19.12.2008
802506	ALU	3316/CHE/2008		IN	User generated and shared ¿best of¿ contents	30.12.2008
802506	ALU	2008332298	JP5336839	JP	User generated and shared ¿best of¿ contents	26.12.2008
802506	ALU	20090004544	KR101575905	KR	User generated and shared ¿best of¿ contents	20.01.2009
802506	ALU	12/356166	US8468574	US	User generated and shared ¿best of¿ contents	20.01.2009
802506	ALU	08172879.2		EP	User generated and shared ¿best of¿ contents	24.12.2008
802030	ALU	200910001804.2	ZL200910001804.2	CN	Automatic Ads Correlation	06.01.2009
802257	ALU	200910004829.8	ZL200910004829.8	CN	A new sub-reflector dielectric support shape for low profile dual reflectors antenna application	19.01.2009
802257	ALU	12/355114	US8102324	US	A new sub-reflector dielectric support shape for low profile dual reflectors antenna application	16.01.2009
802007	ALU	200910001603.2	ZL200910001603.2	CN	Method for protecting a network configurarion set up by a spanning tree protocol	05.01.2009
802007	ALU	12/319496	US7944858	US	Method for protecting a network configurarion set up by a spanning tree protocol	05.01.2009
803277	ALU	10-2011-7016214	KR101591661	KR	PREJOINING: ANTICIPATING THE ACTIVATION OF A DSL LINE	01.12.2009
803016	ALU	12/347530	US7916669	US	Method And System For STP-Aware Subscriber Management	31.12.2008

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
121311	ALU	09305003.7		EP	SEAMLESS TONE REORDERING.	05.01.2009
803334	ALU	12/319390	US8218433	US	Connectivity Check Messages Optimized for Ethernet Ring Networks	07.01.2009
804021	ALU	12/349324	US7953004	US	Minimizing Effects Of Packet Delay Variation In Time-Division Multiplexing Pseudowire	06.01.2009
802885	ALU	12/349441	US7991016	US	High Availability Clock Synchronization and Distribution for Mobile Backhaul Networks	06.01.2009
803447	ALU	0900046	FR2940875	FR	Method And System For Triggering Enriched Presence	07.01.2009
802441	ALU	12/352299	US8094460	US	Multiorientation Land pattern approach to improve PCBA Design / Manufacturing robustness	12.01.2009
802722	ALU	200910003266.0	ZL200910003266.0	CN	Sequencing line tuning through RSVP	01.02.2009
802722	ALU	12/321719	US7855961	US	Sequencing line tuning through RSVP	23.01.2009
121217	ALU	2009107714	RU2411673	RU	ANYCAST ADDRESS RESOLUTION BASED ON AA INFORMATION	03.08.2007
121217	ALU	MX/a/2009/001278	MX280139	MX	ANYCAST ADDRESS RESOLUTION BASED ON AA INFORMATION	03.08.2007
803483	ALU	09305025.0		EP	QoS enforced solution for broadband wireless ad-hoc networks	12.01.2009
802440	ALU	12/355905	US9317856	US	System, Method And Computer Readable Medium For Application Placement	19.01.2009
120239	ALU	12/262697	US7903664	US	ATM header reduction technique	31.10.2008
104070	ALU	03290551.5	EP1347545	FR	OPTICAL WAVEGUIDE AMPLIFIER INCLUDING NANO-ENGINEERED PARTICLES	07.03.2003
104070	ALU	03290551.5	EP1347545	DE	OPTICAL WAVEGUIDE AMPLIFIER INCLUDING NANO-ENGINEERED PARTICLES	07.03.2003
104070	ALU	03290551.5	EP1347545	IT	OPTICAL WAVEGUIDE AMPLIFIER INCLUDING NANO-ENGINEERED PARTICLES	07.03.2003
104070	ALU	03290551.5	EP1347545	GB	OPTICAL WAVEGUIDE AMPLIFIER INCLUDING NANO-ENGINEERED PARTICLES	07.03.2003
114047	ALU	03292843.4	EP1531563	FR	Raman amplifier for Second order pumping (in transmission line) and DCF pumping	14.11.2003
114047	ALU	03292843.4	EP1531563	DE	Raman amplifier for Second order pumping (in transmission line) and DCF pumping	14.11.2003
114047	ALU	03292843.4	EP1531563	GB	Raman amplifier for Second order pumping (in transmission line) and DCF pumping	14.11.2003
115062	ALU	1320/DELNP/2009		IN	Hardware efficient Q-Monitor Circuit / Adaptive Receiver	01.08.2007
115062	ALU	2009524995	JP5021032	JP	Hardware efficient Q-Monitor Circuit / Adaptive Receiver	01.08.2007
115062	ALU	20097005860	KR101110099	KR	Hardware efficient Q-Monitor Circuit / Adaptive Receiver	01.08.2007
804206	ALU	2011-546709	JP5374594	JP	LOCALISATION OF XDSL WIRING ISSUES BY SYNCHRONOUS LISTENING AT XTU'S	27.01.2010
804206	ALU	10-2011-7019830	KR101208941	KR	LOCALISATION OF XDSL WIRING ISSUES BY SYNCHRONOUS LISTENING AT XTU'S	27.01.2010
800011	ALU	2009535639	JP5124587	JP	Adaptive Indoor System	20.11.2007
105947	ALU	06115519.8	EP1734702	FR	STM-1/STS-3 OVER ETHERNET TRANSPORT	15.06.2006
105947	ALU	06115519.8	EP1734702	DE	STM-1/STS-3 OVER ETHERNET TRANSPORT	15.06.2006
105947	ALU	06115519.8	EP1734702	GB	STM-1/STS-3 OVER ETHERNET TRANSPORT	15.06.2006
802935	ALU	12/392643	US8213863	US	Interaction between handsets and urban furnitures	25.02.2009
804528	ALU	12/362328	US8125914	US	Scaled Ethernet OAM For Mesh And Hub-And-Spoke Networks	29.01.2009
804092	ALU	0950817		FR	Availability indicator via video	10.02.2009
137353	ALU	200959015	JP5189014	JP	Metallic Test Access	12.03.2009
104332	ALU	03291586.0	EP1379100	FR	WAVEBAND CONCENTRATOR	27.06.2003
104332	ALU	03291586.0	EP1379100	DE	WAVEBAND CONCENTRATOR	27.06.2003
104332	ALU	03291586.0	EP1379100	GB	WAVEBAND CONCENTRATOR	27.06.2003
804610	ALU	09290107.3		EP	FAST ORTHOGONAL CROSSTALK CHANNEL ESTIMATION USING MIXED-LENGTH PILOT SEQUENCES	13.02.2009
800752	ALU	200910126877.4	ZL200910126877.4	CN	Intelligent directory	24.03.2009
800752	ALU	12/379855	US8457683	US	Intelligent directory	03.03.2009
106292	ALU	200780034355.0	ZL200780034355.0	CN	REPETEUR MULTI ENTREE POUR SYSTEME HYBRIDE SATELLITE/TERRESTRE	11.09.2007
106292	ALU	20097008143	KR1317093	KR	REPETEUR MULTI ENTREE POUR SYSTEME HYBRIDE SATELLITE/TERRESTRE	11.09.2007
106292	ALU	12/311029	US8358607	US	REPETEUR MULTI ENTREE POUR SYSTEME HYBRIDE SATELLITE/TERRESTRE	11.09.2007
800295	ALU	07842364.7	EP2069949	FR	The 2nd SRI Solutions (with/without OR) to the Mobile Termination Call During the Inter-VLR Location Update	12.09.2007
800295	ALU	07842364.7	EP2069949	DE	The 2nd SRI Solutions (with/without OR) to the Mobile Termination Call During the Inter-VLR Location Update	12.09.2007
800295	ALU	07842364.7	EP2069949	GB	The 2nd SRI Solutions (with/without OR) to the Mobile Termination Call During the Inter-VLR Location Update	12.09.2007
801597	ALU	200910134015.6	ZL200910134015.6	CN	Mobile and Wired Phone convergence in residential WiFi coverage	03.04.2009

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
801597	ALU	12/414933		US	Mobile and Wired Phone convergence in residential WiFi coverage	31.03.2009
800752	ALU	09153522.9		EP	Intelligent directory	24.02.2009
106178	ALU	06847229.9	EP1972110	FR	DAMA AVEC RESERVATION IMPLICITE DE CAPACITE	29.12.2006
106178	ALU	06847229.9	EP1972110	DE	DAMA AVEC RESERVATION IMPLICITE DE CAPACITE	29.12.2006
106178	ALU	06847229.9	EP1972110	GB	DAMA AVEC RESERVATION IMPLICITE DE CAPACITE	26.12.2006
137627	ALU	04300206.2	EP1487151	FR	Labeling Conversion Gateway for Compartmented Multi Operator Network Management over a Heterogeneous Network	14.04.2004
137627	ALU	04300206.2	EP1487151	DE	Labeling Conversion Gateway for Compartmented Multi Operator Network Management over a Heterogeneous Network	14.04.2004
137627	ALU	04300206.2	EP1487151	GB	Labeling Conversion Gateway for Compartmented Multi Operator Network Management over a Heterogeneous Network	14.04.2004
137571	ALU	03300092.8	EP1427152	FR	Autodiscovery of VLANs	19.08.2003
137571	ALU	03300092.8	EP1427152	DE	Autodiscovery of VLANs	19.08.2003
137571	ALU	03300092.8	EP1427152	GB	Autodiscovery of VLANs	19.08.2003
804002	ALU	12/371300	US8018839	US	Synchronizing Packet Sequence Number In TDM-PW Service For Line Card Redundancy	13.02.2009
804602	ALU	12/371234	US7990870	US	Peer-To-Peer Traffic Management Based On Key Presence In Peer-To-Peer Control Transfers	13.02.2009
804721	ALU	12/371261	US9385992	US	In-Line HAS-Info Based Peer-To-Peer Processing	13.02.2009
102191	ALU	00401544.2	EP1059824	FR	Mobile Phone without SIM CARD.	31.05.2000
102191	ALU	00401544.2	EP1059824	DE	Mobile Phone without SIM CARD.	31.05.2000
102191	ALU	00401544.2	EP1059824	IT	Mobile Phone without SIM CARD.	31.05.2000
102191	ALU	00401544.2	EP1059824	ES	Mobile Phone without SIM CARD.	31.05.2000
102191	ALU	00401544.2	EP1059824	GB	Mobile Phone without SIM CARD.	31.05.2000
132687	ALU	08002617.2	EP1914827	FR	Integrated Antenna and Radio Interface	23.10.2002
132687	ALU	08002617.2	EP1914827	DE	Integrated Antenna and Radio Interface	23.10.2002
132687	ALU	08002617.2	EP1914827	GB	Integrated Antenna and Radio Interface	23.10.2002
134247	ALU	200780036501.3	ZL200780036501.3	CN	INTELLIGENCE NETWORK ANOMALY DETECTION USING FUZZY SET CLASSIFICATION	29.09.2007
134247	ALU	1789/DELNP/2009		IN	INTELLIGENCE NETWORK ANOMALY DETECTION USING FUZZY SET CLASSIFICATION	18.03.2009
134247	ALU	2009530667	JP5405305	JP	INTELLIGENCE NETWORK ANOMALY DETECTION USING FUZZY SET CLASSIFICATION	29.09.2007
134247	ALU	20097006465	KR101323074	KR	INTELLIGENCE NETWORK ANOMALY DETECTION USING FUZZY SET CLASSIFICATION	29.09.2007
804771	ALU	09305337.9		EP	Home Device Communication	21.04.2009
804327	ALU	09305227.2	EP2228926	EP	Dual time Signaling for the distribution of Time in PSNs (DST)	12.03.2009
804023	ALU	12/397955	US7822056	US	LCR Switch With Header Compression	04.03.2009
804426	ALU	12/404023		US	Intrusion Detection For Virtual Layer-2 Services	13.03.2009
803167	ALU	200910148821.9	ZL200910148821.9	CN	Scalable And Highly-Available Session Handling In IMS Clustered Applications	11.06.2009
803167	ALU	12/457413	US9294559	US	Scalable And Highly-Available Session Handling In IMS Clustered Applications	10.06.2009
803079	ALU	09290465.5		EP	Manual attachment on customer's Femto cell.	18.06.2009
802247	ALU	09290228.7		EP	Mobility Management in a Mobile Ethernet Network	30.03.2009
804234	ALU	0956793	FR2950746	FR	Technique for polarization tributaries identification	30.09.2009
802507	ALU	200910134353.X	ZL200910134353	CN	Customer positioning management in an advertising system	14.04.2009
802507	ALU	12/420168	US8774768	US	Customer positioning management in an advertising system	08.04.2009
804642	ALU	12/454135	US8311591	US	Closed-Loop Efficiency Modulation For Use In Network Powered Applications	13.05.2009
804328	ALU	12/459252	US8284666	US	Per Flow L2 Packet Flooding Control	29.06.2009
804775	ALU	0955752	FR2949284	FR	Criteria for the selection of physical parameters of bi-directional links	24.08.2009
804620	ALU	0902867	FR2946776	FR	Payment protector system for memory deficient relatives	12.06.2009
803837	ALU	1635/DELNP/2011		IN	POWER AMPLIFIER LINEARIZATION USING RF FEEDBACK	18.08.2009
Abel 2-13-2-11 (CJ)	ALU	09/604842	US6668334	US	Apparatus For Detecting Clock Failure Within A Fixed Number Of Cycles Of The Clock	27.06.2000
Abraham 2-48 (SP)	ALU	09/650058	US6980533	US	A Load Balancing Technique for a Wireless Internet Access System	29.08.2000
Abraham 4-58-16-1 (SP)	ALU	10/057449	US7031254	US	Rate Control System And Method For A Link Within A Wireless Communications System	25.01.2002
Abraham 7-2-67-8-2 (SP)	ALU	10/202271	US7206286	US	Dynamic DCH Allocation Methodology For Packet Data Services In A Wireless Communications System	24.07.2002
Abraham 9-75 (SP)	ALU	10/702748	US7298716	US	Clustering Based Load Adaptive Sleeping Protocol For Ad Hoc Networks	06.11.2003
Abramov 2-5-32 (AA)	ALU	295865/1998	JP3421254	JP	Recoatable Temperature-Insensitive Long-Period Gratings	16.10.1998
Abramov 2-5-32 (AA)	ALU	08/951778	US6011886	US	Recoatable Temperature-Insensitive Long-Period Gratings	16.10.1997

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Abramov 3-5-19-11 (AA)	ALU	09/151794	US6097862	US	Optical Fiber Grating Devices With Enhanced Sensitivity Cladding For Reconfigurability	11.09.1998
Abramov 3-5-19-11 (AA)	ALU	256470/1999	JP3386417	JP	Optical Fiber Grating Devices With Enhanced Sensitivity Cladding For Reconfigurability	10.09.1999
Abramov 3-5-19-11 (AA)	ALU	99306905.3	EP0985941	GB	Optical Fiber Grating Devices With Enhanced Sensitivity Cladding For Reconfigurability	31.08.1999
Abramov 3-5-19-11 (AA)	ALU	99306905.3	EP0985941	IT	Optical Fiber Grating Devices With Enhanced Sensitivity Cladding For Reconfigurability	31.08.1999
Abramov 3-5-19-11 (AA)	ALU	99306905.3	EP0985941	FR	Optical Fiber Grating Devices With Enhanced Sensitivity Cladding For Reconfigurability	31.08.1999
Abramov 3-5-19-11 (AA)	ALU	99306905.3	EP0985941	DE	Optical Fiber Grating Devices With Enhanced Sensitivity Cladding For Reconfigurability	31.08.1999
Acharya 28-12-15 (S)	ALU	20087024368	KR100985607	KR	Delivery Of Subscription Services To Roaming Users Through Head End Equipment	30.03.2007
Acharya 29-13 (S)	ALU	11/427879	US9015782	US	Signal Distribution System With Interrupt Processing And Trick Play Functionality	30.06.2006
Acharya 29-13 (S)	ALU	20087031501	KR100990326	KR	Signal Distribution System With Interrupt Processing And Trick Play Functionality	27.06.2007
Acharya 29-13 (S)	ALU	200780024371.1	ZL200780024371.1	CN	Signal Distribution System With Interrupt Processing And Trick Play Functionality	27.06.2007
Acharya 29-13 (S)	ALU	2009516597	JP5249208	JP	Signal Distribution System With Interrupt Processing And Trick Play Functionality	27.06.2007
Abys 43-7-3-1-2 (JA)	ALU	09/405368	US6534192	US	Multi-Purpose Finish For Printed Wiring Boards And Method Of Manufacture Of Such Boards	24.09.1999
Abys 43-7-3-1-2 (JA)	ALU	20000055995	KR0356322	KR	Multi-Purpose Finish For Printed Wiring Boards And Method Of Manufacture Of Such Boards	23.09.2000
Abys 43-7-3-1-2 (JA)	ALU	2000287891	JP3662825	JP	Multi-Purpose Finish For Printed Wiring Boards And Method Of Manufacture Of Such Boards	22.09.2000
Abys 43-7-3-1-2 (JA)	ALU	09/941086	US6517893	US	Multi-Purpose Finish For Printed Wiring Boards And Method Of Manufacture Of Such Boards	28.08.2001
Acharya 24-1-3-13 (S)	ALU	11/126415	US8116209	US	Method And Apparatus For Identifying Errors And Stranded Resources In Networks	11.05.2005
Acharya 28-12-15 (S)	ALU	11/399872	US8494516	US	Delivery Of Subscription Services To Roaming Users Through Head End Equipment	07.04.2006
Acharya 28-12-15 (S)	ALU	2009504234	JP4971424	JP	Delivery Of Subscription Services To Roaming Users Through Head End Equipment	30.03.2007
Acharya 28-12-15 (S)	ALU	200780012508.1	ZL200780012508.1	CN	Delivery Of Subscription Services To Roaming Users Through Head End Equipment	30.03.2007
Acharya 30-4-17 (S)	ALU	11/425566	US7676823	US	User Interface Methods And Apparatus For Roaming Access To Subscription Services	21.06.2006
Acharya 30-4-17 (S)	ALU	07845203.4		EP	User Interface Methods And Apparatus For Roaming Access To Subscription Services	19.06.2007
Acharya 30-4-17 (S)	ALU	2009516550	JP4949468	JP	User Interface Methods And Apparatus For Roaming Access To Subscription Services	19.06.2007
Acharya 30-4-17 (S)	ALU	200780023199.8	ZL200780023199.8	CN	User Interface Methods And Apparatus For Roaming Access To Subscription Services	19.06.2007
Acharya 30-4-17 (S)	ALU	20087029756	KR101037045	KR	User Interface Methods And Apparatus For Roaming Access To Subscription Services	19.06.2007
Acharya 31-14-18 (S)	ALU	2010513194	JP5269893	JP	Targeted Advertisement Insertion With Interface Device Assisted Switching	09.06.2008
Acharya 31-14-18 (S)	ALU	200880020750.8	ZL200880020750.8	CN	Targeted Advertisement Insertion With Interface Device Assisted Switching	09.06.2008
Acharya 31-14-18 (S)	ALU	11/764472	US8949886	US	Targeted Advertisement Insertion With Interface Device Assisted Switching	18.06.2007
Acharya 33-1-19 (S)	ALU	12/197505	US8910197	US	Update Process For Interface Device Based Targeted Information Insertion	25.08.2008
Acharya 35-21 (S)	ALU	12/389903	US9306765	US	Access Node Based Targeted Information Insertion	20.02.2009
Acharya 4-10 (S)	ALU	09/174228	US6571391	US	System And Method For Scheduling On-Demand Broadcasts For Heterogeneous Workloads	16.10.1998
Adamiecki 4-23-120-23-27 (AL)	ALU	11/617350	US7782520	US	Duobinary Modulation With A Lumped-Element Mach-Zehnder Device	28.12.2006
Agazzi 9-12-4 (OE)	ALU	08/281879	US6389178	US	A Method Of Downsampling Documents	28.07.1994
Alfano 2-9-6 (FM)	ALU	20077022254	KR101211941	KR	Telecommunication Network Support For Service Based Policy In Roaming Configurations	28.03.2006
Alfano 2-9-6 (FM)	ALU	200680016754.X	ZL200680016754.X	CN	Telecommunication Network Support For Service Based Policy In Roaming Configurations	28.03.2006
Alfano 2-9-6 (FM)	ALU	2008505365	JP159606	JP	Telecommunication Network Support For Service Based Policy In Roaming Configurations	28.03.2006

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Alfano 2-9-6 (FM)	ALU	11/098105	US7436766	US	Telecommunication Network Support For Service Based Policy In Roaming Configurations	04.04.2005
Alfano 3-16-13-8 (FM)	ALU	11/602543	US8346268	US	Network Controlled Mobility Route Optimization For An IP Base Station Transceiver Architecture	20.11.2006
Alfano 3-16-13-8 (FM)	ALU	20097009944	KR1100071	KR	Network Controlled Mobility Route Optimization For An IP Base Station Transceiver Architecture	15.11.2007
Alfano 3-16-13-8 (FM)	ALU	2485/CHENP/2009		IN	Network Controlled Mobility Route Optimization For An IP Base Station Transceiver Architecture	15.11.2007
Alfano 3-16-13-8 (FM)	ALU	2009538388	JP4934200	JP	Network Controlled Mobility Route Optimization For An IP Base Station Transceiver Architecture	15.11.2007
Antonucci 1-1-1-2-1-7 (IT)	ALU	09/518998	US6385302	US	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	03.03.2000
Antonucci 1-1-1-2-1-7 (IT)	ALU	09/518997	US6584307	US	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	03.03.2000
Antonucci 1-1-1-2-1-7 (IT)	ALU	09/499773	US6415018	US	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	08.02.2000
Antonucci 1-1-1-2-1-7 (IT)	ALU	09/659414	US6690932	US	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	11.09.2000
Antonucci 1-1-1-2-1-7 (IT)	ALU	09/803832	US6819929	US	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	12.03.2001
Antonucci 1-1-1-2-1-7 (IT)	ALU	09/694559	US6587545	US	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	23.10.2000
Agrawal 20-8-4 (P)	ALU	08/911598	US6072809	US	Statistical Method For Dynamically Controlling The Playback Delay Of Network Multimedia Streams	14.08.1997
Ahrens 7-93-5 (RG)	ALU	01303494.7	EP1154591	IT	Method And Apparatus For Communication Signal Autotracking Within A Free Space Optical Communication System	17.04.2001
Ahrens 7-93-5 (RG)	ALU	01303494.7	EP1154591	FR	Method And Apparatus For Communication Signal Autotracking Within A Free Space Optical Communication System	17.04.2001
Ahrens 7-93-5 (RG)	ALU	01303494.7	EP1154591	DE	Method And Apparatus For Communication Signal Autotracking Within A Free Space Optical Communication System	17.04.2001
Akyamac 1-6-37 (AA)	ALU	2011505023	JP5174235	JP	Methods Of Protection Sharing For Multi-Protected Optical Demands In Large-Scale WDM Mesh Networks	16.04.2009
Ahrens 7-93-5 (RG)	ALU	01303494.7	EP1154591	GB	Method And Apparatus For Communication Signal Autotracking Within A Free Space Optical Communication System	17.04.2001
Ahrens 9 (RG)	ALU	10/651064	US7181111	US	Apparatus For Splicing Optical Fibers	28.08.2003
Aksyuk 28-59-1 (VA)	ALU	10/746566	US7149378	US	Planar Lightwave Wavelength Device Using Moveable Mirrors	24.12.2003
Aksyuk 28-59-1 (VA)	ALU	10/916933	US6944366	US	Planar Lightwave Wavelength Device Using Moveable Mirrors	12.08.2004
Aksyuk 28-59-1 (VA)	ALU	11/478189	US7155083	US	Planar Lightwave Wavelength Device Using Moveable Mirrors	29.06.2006
Aksyuk 56-17 (VA)	ALU	11/983538	US8139283	US	Surface Plasmon Polariton Modulation	09.11.2007
Aksyuk 56-17 (VA)	ALU	20107010042	KR101156829	KR	Surface Plasmon Polariton Modulation	28.10.2008
Aksyuk 56-17 (VA)	ALU	08849992.6		EP	Surface Plasmon Polariton Modulation	28.10.2008
Aksyuk 56-17 (VA)	ALU	2010533066		JP	Surface Plasmon Polariton Modulation	28.10.2008
Aksyuk 31-1-2-28-2 (VA)	ALU	10/387852	US6993219	US	Waveguide/MEMS Switch	13.03.2003
Aksyuk 32-3-14-3 (VA)	ALU	10/459108	US6781744	US	Amplification Of MEMS Motion	11.06.2003
Aiken 2-11-2 (RT)	ALU	09/481567	US6232921	US	Method And System For Adaptive Signal Processing For An Antenna Array	11.01.2000
Aiken 2-11-2 (RT)	ALU	20010001652	KR819351	KR	Method And System For Adaptive Signal Processing For An Antenna Array	11.01.2001
Aiken 2-11-2 (RT)	ALU	20013227	JP3825259	JP	Method And System For Adaptive Signal Processing For An Antenna Array	11.01.2001
Aiken 2-11-2 (RT)	ALU	00311337.0	EP1126629	DE	Method And System For Adaptive Signal Processing For An Antenna Array	18.12.2000
Aiken 2-11-2 (RT)	ALU	00311337.0	EP1126629	GB	Method And System For Adaptive Signal Processing For An Antenna Array	18.12.2000
Aiken 2-11-2 (RT)	ALU	00311337.0	EP1126629	FI	Method And System For Adaptive Signal Processing For An Antenna Array	18.12.2000
Aiken 2-11-2 (RT)	ALU	00311337.0	EP1126629	FR	Method And System For Adaptive Signal Processing For An Antenna Array	18.12.2000
Aiken 3-8 (RT)	ALU	09/671241	US6718184	US	Method And System For Adaptive Signal Processing For An Antenna Array	28.09.2000
Aiken 4-9 (RT)	ALU	09/557556	US6448937	US	Phased Array Antenna With Active Parasitic Elements	25.04.2000
Aiken 4-9 (RT)	ALU	00309811.8	EP1174946	GB	Phased Array Antenna With Active Parasitic Elements	06.11.2000

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Aiken 4-9 (RT)	ALU	00309811.8	EP1174946	SE	Phased Array Antenna With Active Parasitic Elements	06.11.2000
Aiken 4-9 (RT)	ALU	00309811.8	EP1174946	FR	Phased Array Antenna With Active Parasitic Elements	06.11.2000
Akhteruzzaman 23-11 (A)	ALU	09/442801	US6449483	US	Wireless Telephone System For Accessing Multiple Stations Via A Single Telephone Number	18.11.1999
Aksyuk 14-5-22-40-4-11 (VA)	ALU	09/197388	US6148124	US	Wavelength Division Multiplexed Optical Networks	20.11.1998
Aksyuk 9-15-20-15 (VA)	ALU	08/997173	US5974207	US	Article Comprising A Wavelength Selective Add-Drop Multiplexer	23.12.1997
Aksyuk 9-15-20-15 (VA)	ALU	10358194	JP3662754	JP	Article Comprising A Wavelength Selective Add-Drop Multiplexer	16.12.1998
Aksyuk 9-15-20-15 (VA)	ALU	98309988.8	EP0926853	FR	Article Comprising A Wavelength Selective Add-Drop Multiplexer	04.12.1998
Aksyuk 9-15-20-15 (VA)	ALU	98309988.8	EP0926853	DE	Article Comprising A Wavelength Selective Add-Drop Multiplexer	04.12.1998
Aksyuk 9-15-20-15 (VA)	ALU	98309988.8	EP0926853	GB	Article Comprising A Wavelength Selective Add-Drop Multiplexer	04.12.1998
Ahmed 23-3-2-1 (W)	ALU	09/903881	US6961397	US	Symbol Synchronizer For Impulse Noise Channels	12.07.2001
Ahmed 24-4-3-2 (W)	ALU	10/159523	US7386779	US	Systems And Methods For Correcting Errors In A Received Frame	31.05.2002
Ahmed 25-5-4-3 (W)	ALU	10/161812	US7395493	US	Systems And Methods For Adaptively Decoding Transmitted Frames	04.06.2002
Aiken 4-9 (RT)	ALU	00309811.8	EP1174946	DE	Phased Array Antenna With Active Parasitic Elements	06.11.2000
Aiken 4-9 (RT)	ALU	2001126825	JP3872658	JP	Phased Array Antenna With Active Parasitic Elements	25.04.2001
Akhteruzzaman 33-27-17 (A)	ALU	09/768481	US6823189	US	System And Method For Identifying Mobile Communication Apparatus Proximal With An Identification Locus	24.01.2001
Akhteruzzaman 35-30-19-7 (A)	ALU	10/177157	US6980799	US	Method For Preserving Calls When Service Is Interrupted To A Mobile Unit In A Wireless Communication System	21.06.2002
Akulova 5-31 (YA)	ALU	10/067670	US6795472	US	Laser With A Resonant Optical Reflector	05.02.2002
Akyamac 1-6-37 (AA)	ALU	12/169204	US8842984	US	Methods Of Protection Sharing For Multi-Protected Optical Demands In Large-Scale WDM Mesh Networks	08.07.2008
Akyamac 1-6-37 (AA)	ALU	6177/CHENP/2010		IN	Methods Of Protection Sharing For Multi-Protected Optical Demands In Large-Scale WDM Mesh Networks	16.04.2009
Akyamac 1-6-37 (AA)	ALU	20107023016	KR101190535	KR	Methods Of Protection Sharing For Multi-Protected Optical Demands In Large-Scale WDM Mesh Networks	16.04.2009
Akyamac 1-6-37 (AA)	ALU	200980113342.1	ZL200980113342.1	CN	Methods Of Protection Sharing For Multi-Protected Optical Demands In Large-Scale WDM Mesh Networks	16.04.2009
Akyamac 2-7-38 (AA)	ALU	11/772143	US8913481	US	Method And System For Efficient Provisioning Of Multiple Services For Multiple Failure Restoration In Multi-Layer Mesh Networks	30.06.2007
Allande 1-2-1-1 (DA)	ALU	09/756390	US6850755	US	Transparent Billing And Display Of Multiple Directory Numbers In Wireless Telephone Systems	08.01.2001
Allande 1-2-1-1 (DA)	ALU	02250084.7	EP1221807	FR	Transparent Billing And Display Of Multiple Directory Numbers In Wireless Telephone Systems	07.01.2002
Allande 1-2-1-1 (DA)	ALU	02250084.7	EP1221807	DE	Transparent Billing And Display Of Multiple Directory Numbers In Wireless Telephone Systems	07.01.2002
Allande 1-2-1-1 (DA)	ALU	02250084.7	EP1221807	GB	Transparent Billing And Display Of Multiple Directory Numbers In Wireless Telephone Systems	07.01.2002
Alexiou 1-7-1-53-12-3 (T)	ALU	10/435015	US7822416	US	Methods And Systems For Allowing Global Roaming Between Devices Supported By Different Protocols	12.05.2003
Ali 11-7-1 (SS)	ALU	09/167344	US6075850	US	Flash Hook Caller ID	07.10.1998
Ali 11-7-1 (SS)	ALU	11286613	JP3851474	JP	Flash Hook Caller ID	07.10.1999
Alicher 12-12-9-28 (M)	ALU	10/952015	US7693422	US	Constraint-Based Design Of Optical Transmission Systems	28.09.2004
Alexiou 2-1 (A)	ALU	10/392935	US7197082	US	Linear Transformation Of Symbols To At Least Partially Compensate For Correlation Between Antennas In Space Time Block Coded Systems	20.03.2003
Alexiou 2-1 (A)	ALU	10/621425	US7130580	US	Linear Transformation Of Symbols To At Least Partially Compensate For Correlation Between Antennas In Space Time Block Coded Systems	17.07.2003
Alexiou 4-2 (A)	ALU	10/620987	US7242724	US	Method And Apparatus For Transmitting Signals In A Multi-Antenna Mobile Communications System That Compensates For Channel Variations	16.07.2003
Alexiou 4-2 (A)	ALU	20040055520	KR101143332	KR	Method And Apparatus For Transmitting Signals In A Multi-Antenna Mobile Communications System That Compensates For Channel Variations	16.07.2004
Alexiou 4-2 (A)	ALU	2004209744	JP4574258	JP	Method And Apparatus For Transmitting Signals In A Multi-Antenna Mobile Communications System That Compensates For Channel Variations	16.07.2004

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Alicherry 6-3 (M)	ALU	10/722651	US8346515	US	Methods And Apparatus For Pre-Provisioning Networks To Support Fast Restoration With Minimum Overbuild	26.11.2003
Alexiou 5 (A)	ALU	2004333917	JP4564339	JP	Evaluating Performance Of A Multiple-Input Multiple Output (MIMO) Communications Link	18.11.2004
Alexiou 5 (A)	ALU	20040092296	KR101080624	KR	Evaluating Performance Of A Multiple-Input Multiple Output (MIMO) Communications Link	12.11.2004
Alexiou 5 (A)	ALU	1220/CHE/2004	IN262363	IN	Evaluating Performance Of A Multiple-Input Multiple Output (MIMO) Communications Link	18.11.2004
Alexiou 5 (A)	ALU	10/715923	US7424273	US	Evaluating Performance Of A Multiple-Input Multiple Output (MIMO) Communications Link	18.11.2003
Alexiou 5 (A)	ALU	04256702.4	EP1533935	GB	Evaluating Performance Of A Multiple-Input Multiple Output (MIMO) Communications Link	29.10.2004
Alexiou 5 (A)	ALU	04256702.4	EP1533935	FR	Evaluating Performance Of A Multiple-Input Multiple Output (MIMO) Communications Link	29.10.2004
Alexiou 5 (A)	ALU	04256702.4	EP1533935	DE	Evaluating Performance Of A Multiple-Input Multiple Output (MIMO) Communications Link	29.10.2004
Alexiou 6-1 (A)	ALU	2008526978	JP5314424	JP	Scheduling Multi-User Transmission In The Downlink Of A Multi-Antenna Wireless Communication System	04.08.2006
Alexiou 6-1 (A)	ALU	11/204775	US7907911	US	Scheduling Multi-User Transmission In The Downlink Of A Multi-Antenna Wireless Communication System	16.08.2005
Alexiou 6-1 (A)	ALU	20077030835	KR101268728	KR	Scheduling Multi-User Transmission In The Downlink Of A Multi-Antenna Wireless Communication System	04.08.2006
Alexiou 6-1 (A)	ALU	200680023421.X	ZL200680023421.X	CN	Scheduling Multi-User Transmission In The Downlink Of A Multi-Antenna Wireless Communication System	04.08.2006
Alexiou 6-1 (A)	ALU	5968/CHENP/2007	IN273737	IN	Scheduling Multi-User Transmission In The Downlink Of A Multi-Antenna Wireless Communication System	04.08.2006
Ali 5-11-15-1 (SS)	ALU	09/048841	US6335962	US	Apparatus And Method For ReGrouping Voice Messages For Convenient Playback	27.03.1998
Aleiner 1-5-3 (E)	ALU	08/958455	US6484015	US	Portable Telephone Antenna For PCS	27.10.1997
Alvarez 1-3 (TL)	ALU	09/699770	US7088738	US	Dynamic Fragmentation Of Information	30.10.2000
Axelsson 1-1-3-1-1 (JW)	ALU	09/501921	US6493549	US	Over The Air Parameter Administration For Mobile Telecommunications Stations	10.02.2000
Anderson 11-6-8 (TW)	ALU	200780007058.7	ZL200780007058.7	CN	Method And Apparatus For Real-Time Application-Driven Resource Management In Next Generation Networks	12.02.2007
Andersen 1 (JA)	ALU	09/177637	US6496638	US	Optical Fiber Cassette	23.10.1998
Andrejco 9-1-1 (MJ)	ALU	09/933643	US6560009	US	Erbium Doped Fibers For Extended L-Band Amplification	21.08.2001
Andrejco 9-1-1 (MJ)	ALU	02254378.9	EP1286433	FR	Erbium Doped Fibers For Extended L-Band Amplification	24.06.2002
Andrejco 9-1-1 (MJ)	ALU	02254378.9	EP1286433	DE	Erbium Doped Fibers For Extended L-Band Amplification	24.06.2002
Andrejco 9-1-1 (MJ)	ALU	02254378.9	EP1286433	GB	Erbium Doped Fibers For Extended L-Band Amplification	24.06.2002
Andrejco 9-1-1 (MJ)	ALU	2002206719	JP3803310	JP	Erbium Doped Fibers For Extended L-Band Amplification	16.07.2002
Anderson 11-6-8 (TW)	ALU	11/364698	US8000233	US	Method And Apparatus For Real-Time Application-Driven Resource Management In Next Generation Networks	28.02.2006
Anderson 11-6-8 (TW)	ALU	4326/CHENP/2008		IN	Method And Apparatus For Real-Time Application-Driven Resource Management In Next Generation Networks	12.02.2007
Anderson 11-6-8 (TW)	ALU	2008557276	JP5335444	JP	Method And Apparatus For Real-Time Application-Driven Resource Management In Next Generation Networks	12.02.2007
Anderson 11-6-8 (TW)	ALU	20087020975	KR101360741	KR	Method And Apparatus For Real-Time Application-Driven Resource Management In Next Generation Networks	12.02.2007
Andrews 1-7-1-1-6-1 (DM)	ALU	09/112547	US6496490	US	Method For Dynamically Allocating Carriers In A Wireless Packet Network, With Reuse Of Carriers	09.07.1998
Andrews 1-7-1-1-6-1 (DM)	ALU	195221/1999	JP3435100	JP	Method For Dynamically Allocating Carriers In A Wireless Packet Network, With Reuse Of Carriers	09.07.1999
Andrews 10-28-17-6-4 (DM)	ALU	10/459010	US8730923	US	Method For Controlling Resource Allocation In A Wireless Communication System	11.06.2003
Arakawa 1-1-1-66 (Y)	ALU	12/155370	US8428591	US	Method Of Translating Cellular Carriers	03.06.2008
Arakawa 1-1-1-66 (Y)	ALU	08779781.7		EP	Method Of Translating Cellular Carriers	26.06.2008
Arakawa 1-1-1-66 (Y)	ALU	200880022528.1	ZL200880022528.1	CN	Method Of Translating Cellular Carriers	26.06.2008
Arakawa 1-1-1-66 (Y)	ALU	2010514809	JP5528335	JP	Method Of Translating Cellular Carriers	26.06.2008
Antonucci 1-1-1-2-1-7 (IT)	ALU	2381317	CA2381317	CA	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	06.02.2001
Antonucci 1-1-1-2-1-7 (IT)	ALU	01905460.0		EP	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	06.02.2001

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Antonucci 1-1-1-2-1 7 (JT)	ALU	2383380	CA2383380	CA	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	06.02.2001
Antonucci 1-1-1-2-1 7 (JT)	ALU	2383385	CA2383385	CA	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	06.02.2001
Antonucci 1-1-1-2-1 7 (JT)	ALU	01908896.2		EP	Improved Telecommunication System And Method For Handling Special Number Calls Having Geographic Sensitivity	06.02.2001
Arakawa 1-1-1-66 (Y)	ALU	20097026972	KR101149779	KR	Method Of Translating Cellular Carriers	26.06.2008
Andrews 6-2-3-6-2 (DM)	ALU	09/726192	US7020698	US	Improved System And Method For Managing The Distribution Of Web Content In Computer Networks	29.11.2000
Andrews 9 (MR)	ALU	10/195014	US7092451	US	Information Hiding System And A Method Of Hiding Information In A Wireless Communication Network	12.07.2002
Anupam 16-13-17 (V)	ALU	10/748375	US7555107	US	"Roaming" Method And Apparatus For Use In Emulating A User's "Home" Telecommunications Environment	30.12.2003
Balyan 1-1-1-1 (A)	ALU	10/421388	US7536183	US	Network Interworking Through Message Translation	23.04.2003
Ashikhmin 26-30 (A)	ALU	12/493328	US8498408	US	Crosswalk Estimation And Power Setting Based On Interpolation In A Multi-Channel Communication System	29.06.2009
Ascend 5	ALU	08/919824	US5991297	US	Independently Sizeable Memory Pages for a Plurality of Connection ID Types in a Network Switch	28.08.1997
Balachandran 53-15-7-46 (K)	ALU	2010521881	JP5341089	JP	Content Rate Selection For Media Servers With Feedback-Controlled Frame Transmission	21.08.2008
Balachandran 53-15-7-46 (K)	ALU	200880104181.5	ZL200880104181.5	CN	Content Rate Selection For Media Servers With Feedback-Controlled Frame Transmission	21.08.2008
Balachandran 53-15-7-46 (K)	ALU	20107004109	KR101397815	KR	Content Rate Selection For Media Servers With Feedback-Controlled Frame Transmission	21.08.2008
Balachandran 53-15-7-46 (K)	ALU	12/222896	US8190750	US	Content Rate Selection For Media Servers With Feedback-Controlled Frame Transmission	19.08.2008
Baldwin 5-7-29-12-2-1-36-3 (KW)	ALU	04012542.9	EP1455218	GB	Thermally Tunable Fiber Devices With Microcapillary Heaters	22.07.2002
Ashikhmin 12-18-17 (A)	ALU	11/753332	US7809070	US	Crosstalk Estimation Methods And Apparatus Using Auxiliary Time-Domain Signals	24.05.2007
Ashikhmin 17-23-13-2-15-41-1-2-21-10 (A)	ALU	12/197409	US8830812	US	Methods For Optimizing Precoder Settings Using Average SINR Reports For Groups Of Tones	25.08.2008
August 26-9-50 (KG)	ALU	09/653810	US7433836	US	Information And Communication System	01.09.2000
August 27-4-51 (KG)	ALU	09/503096	US7478240	US	Method And System For Capture Of Location Specific Media Related Information And Delivery Through Communications Network	11.02.2000
Ashikhmin 18-5-24-5-14-14-42-3-22-11 (A)	ALU	12/130253	US7860044	US	Method And Apparatus For Providing Synchronization In A Multi-Line Communication System	30.05.2008
Ashikhmin 21-25-15-16-25 (A)	ALU	12/060653	US8300518	US	Fast Seamless Joining Of Channels In A Multi-Channel Communication System	01.04.2008
Ashikhmin 24-28 (A)	ALU	12/352896	US8094745	US	Power Control Using Denoised Crosswalk Estimates In A Multi-Channel Communication System	13.01.2009
Ashikhmin 25-29 (A)	ALU	12/474432	US8422541	US	Channel Estimation In A Multi-Channel Communication System Using Pilot Signals Having Quasi-Orthogonal Subpilots	29.05.2009
Ayres 1-9-17-3 (JW)	ALU	09/624102	US6310776	US	Transverse Mountable Heat Sink For Use In An Electronic Device	24.07.2000
Ayres 7-4-21-28 (JW)	ALU	09/625679	US6330160	US	Component Retention Clip For A Heat Sink Assembly	25.07.2000
Atkinson 4-30-1 (GW)	ALU	11/239765	US8670309	US	Method And Apparatus For Preventing Activation Of A Congestion Control Process	30.09.2005
Ascend 2	ALU	09/049510	US5905730	US	High Speed Packet Scheduling Method and Apparatus	27.03.1998
Ascend 2	ALU	09/049511	US5850399	US	High Speed Packet Scheduling Method and Apparatus	27.03.1998
Atkins 20-24-23-27-2-13-8 (RM)	ALU	09/778166	US6396983	US	Formation Of Gratings In Optical Fibers Coated With UV-Curable Polymer	07.02.2001
Bachl 29-10 (RW)	ALU	2009547255	JP5220767	JP	Dynamic Power Allocation For Unicast-Multicast Superposition In Wireless Broadcasting	14.01.2008
Bachl 29-10 (RW)	ALU	20097015337	KR101136787	KR	Dynamic Power Allocation For Unicast-Multicast Superposition In Wireless Broadcasting	14.01.2008
Baeyens 3-56-8-27-9 (YL)	ALU	12/418442	US8224134	US	Optoelectronic Receiver	03.04.2009
Baiyor 1-1-2-1 (RJ)	ALU	09/342499	US6366660	US	Apparatus, Method And System For Providing Variable Alerting Patterns For Multiple Leg Telecommunication Sessions	29.06.1999
Baiyor 2-2-3-2 (RJ)	ALU	H11168857	JP3836996	JP	Apparatus, Method And System For Controlling The Start Of Alerting Of Multiple Leg Telecommunication Sessions	15.06.1999
Baiyor 2-2-3-2 (RJ)	ALU	09/094837	US6009159	US	Apparatus, Method And System For Controlling The Start Of Alerting Of Multiple Leg Telecommunication Sessions	15.06.1998

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Baiyor 3-3-4-3 (RJ)	ALU	09/097334	US6005930	US	Apparatus, Method And System For Controlling Secondary Treatment By A Distant Switch For Multiple Leg Telecommunication Sessions	15.06.1998
Baiyor 4-4-5-4 (RJ)	ALU	11168859	JP3505105	JP	Apparatus, Method And System For Providing Information To A Called Party In Multiple Leg Telecommunication Sessions	15.06.1999
Baiyor 4-4-5-4 (RJ)	ALU	09/097527	US6115461	US	Apparatus, Method And System For Providing Information To A Called Party In Multiple Leg Telecommunication Sessions	15.06.1998
Bachl 29-10 (RW)	ALU	11/625463	US7738905	US	Dynamic Power Allocation For Unicast-Multicast Superposition In Wireless Broadcasting	22.01.2007
Baillargeon 10-58-96-12-11-23-4-27-8 (JN)	ALU	09/448929	US6326646	US	Mounting Technology For Intersubband Light Emitters	24.11.1999
Baillargeon 11-61-99-14-25-1-30 (JN)	ALU	09/566348	US6563852	US	Self-Mode-Locking Quantum Cascade Laser	08.05.2000
Baillargeon 11-61-99-14-25-1-30 (JN)	ALU	01117441.2	ZL01117441.2	CN	Self-Mode-Locking Quantum Cascade Laser	28.04.2001
Baillargeon 11-61-99-14-25-1-30 (JN)	ALU	01303946.6	EP1154532	GB	Self-Mode-Locking Quantum Cascade Laser	30.04.2001
Baillargeon 11-61-99-14-25-1-30 (JN)	ALU	01303946.6	EP1154532	FR	Self-Mode-Locking Quantum Cascade Laser	30.04.2001
Baillargeon 11-61-99-14-25-1-30 (JN)	ALU	01303946.6	EP1154532	DE	Self-Mode-Locking Quantum Cascade Laser	30.04.2001
Baillargeon 11-61-99-14-25-1-30 (JN)	ALU	2001136193	JP3785057	JP	Self-Mode-Locking Quantum Cascade Laser	07.05.2001
Baillargeon 12-62-100-15-26-5-2-5-31-11 (JN)	ALU	2001205754	JP4108297	JP	Mesa Geometry Semiconductor Light Emitters Having Chalcogenide Dielectric Coating	06.07.2001
Baillargeon 12-62-100-15-26-5-2-5-31-11 (JN)	ALU	09/611886	US6463088	US	Mesa Geometry Semiconductor Light Emitters Having Chalcogenide Dielectric Coating	07.07.2000
Baiyor 6-6-7-6 (RJ)	ALU	09/350577	US6574325	US	Apparatus, Method And System For Providing Call Progress Information For Multiple Leg Telecommunication Sessions For Intelligent Network Services	09.07.1999
Baiyor 8-8-9-8 (RJ)	ALU	09/404901	US6714636	US	Apparatus, Method And System For Subscriber Control Of Timed And Regional Membership In Multiple Member Termination Groups For Multiple Leg Telecommunication Sessions	24.09.1999
Baiyor 8-8-9-8 (RJ)	ALU	00307840.9		EP	Apparatus, Method And System For Subscriber Control Of Timed And Regional Membership In Multiple Member Termination Groups For Multiple Leg Telecommunication Sessions	11.09.2000
Baiyor 8-8-9-8 (RJ)	ALU	20000055947	KR707564	KR	Apparatus, Method And System For Subscriber Control Of Timed And Regional Membership In Multiple Member Termination Groups For Multiple Leg Telecommunication Sessions	23.09.2000
Bajaj 1-1-27-1 (C)	ALU	09/383836	US6438266	US	Compression And Progressive Transmission Of Arbitrary Polygonal Meshes	26.08.1999
Bachl 20-34-20 (RW)	ALU	11/414525	US7920517	US	Uplink Load Control Including Individual Measurements	28.04.2006
Bachl 20-34-20 (RW)	ALU	200780015518.0	ZL80015518.0	CN	Uplink Load Control Including Individual Measurements	20.04.2007
Bachl 20-34-20 (RW)	ALU	07755847.6		EP	Uplink Load Control Including Individual Measurements	20.04.2007
Bachl 7-27-23-11 (RW)	ALU	11/201364	US8086257	US	Dedicated Control Channel Detection For Enhanced Dedicated Channel	11.08.2005
Bachl 7-27-23-11 (RW)	ALU	2008526048	JP5475285	JP	Dedicated Control Channel Detection For Enhanced Dedicated Channel	28.07.2006
Bachl 7-27-23-11 (RW)	ALU	200680023497.2	ZL200680023497.2	CN	Dedicated Control Channel Detection For Enhanced Dedicated Channel	28.07.2006
Bachl 7-27-23-11 (RW)	ALU	5961/CHENP/2007	IN284392	IN	Dedicated Control Channel Detection For Enhanced Dedicated Channel	28.07.2006
Bachl 20-34-20 (RW)	ALU	20087026052	KR10986034	KR	Uplink Load Control Including Individual Measurements	20.04.2007
Bachl 20-34-20 (RW)	ALU	2009507745	JP5204095	JP	Uplink Load Control Including Individual Measurements	20.04.2007

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Bachl 20-34-20 (RW)	ALU	5669/CHENP/2008		IN	Uplink Load Control Including Individual Measurements	20.04.2007
Balachandran 11-16-38 (K)	ALU	09/650787	US7006477	US	A Method For Interleaving Of Half Rate Channels Suitable For Half Duplex Operation And Statistical Multiplexing	30.08.2000
Baden 2-1-1-1 (CCE)	ALU	309311/1998	JP3613379	JP	Asymmetric Multiple Access Protocol For A Communication System	30.10.1998
Baden 2-1-1-1 (CCE)	ALU	09/183562	US6353598	US	Asymmetric Multiple Access Protocol For A Communication System	30.10.1998
Baden 2-1-1-1 (CCE)	ALU	89586/98	AU727429	AU	Asymmetric Multiple Access Protocol For A Communication System	28.10.1998
Baden 2-1-1-1 (CCE)	ALU	19980046524	KR362303	KR	Asymmetric Multiple Access Protocol For A Communication System	28.10.1998
Balachandran 12-39-15 (K)	ALU	09/650792	US6996083	US	Burst Based Access And Assignment Method For Providing Real-Time Services	30.08.2000
Balachandran 12-39-15 (K)	ALU	89126147	TWNI-158333	TW	Burst Based Access And Assignment Method For Providing Real-Time Services	08.12.2000
Baillargeon 5-1-49-81-13-2-18 (JN)	ALU	09/067086	US6055257	US	Quantum Cascade Laser	27.04.1998
Baillargeon 6-52-84-5-17-21-3 (JN)	ALU	09/096701	US6137817	US	Quantum Cascade Laser	12.06.1998
Baillargeon 6-52-84-5-17-21-3 (JN)	ALU	164562/1999	JP3717712	JP	Quantum Cascade Laser	11.06.1999
Bauer 2-4 (MG)	ALU	05251917.0	EP1708446	DE	Managing Internet Protocol Based Resources In A Packet-Based Access Network	29.03.2005
Bauer 2-4 (MG)	ALU	05251917.0	EP1708446	GB	Managing Internet Protocol Based Resources In A Packet-Based Access Network	29.03.2005
Bauer 2-4 (MG)	ALU	05251917.0	EP1708446	FR	Managing Internet Protocol Based Resources In A Packet-Based Access Network	29.03.2005
Bachl 23-23-23 (RW)	ALU	11/424947	US7664467	US	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	19.06.2006
Bachl 23-23-23 (RW)	ALU	2009101383	RU2458467	RU	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	14.06.2007
Bachl 23-23-23 (RW)	ALU	07809615.3		EP	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	14.06.2007
Bachl 23-23-23 (RW)	ALU	20087030796	KR101059003	KR	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	14.06.2007
Bachl 23-23-23 (RW)	ALU	96121613	TW431973	TW	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	14.06.2007
Bachl 23-23-23 (RW)	ALU	PI0713003.1		BR	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	14.06.2007
Bachl 23-23-23 (RW)	ALU	2007261551	AU2007261551	AU	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	14.06.2007
Bachl 23-23-23 (RW)	ALU	195968	IL195968	IL	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	14.06.2007
Bauer 2-4 (MG)	ALU	200510126918.1	ZL10126918.1	CN	Managing Internet Protocol Based Resources In A Packet-Based Access Network	28.11.2005
Baillarin 1-1 (S)	ALU	09/667348	US6728549	US	Switching To An Improved Bearer During A Call Connection	22.09.2000
Baillarin 1-1 (S)	ALU	2000293219	JP3730104	JP	Switching To An Improved Bearer During A Call Connection	27.09.2000
Azman 2-4-3-1-7 (U)	ALU	11/121432	US7400887	US	METHOD FOR ESTIMATING THE DOWNLINK CAPACITY IN ASPREAD SPECTRUM WIRELESS COMMUNICATIONS SYSTEM	04.05.2005
Bachl 29-10 (RW)	ALU	200880002689.4	ZL200880002689.4	CN	Dynamic Power Allocation For Unicast-Multicast Superposition In Wireless Broadcasting	14.01.2008
Balachandran 16-21-45 (K)	ALU	09/573017	US6557135	US	Cycling Through Entirety Of Error-Indicating Acknowledgement Information	17.05.2000
Balachandran 18-10-25-3-51 (K)	ALU	09/847567	US7068619	US	Radio Link Control With Limited Retransmissions For Streaming Services	02.05.2001
Balachandran 18-10-25-3-51 (K)	ALU	644/MAS/2001	IN219225	IN	Radio Link Control With Limited Retransmissions For Streaming Services	03.08.2001
Balachandran 18-10-25-3-51 (K)	ALU	2001182690	JP4979858	JP	Radio Link Control With Limited Retransmissions For Streaming Services	18.06.2001
Baker 24-2 (AD)	ALU	09/861947	US7009939	US	Adaptive Resource Management In A Communication System	21.05.2001
Banerjee 3-22-21 (S)	ALU	09/518301	US6501870	US	System And Method For Reducing Effects Of Optical Impairments In Optically Amplified Lightwave Communication Systems	03.03.2000
Ballintine 1-12-2-2 (JE)	ALU	248119/1999	JP3390705	JP	Backwards-Compatible Failure Restoration In Bidirectional Multiplex Section-Switched Ring Transmission Systems	02.09.1999
Ballintine 1-12-2-2 (JE)	ALU	99306650.5	EP0984574	FR	Backwards-Compatible Failure Restoration In Bidirectional Multiplex Section-Switched Ring Transmission Systems	23.08.1999

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Ballintine 1-12-2-2 (JE)	ALU	99306650.5	EP0984574	DE	Backwards-Compatible Failure Restoration In Bidirectional Multiplex Section-Switched Ring Transmission Systems	23.08.1999
Ballintine 1-12-2-2 (JE)	ALU	99306650.5	EP0984574	GB	Backwards-Compatible Failure Restoration In Bidirectional Multiplex Section-Switched Ring Transmission Systems	23.08.1999
Ballintine 1-12-2-2 (JE)	ALU	09/146209	US6246667	US	Backwards-Compatible Failure Restoration In Bidirectional Multiplex Section-Switched Ring Transmission Systems	02.09.1998
Balachandran 52-14-6-45 (K)	ALU	12/222897	US8812712	US	Proxy-Driven Content Rate Selection For Streaming Media Servers	19.08.2008
Balachandran 52-14-6-45 (K)	ALU	968/CHENP/2010		IN	Proxy-Driven Content Rate Selection For Streaming Media Servers	21.08.2008
Balachandran 52-14-6-45 (K)	ALU	20107004100	KR101524325	KR	Proxy-Driven Content Rate Selection For Streaming Media Servers	21.08.2008
Balachandran 23-11-7-59 (K)	ALU	10/252797	US7352714	US	Methods And Apparatuses For Allocating Time Slots To Half Duplex Wireless Mobile Stations	24.09.2002
Balachandran 24-3-2-3 (K)	ALU	10/252351	US7187715	US	Systems And Methods For Providing Adaptive Pulse Position Modulated Code Division Multiple Access For Ultra-Wideband Communication Links	23.09.2002
Balachandran 31-16-28-4-1 (K)	ALU	10/413382	US7349338	US	Scheduler And Method For Scheduling Transmissions In A Communication Network	15.04.2003
Balachandran 31-16-28-4-1 (K)	ALU	05024803.8	EP1643697	FR	Scheduler And Method For Scheduling Transmissions In A Communication Network	30.03.2004
Balachandran 31-16-28-4-1 (K)	ALU	05024803.8	EP1643697	DE	Scheduler And Method For Scheduling Transmissions In A Communication Network	30.03.2004
Balachandran 31-16-28-4-1 (K)	ALU	05024803.8	EP1643697	GB	Scheduler And Method For Scheduling Transmissions In A Communication Network	30.03.2004
Balachandran 31-16-28-4-1 (K)	ALU	05024802.0	EP1643696	GB	Scheduler And Method For Scheduling Transmissions In A Communication Network	30.03.2004
Balachandran 31-16-28-4-1 (K)	ALU	05024802.0	EP1643696	FR	Scheduler And Method For Scheduling Transmissions In A Communication Network	30.03.2004
Balachandran 31-16-28-4-1 (K)	ALU	05024802.0	EP1643696	DE	Scheduler And Method For Scheduling Transmissions In A Communication Network	30.03.2004
Balachandran 31-16-28-4-1 (K)	ALU	2004119696	JP4607486	JP	Scheduler And Method For Scheduling Transmissions In A Communication Network	15.04.2004
Balachandran 31-16-28-4-1 (K)	ALU	20040024593	KR101038227	KR	Scheduler And Method For Scheduling Transmissions In A Communication Network	09.04.2004
Balachandran 45-11-3-36 (K)	ALU	11/674802	US8180283	US	Method Of Providing Feedback To A Media Server In A Wireless Communication System	14.02.2007
Balachandran 45-11-3-36 (K)	ALU	20097017048	KR101099800	KR	Method Of Providing Feedback To A Media Server In A Wireless Communication System	11.02.2008
Balachandran 45-11-3-36 (K)	ALU	4782/CHENP/2009		IN	Method Of Providing Feedback To A Media Server In A Wireless Communication System	11.02.2008
Balachandran 45-11-3-36 (K)	ALU	200880004906.3	ZL200880004906.3	CN	Method Of Providing Feedback To A Media Server In A Wireless Communication System	11.02.2008
Balachandran 45-11-3-36 (K)	ALU	2009549603	JP5373638	JP	Method Of Providing Feedback To A Media Server In A Wireless Communication System	11.02.2008
Balachandran 47-12-4-42 (K)	ALU	11/674842	US8812673	US	Content Rate Control For Streaming Media Servers	14.02.2007
Balachandran 34-18-31-5-10 (K)	ALU	10/439759	US7502352	US	Scheduling Method For Quality Of Service Differentiation For Non-Real Time Services In Packet Radio Networks	16.05.2003
Baldwin 12-1-7-2 (JH)	ALU	11/767638	US8014826	US	Base Station And Component Configuration For Versatile Installation Options	25.06.2007
Baldwin 5-7-29-12-2-1-36-3 (KW)	ALU	04012542.9	EP1455218	FR	Thermally Tunable Fiber Devices With Microcapillary Heaters	22.07.2002
Baldwin 5-7-29-12-2-1-36-3 (KW)	ALU	04012542.9	EP1455218	DE	Thermally Tunable Fiber Devices With Microcapillary Heaters	22.07.2002
Baldwin 5-7-29-12-2-1-36-3 (KW)	ALU	02255133.7	EP1327902	FR	Thermally Tunable Fiber Devices With Microcapillary Heaters	22.07.2002
Baldwin 5-7-29-12-2-1-36-3 (KW)	ALU	02255133.7	EP1327902	DE	Thermally Tunable Fiber Devices With Microcapillary Heaters	22.07.2002
Baldwin 5-7-29-12-2-1-36-3 (KW)	ALU	02255133.7	EP1327902	GB	Thermally Tunable Fiber Devices With Microcapillary Heaters	22.07.2002
Baldwin 5-7-29-12-2-1-36-3 (KW)	ALU	10/047339	US6778734	US	Thermally Tunable Fiber Devices With Microcapillary Heaters	15.01.2002
Barroso 1 (CB)	ALU	09/448354	US6389003	US	A Method For Decreasing False Positives In Frame Synchronization Of Code Division Multiple Access	23.11.1999
Barroso 2-11-36 (CB)	ALU	09/439217	US7142878	US	Method Of Timing Calibration	12.11.1999
Bao 30-4-2 (Z)	ALU	10/141362	US6770549	US	Forming Patterned Thin Film Metal Layers	08.05.2002
Bao 33-47-8 (Z)	ALU	10/256885	US6885024	US	Devices With Organic Crystallite Active Channels	27.09.2002
Bao 39 (Z)	ALU	11/177602	US7338835	US	OFETS with Active Channels Formed of Densified Layers	08.07.2005
Bao 39 (Z)	ALU	20040097395	KR101110086	KR	OFETS with Active Channels Formed of Densified Layers	25.11.2004

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Bao 39 (Z)	ALU	10/727709	US7767998	US	OFETS with Active Channels Formed of Densified Layers	04.12.2003
Bao 39 (Z)	ALU	2004350530	JP5042452	JP	OFETS with Active Channels Formed of Densified Layers	03.12.2004
Barry 1-2 (MP)	ALU	10/427833	US7590917	US	Parameter Generation For Interleavers	01.05.2003
Basavanhally 19 (NR)	ALU	09/012282	US6052880	US	Optical Fiber Stripping Apparatus	23.01.1998
Barclay 17-76-15-14 (DL)	ALU	10/837088	US7570743	US	Method and Apparatus For Surveillance of Voice Over Internet Protocol Communications	30.04.2004
Benno 5-2-1-1-3-1-2 (SA)	ALU	05250718.3	EP1566984	DE	A Method Of Delivering Multimedia Associated With A Voice Link	08.02.2005
Benno 5-2-1-1-3-1-2 (SA)	ALU	05250718.3	EP1566984	GB	A Method Of Delivering Multimedia Associated With A Voice Link	08.02.2005
Benno 5-2-1-1-3-1-2 (SA)	ALU	05250718.3	EP1566984	FR	A Method Of Delivering Multimedia Associated With A Voice Link	08.02.2005
Basavanhally 26-13-39 (NR)	ALU	09/886767	US6633719	US	Fiber Array Coupler	21.06.2001
Baroni 1-44-22-9-2-1 (S)	ALU	09/468714	US6662308	US	Dual-Homing Select Architecture	21.12.1999
Bao 43-2-1 (Z)	ALU	11/330472	US7470574	US	OFET Structures With Both N- And P-Type Channels	12.01.2006
Bao 43-2-1 (Z)	ALU	10/875478	US7045814	US	OFET Structures With Both N- And P-Type Channels	24.06.2004
Bao 11-2 (Z)	ALU	09/394524	US6489044	US	Process For Fabricating Polarized Organic Photonics Devices, And Resultant Articles	10.09.1999
Bao 15-93-4-25-2 (Z)	ALU	09/659550	US6589629	US	Process For Fabricating Patterned, Functionalized Particles And Article Formed From Particles	11.09.2000
Bao 16-25-12 (Z)	ALU	09/603941	US6891237	US	Organic Semiconductor Device Having An Active Dielectric Layer Comprising Silsesquioxanes	27.06.2000
Bao 16-25-12 (Z)	ALU	11/042240	US7189663	US	Organic Semiconductor Device Having An Active Dielectric Layer Comprising Silsesquioxanes	25.01.2005
Batni 16-14 (RP)	ALU	2008540054	JP5275808	JP	Ringback Tone Preference Information To Assist Selection Of Ringback Tone	02.11.2006
Batni 16-14 (RP)	ALU	06836722.6		EP	Ringback Tone Preference Information To Assist Selection Of Ringback Tone	02.11.2006
Batni 16-14 (RP)	ALU	568133	NZ568133	NZ	Ringback Tone Preference Information To Assist Selection Of Ringback Tone	02.11.2006
Batni 16-14 (RP)	ALU	20087013773	KR101334632	KR	Ringback Tone Preference Information To Assist Selection Of Ringback Tone	02.11.2006
Batni 18-18 (RP)	ALU	11/384147	US8982874	US	Method And Apparatus For Providing Customized Ring Back To Calling Terminals In A Cable Network	17.03.2006
Baum 2-4-6 (MOA)	ALU	28030/1999	JP3431527	JP	Method For Optimizing Forward Link Power Levels During Soft Handoffs In A Wireless Telecommunications Network	05.02.1999
Baum 2-4-6 (MOA)	ALU	99300559.4	EP0940932	DE	Method For Optimizing Forward Link Power Levels During Soft Handoffs In A Wireless Telecommunications Network	26.01.1999
Baum 2-4-6 (MOA)	ALU	99300559.4	EP0940932	GB	Method For Optimizing Forward Link Power Levels During Soft Handoffs In A Wireless Telecommunications Network	26.01.1999
Baum 2-4-6 (MOA)	ALU	99300559.4	EP0940932	SE	Method For Optimizing Forward Link Power Levels During Soft Handoffs In A Wireless Telecommunications Network	26.01.1999
Baum 2-4-6 (MOA)	ALU	99300559.4	EP0940932	FR	Method For Optimizing Forward Link Power Levels During Soft Handoffs In A Wireless Telecommunications Network	26.01.1999
Baum 2-4-6 (MOA)	ALU	09/019267	US6510319	US	Method For Optimizing Forward Link Power Levels During Soft Handoffs In A Wireless Telecommunications Network	05.02.1998
Bartter 4-104-36 (WD)	ALU	11/653741	US7991131	US	Control Of Prepaid Balance Status Notification	16.01.2007
Bartter 4-104-36 (WD)	ALU	08713131.4		EP	Control Of Prepaid Balance Status Notification	14.01.2008
Bartter 4-104-36 (WD)	ALU	4015/CHENP/2009		IN	Control Of Prepaid Balance Status Notification	14.01.2008
Bartter 4-104-36 (WD)	ALU	2009546406	JP5306234	JP	Control Of Prepaid Balance Status Notification	14.01.2008
Beaumont 1-7-1-1 (LR)	ALU	09/851267	US6959333	US	Technique For Content Delivery Over The Internet	08.05.2001
Batni 20-39 (RP)	ALU	2009514428	JP4928605	JP	User Message Delivery To Calling Party Device	11.06.2007
Batni 20-39 (RP)	ALU	07777470.1		EP	User Message Delivery To Calling Party Device	11.06.2007
Batni 20-39 (RP)	ALU	11/453678	US8270590	US	User Message Delivery To Calling Party Device	15.06.2006
Batni 20-39 (RP)	ALU	200780022306.5	ZL200780022306.5	CN	User Message Delivery To Calling Party Device	11.06.2007
Batni 20-39 (RP)	ALU	6745/CHENP/2008		IN	User Message Delivery To Calling Party Device	11.06.2007
Batni 21-28 (RP)	ALU	11/485890	US9210252	US	End-User Device Personalized Application Notification Feature	13.07.2006
Baughman 1 (LD)	ALU	09/256908	US6408399	US	High Reliability Multiple Processing And Control System Utilizing Shared Components	24.02.1999
Barney 3 (MF)	ALU	09/105607	US6289341	US	Intelligent Agent For Identifying Intellectual Property Infringement Issues In Computer Network Sites And Method Of Operation Thereof	26.06.1998

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Batni 22-4-40-10 (RP)	ALU	2009123228	RU2474971	RU	Providing An Advertisement To A Calling Party Before Ringback	15.11.2007
Batni 22-4-40-10 (RP)	ALU	096142562	TW501618	TW	Providing An Advertisement To A Calling Party Before Ringback	09.11.2007
Batni 22-4-40-10 (RP)	ALU	2009538387	JP5178735	JP	Providing An Advertisement To A Calling Party Before Ringback	15.11.2007
Batni 22-4-40-10 (RP)	ALU	2007322099	AU2007322099	AU	Providing An Advertisement To A Calling Party Before Ringback	15.11.2007
Batni 22-4-40-10 (RP)	ALU	PI0718889.7		BR	Providing An Advertisement To A Calling Party Before Ringback	15.11.2007
Batni 22-4-40-10 (RP)	ALU	MX/a/2009/005137	MX298649	MX	Providing An Advertisement To A Calling Party Before Ringback	15.11.2007
Batni 22-4-40-10 (RP)	ALU	11/561769	US8385514	US	Providing An Advertisement To A Calling Party Before Ringback	20.11.2006
Batni 22-4-40-10 (RP)	ALU	2743/CHENP/2009	IN270949	IN	Providing An Advertisement To A Calling Party Before Ringback	15.11.2007
Batni 23-1-1-16 (RP)	ALU	11/769366		US	Availability Determination Of A Party To Receive A Call Prior To Call Setup	27.06.2007
Batni 3-1-4-2 (RP)	ALU	10/736256	US7120419	US	Generating One Or More Triggered Operations To Prepaid Service Node Based On Connection With Intelligent Peripheral Component	15.12.2003
Basavanhally 32-9-4 (NR)	ALU	10/743922	US7062132	US	Coupler Assembly For An Optical Backplane System	23.12.2003
Batni 1-13-1-1-2-1-4-1-1 (R)	ALU	10/253090	US6978133	US	Mobile Station Origination When Serving Mobile Switching Center is Not Wireless Intelligent Network Capable	24.09.2002
Batni 11-9 (RP)	ALU	11/168201	US8073128	US	Ringback Tone Service Opt-In And Opt-Out Requests For Use By Calling Party	28.06.2005
Bauer 2-4 (MG)	ALU	20050114879	KR101184185	KR	Managing Internet Protocol Based Resources In A Packet-Based Access Network	29.11.2005
Bauer 2-4 (MG)	ALU	2005343073	JP4856418	JP	Managing Internet Protocol Based Resources In A Packet-Based Access Network	29.11.2005
Batni 7-12-14-5-4 (RP)	ALU	11/026509	US8068593	US	Method And Apparatus For Providing Multimedia Ringback Services To Mobile User Devices In Pre-IMS Networks	30.12.2004
Batni 7-12-14-5-4 (RP)	ALU	200510135763.8	ZL200510135763.8	CN	Method And Apparatus For Providing Multimedia Ringback Services To Mobile User Devices In Pre-IMS Networks	29.12.2005
Batni 7-12-14-5-4 (RP)	ALU	20050135337	KR101222580	KR	Method And Apparatus For Providing Multimedia Ringback Services To Mobile User Devices In Pre-IMS Networks	30.12.2005
Batni 8-13-3-15-5 (RP)	ALU	200510135762.3	ZL200510135762.3	CN	Method And Apparatus For Providing Multimedia Ringback Services To User Devices In IMS Networks	29.12.2005
Batni 8-13-3-15-5 (RP)	ALU	11/027298	US7693134	US	Method And Apparatus For Providing Multimedia Ringback Services To User Devices In IMS Networks	30.12.2004
Baum 1-3-1-3 (MOA)	ALU	09/019266	US6148207	US	Method For Optimizing Frame Error Rate Settings During Soft Handoffs In A Wireless Telecommunications Network	05.02.1998
Baum 1-3-1-3 (MOA)	ALU	28029/1999	JP3459188	JP	Method For Optimizing Frame Error Rate Settings During Soft Handoffs In A Wireless Telecommunications Network	05.02.1999
Baum 1-3-1-3 (MOA)	ALU	99300568.5	EP0935401	DE	Method For Optimizing Frame Error Rate Settings During Soft Handoffs In A Wireless Telecommunications Network	26.01.1999
Baum 1-3-1-3 (MOA)	ALU	99300568.5	EP0935401	GB	Method For Optimizing Frame Error Rate Settings During Soft Handoffs In A Wireless Telecommunications Network	26.01.1999
Baum 1-3-1-3 (MOA)	ALU	99300568.5	EP0935401	SE	Method For Optimizing Frame Error Rate Settings During Soft Handoffs In A Wireless Telecommunications Network	26.01.1999
Baum 1-3-1-3 (MOA)	ALU	99300568.5	EP0935401	FI	Method For Optimizing Frame Error Rate Settings During Soft Handoffs In A Wireless Telecommunications Network	26.01.1999
Baum 1-3-1-3 (MOA)	ALU	99300568.5	EP0935401	FR	Method For Optimizing Frame Error Rate Settings During Soft Handoffs In A Wireless Telecommunications Network	26.01.1999
Batni 16-14 (RP)	ALU	11/272111	US7801293	US	Ringback Tone Preference Information To Assist Selection Of Ringback Tone	10.11.2005
Batni 16-14 (RP)	ALU	200680041892.3	ZL200680041892.3	CN	Ringback Tone Preference Information To Assist Selection Of Ringback Tone	02.11.2006
Batni 8-13-3-15-5 (RP)	ALU	20050135425	KR101230939	KR	Method And Apparatus For Providing Multimedia Ringback Services To User Devices In IMS Networks	30.12.2005
Batni 8-13-3-15-5 (RP)	ALU	05257735.0	EP1677485	FR	Method And Apparatus For Providing Multimedia Ringback Services To User Devices In IMS Networks	15.12.2005
Batni 8-13-3-15-5 (RP)	ALU	05257735.0	EP1677485	DE	Method And Apparatus For Providing Multimedia Ringback Services To User Devices In IMS Networks	15.12.2005
Batni 8-13-3-15-5 (RP)	ALU	05257735.0	EP1677485	GB	Method And Apparatus For Providing Multimedia Ringback Services To User Devices In IMS Networks	15.12.2005
Belhaj 5 (SO)	ALU	00309104.8	EP1096690	GB	Bi-Directional Scan Switch Matrix Method And Apparatus	16.10.2000
Belhaj 5 (SO)	ALU	00309104.8	EP1096690	FR	Bi-Directional Scan Switch Matrix Method And Apparatus	16.10.2000
Belhaj 5 (SO)	ALU	00309104.8	EP1096690	DE	Bi-Directional Scan Switch Matrix Method And Apparatus	16.10.2000

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Bemmel 2 (Jv)	ALU	10/994989	US7711799	US	Method And Apparatus For Pre-Packetized Caching For Network Servers	22.11.2004
Bemmel 2 (Jv)	ALU	2005333504	JP5107517	JP	Method And Apparatus For Pre-Packetized Caching For Network Servers	18.11.2005
Bemmel 5-1-2 (Jv)	ALU	10/955150	US8180036	US	Method And Apparatus For Accessing Missed Call Information	30.09.2004
Bemmel 6-3 (Jv)	ALU	11/095059	US7647048	US	Selecting A Hidden Network To Connect A User To A Wireless Local Area Network	31.03.2005
Benco 184-1 (DS)	ALU	11/811807	US8126436	US	Network Support For Voice Mail Preemption	12.06.2007
Benco 39 (DS)	ALU	04255946.8	EP1528822	GB	A Method And Apparatus For Providing Mobile-To-Mobile Video Capability To A Network	29.09.2004
Benco 39 (DS)	ALU	04255946.8	EP1528822	FR	A Method And Apparatus For Providing Mobile-To-Mobile Video Capability To A Network	29.09.2004
Bejerano 17-9 (Y)	ALU	11/729791	US8358636	US	Methods And Devices For Scheduling The Transmission Of Multicast Messages In Wireless Local Area Networks	30.03.2007
Bedrosian 7 (PS)	ALU	09/332726	US6937613	US	Method And Apparatus For Synchronization Of High-Bit-Rate Digital Subscriber Line Signals	14.06.1999
Bejerano 19-13-10 (Y)	ALU	12/071864	US8374131	US	Frequency Planning Method For Wireless Lans	27.02.2008
Bejerano 22-14 (Y)	ALU	12/241516	US7859995	US	Protected-Far-Node-Based Solution For Fault-Resilient MPLS/T-MPLS Multicast Services	30.09.2008
Bi 33-8-11 (Q)	ALU	10/944289	US7565110	US	Method For Determining Rise Over Thermal For A Reverse Link In A Wireless System	17.09.2004
Bi 33-8-11 (Q)	ALU	20050086095	KR101123427	KR	Method For Determining Rise Over Thermal For A Reverse Link In A Wireless System	15.09.2005
Bi 33-8-11 (Q)	ALU	2005267970	JP5208357	JP	Method For Determining Rise Over Thermal For A Reverse Link In A Wireless System	15.09.2005
Bi 33-8-11 (Q)	ALU	200510103949.5	ZL10103949.5	CN	Method For Determining Rise Over Thermal For A Reverse Link In A Wireless System	16.09.2005
Bi 33-8-11 (Q)	ALU	05255360.9	EP1638224	GB	Method For Determining Rise Over Thermal For A Reverse Link In A Wireless System	01.09.2005
Bi 33-8-11 (Q)	ALU	05255360.9	EP1638224	FR	Method For Determining Rise Over Thermal For A Reverse Link In A Wireless System	01.09.2005
Bi 33-8-11 (Q)	ALU	05255360.9	EP1638224	DE	Method For Determining Rise Over Thermal For A Reverse Link In A Wireless System	01.09.2005
Benitez Pelaez 16-14-8-5 (M)	ALU	10/827039	US7512090	US	System And Method For Routing Calls In A Wireless Network Using A Single Point Of Contact	19.04.2004
Benco 129-43-94-117 (DS)	ALU	11/141102	US7890126	US	Network Support For Remote Sign Content Update	31.05.2005
Benco 135-47-97-123 (DS)	ALU	11/151136	US8000685	US	Network Support For Distinctive VoiceMail Greeting	13.06.2005
Benco 191-16-14 (DS)	ALU	12/008599	US9307519	US	Neighboring Cell Paging At Border Mobile Switching Center	11.01.2008
Bejerano 7-4 (Y)	ALU	10/879062	US9295105	US	Methods And Devices For Configuring Simplified, Static, Multi-Hop Wireless Networks	30.06.2004
Bejerano 8-5 (Y)	ALU	10/879064	US7583602	US	Methods And Devices For Routing Traffic Using A Configurable Access Wireless Network	30.06.2004
Benco 10-4-4-4-4 (DS)	ALU	10/431288	US7239617	US	Per Call Interactive High Speed Packet Data Activation	07.05.2003
Benco 10-4-4-4-4 (DS)	ALU	04252418.1	EP1480486	FR	Per Call Interactive High Speed Packet Data Activation	26.04.2004
Benco 147-4-57-107-133 (DS)	ALU	11/231275	US7519358	US	Over The Air Provisioning Of A Wireless Mobile Station Using IP Multimedia Subsystem Mode	20.09.2005
Bemmel 1-8-6 (J)	ALU	05256617.1	EP1653685	FR	Congestion Control For Improved Management Of Service Level Agreements In Switched Networks	25.10.2005
Bemmel 1-8-6 (J)	ALU	05256617.1	EP1653685	DE	Congestion Control For Improved Management Of Service Level Agreements In Switched Networks	25.10.2005
Bemmel 1-8-6 (J)	ALU	05256617.1	EP1653685	GB	Congestion Control For Improved Management Of Service Level Agreements In Switched Networks	25.10.2005
Benco 10-4-4-4-4 (DS)	ALU	04252418.1	EP1480486	DE	Per Call Interactive High Speed Packet Data Activation	26.04.2004
Benco 10-4-4-4-4 (DS)	ALU	04252418.1	EP1480486	GB	Per Call Interactive High Speed Packet Data Activation	26.04.2004
Benco 10-4-4-4-4 (DS)	ALU	2004138625	JP4520768	JP	Per Call Interactive High Speed Packet Data Activation	07.05.2004
Benco 10-4-4-4-4 (DS)	ALU	20040031115	KR101087557	KR	Per Call Interactive High Speed Packet Data Activation	03.05.2004
Benco 200-8 (DS)	ALU	09713686.5		EP	A Method And Apparatus For Allowing Non-IP Based Networks To Interact With IPTV-Based Systems	25.02.2009
Benco 200-8 (DS)	ALU	2010548827	JP5283712	JP	A Method And Apparatus For Allowing Non-IP Based Networks To Interact With IPTV-Based Systems	25.02.2009

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Benco 200-8 (DS)	ALU	20107019146	KR101193755	KR	A Method And Apparatus For Allowing Non-IP Based Networks To Interact With IPTV-Based Systems	25.02.2009
Benco 200-8 (DS)	ALU	5318/CHENP/2010		IN	A Method And Apparatus For Allowing Non-IP Based Networks To Interact With IPTV-Based Systems	25.02.2009
Benco 201-9 (DS)	ALU	12/156068	US8175239	US	Method And Apparatus For Efficient Abbreviated Dialing	29.05.2008
Bejerano 11-6-5 (Y)	ALU	11/205768	US7836181	US	Fairness And Load Balancing In Wireless LANs Using Association Control	17.08.2005
Bejerano 12-8-7-6 (Y)	ALU	2005374146	JP4921791	JP	Methods And Devices For Determining The Adjacency Of Access Points In A Wireless Network	27.12.2005
Bejerano 12-8-7-6 (Y)	ALU	05257701.2		EP	Methods And Devices For Determining The Adjacency Of Access Points In A Wireless Network	15.12.2005
Bejerano 12-8-7-6 (Y)	ALU	20050133090	KR101201639	KR	Methods And Devices For Determining The Adjacency Of Access Points In A Wireless Network	29.12.2005
Bejerano 12-8-7-6 (Y)	ALU	1962/CHE/2005		IN	Methods And Devices For Determining The Adjacency Of Access Points In A Wireless Network	29.12.2005
Bejerano 12-8-7-6 (Y)	ALU	200510135753.4	ZL200510135753.4	CN	Methods And Devices For Determining The Adjacency Of Access Points In A Wireless Network	29.12.2005
Bejerano 12-8-7-6 (Y)	ALU	11/026905	US7430189	US	Methods And Devices For Determining The Adjacency Of Access Points In A Wireless Network	31.12.2004
Benco 105-2 (DS)	ALU	11/090500	US7801525	US	Network Support For Paging Channel And Access Channel Optimization	25.03.2005
Benco 158-78-116-142-77 (DS)	ALU	11/440906	US7515042	US	Mobile Surveillance	25.05.2006
Benco 163-68-121-148 (DS)	ALU	11/408304	US7965998	US	Network Support For Handset Data Protection	21.04.2006
Benco 205-2 (DS)	ALU	12/387297	US8055704	US	Method For Providing Airline-Based Internet Services	30.04.2009
Bedekar 1-11-2-4-2 (AS)	ALU	09/454039	US6763009	US	Down-Link Transmission Scheduling In CDMA Data Networks	03.12.1999
Bejerano 14-10-9-8 (Y)	ALU	11/026904	US8254347	US	Methods And Devices For Associating A Mobile Device To Access Points Within A WLAN	31.12.2004
Benmohamed 8-16-21-29 (LM)	ALU	10/119943	US7542416	US	Connection Admission For Bursty Real-Time Traffic In A Network With Multiple Service Classes	11.04.2002
Belhaj 5 (SO)	ALU	2000330493	JP4944295	JP	Bi-Directional Scan Switch Matrix Method And Apparatus	30.10.2000
Belhaj 5 (SO)	ALU	09/428468	US7030858	US	Bi-Directional Scan Switch Matrix Method And Apparatus	28.10.1999
Bemmel 9 (Jv)	ALU	05256095.0	EP1650930	DE	Method, Apparatus And Network Architecture For Enforcing Security Policies Using An Isolated Subnet	29.09.2005
Bemmel 9 (Jv)	ALU	05256095.0	EP1650930	GB	Method, Apparatus And Network Architecture For Enforcing Security Policies Using An Isolated Subnet	29.09.2005
Bemmel 9 (Jv)	ALU	05256095.0	EP1650930	FR	Method, Apparatus And Network Architecture For Enforcing Security Policies Using An Isolated Subnet	29.09.2005
Bemmel 9 (Jv)	ALU	10/970350	US7877786	US	Method, Apparatus And Network Architecture For Enforcing Security Policies Using An Isolated Subnet	21.10.2004
Bemmel 9 (Jv)	ALU	2005306494	JP5367936	JP	Method, Apparatus And Network Architecture For Enforcing Security Policies Using An Isolated Subnet	21.10.2005
Benco 39 (DS)	ALU	04255946.8	EP1528822	DE	A Method And Apparatus For Providing Mobile-To-Mobile Video Capability To A Network	29.09.2004
Benco 39 (DS)	ALU	2004286362	JP4723841	JP	A Method And Apparatus For Providing Mobile-To-Mobile Video Capability To A Network	30.09.2004
Benco 39 (DS)	ALU	200410047197.0	ZL200410047197.0	CN	A Method And Apparatus For Providing Mobile-To-Mobile Video Capability To A Network	29.09.2004
Benco 39 (DS)	ALU	20040078007	KR101125515	KR	A Method And Apparatus For Providing Mobile-To-Mobile Video Capability To A Network	30.09.2004
Benco 39 (DS)	ALU	10/698783	US9439048	US	A Method And Apparatus For Providing Mobile-To-Mobile Video Capability To A Network	31.10.2003
Benco 54-40-40-49-40 (DS)	ALU	10/739654	US7949329	US	Network Support For Mobile Handset Anti-Virus Protection	18.12.2003
Benco 59-42-42-56-42 (DS)	ALU	10/761823	US7103352	US	Network Support For Mobile Handset Screen Customization	21.01.2004
Benco 6-1-1-1-1 (DS)	ALU	10/411807	US7133700	US	Wireless Visual Alerting Method And System	11.04.2003
Benco 70-48-48-65-48 (DS)	ALU	10/818102	US8098592	US	Network Support For Packet Data Transaction Time Calculation Based On (Re)Selected Rate and Resource Limitations	05.04.2004
Benco 78-53-53-70-53 (DS)	ALU	10/843763	US7546299	US	Network Supported Network File Sharing Among Mobile Subscribers	12.05.2004
Benco 8-2-36 (DS)	ALU	10/376161	US6940960	US	Selective Conference Call Disconnect	27.02.2003
Benning 13-2 (RD)	ALU	09/535710	US6711224	US	Timing Acquisition Algorithm For An Adaptive Antenna Array	27.03.2000
Benning 17-14-14-8 (RD)	ALU	09/918086	US6980778	US	Split Shift Phase Sweep Transmit Diversity	30.07.2001

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Bendinelli 1-3 (SJ)	ALU	08/965633	US6061719	US	Synchronized Presentation Of Television Programming And WWW Content	06.11.1997
Bendinelli 2-13 (SJ)	ALU	09/033279	US6792618	US	Viewer Customization Of Displayed Programming Based On Transmitted URLs	02.03.1998
Benesty 8-4 (J)	ALU	09/603652	US6377682	US	A Robust Adaptive Filter For Use In Acoustic And Network Echo Cancellation	26.06.2000
Benet 3-6-14-14-10 (RB)	ALU	05251010.4	EP1693968	GB	Method And Apparatus For Encoding For Protocol Based Transmission Using Low Density Parity Check Codes	22.02.2005
Benet 3-6-14-14-10 (RB)	ALU	05251010.4	EP1693968	FR	Method And Apparatus For Encoding For Protocol Based Transmission Using Low Density Parity Check Codes	22.02.2005
Benet 3-6-14-14-10 (RB)	ALU	05251010.4	EP1693968	DE	Method And Apparatus For Encoding For Protocol Based Transmission Using Low Density Parity Check Codes	22.02.2005
Berger 6-31-10-2-16 (M)	ALU	10/131439	US7079777	US	Optical Fiber Communication Systems Having Simultaneous Compensation Of Polarization Mode Dispersion And Chromatic Dispersion	24.04.2002
Bernstein 2-2 (NE)	ALU	09/149327	US6285664	US	Method And Apparatus For Estimating Pilot Coverage	08.09.1998
Bernasconi 5-7-1-17-3-3-5 (PA)	ALU	10/611221	US7020168	US	High Power Multi-Frequency Laser	01.07.2003
Bernasconi 6-4 (PA)	ALU	10/770279	US7149373	US	Active/Passive Monolithically Integrated Channel Filtering Polarization Splitter	02.02.2004
Bernasconi 6-4 (PA)	ALU	200510005950.4	ZL200510005950.4	CN	Active/Passive Monolithically Integrated Channel Filtering Polarization Splitter	01.02.2005
Bernasconi 6-4 (PA)	ALU	2005025778	JP4832766	JP	Active/Passive Monolithically Integrated Channel Filtering Polarization Splitter	02.02.2005
Bernstein 1-1-12-9-2-9 (NE)	ALU	09/048626	US6252861	US	Methods And Apparatus For Inter-Frequency Handoff In A Wireless Communication System	26.03.1998
Bernstein 1-1-12-9-2-9 (NE)	ALU	88104431	TW131829	TW	Methods And Apparatus For Inter-Frequency Handoff In A Wireless Communication System	20.03.1999
Bernstein 1-1-12-9-2-9 (NE)	ALU	09/888913	US6574203	US	Methods And Apparatus For Inter-Frequency Handoff In A Wireless Communication System	25.06.2001
Bernstein 2-2 (NE)	ALU	99306917.8	EP0986276	DE	Method And Apparatus For Estimating Pilot Coverage	31.08.1999
Bernstein 2-2 (NE)	ALU	99306917.8	EP0986276	GB	Method And Apparatus For Estimating Pilot Coverage	31.08.1999
Bernstein 2-2 (NE)	ALU	99306917.8	EP0986276	SE	Method And Apparatus For Estimating Pilot Coverage	31.08.1999
Bernstein 2-2 (NE)	ALU	99306917.8	EP0986276	FI	Method And Apparatus For Estimating Pilot Coverage	31.08.1999
Boettcher 4-11-10-17-1-7 (CW)	ALU	10/654977	US7453945	US	Methods And Devices For Controlling RF, Multi-Carrier Amplifier Signal Power	05.09.2003
Bernstein 2-2 (NE)	ALU	99306917.8	EP0986276	FR	Method And Apparatus For Estimating Pilot Coverage	31.08.1999
Bernstein 2-2 (NE)	ALU	11253018	JP4184551	JP	Method And Apparatus For Estimating Pilot Coverage	07.09.1999
Bernstein 2-2 (NE)	ALU	19990038066	KR511144	KR	Method And Apparatus For Estimating Pilot Coverage	08.09.1999
Bhatia 12-14-26 (RS)	ALU	11/693262	US8068821	US	Method And Apparatus For Providing Content To Users Using Unicast And Broadcast Wireless Networks	29.03.2007
Bickerstaff 7 (MA)	ALU	10/608831	US7200798	US	Unified Serial/Parallel Concatenated Convolutional Code Decoder Architecture And Method	26.06.2003
Bijwaard 2-2 (D)	ALU	11/096218	US8102846	US	Method And Apparatus For Managing A Multicast Tree	31.03.2005
Bhatia 13-15-27 (RS)	ALU	11/694977	US8588750	US	Method and Apparatus For Providing Interactive Services To Users Using Unicast And Broadcast Wireless Networks	31.03.2007
Bian 1-1-2 (MJ)	ALU	200710152735.6	ZL200710152735.6	CN	Facilitating Non-Sip Users Calling Sip Users	29.06.2007
Bian 1-1-2 (MJ)	ALU	11/946984	US8780888	US	Facilitating Non-Sip Users Calling Sip Users	29.11.2007
Bijwaard 4 (DJ)	ALU	11/456607	US9680880	US	Method And Apparatus For Supporting IP Multicast	11.07.2006
Bijwaard 7-17-5 (DJ)	ALU	2009533339	JP4949478	JP	Method And Apparatus For Establishing Multicast Groups	16.10.2007
Bijwaard 7-17-5 (DJ)	ALU	200780038777.5	ZL200780038777.5	CN	Method And Apparatus For Establishing Multicast Groups	16.10.2007
Bijwaard 7-17-5 (DJ)	ALU	20097008023	KR101033057	KR	Method And Apparatus For Establishing Multicast Groups	16.10.2007
Bijwaard 7-17-5 (DJ)	ALU	11/551516	US8249068	US	Method And Apparatus For Establishing Multicast Groups	20.10.2006
Bhalla 6 (KS)	ALU	09/420442	US6285022	US	A Front Accessible Optical Beam Switch	18.10.1999
Bhandari 2-15-4 (R)	ALU	200566768	JP4746331	JP	Method, Apparatus And System For The Synchronized Combining Of Packet Data	10.03.2005
Bhandari 2-15-4 (R)	ALU	20050019485	KR101107864	KR	Method, Apparatus And System For The Synchronized Combining Of Packet Data	09.03.2005

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Bhandari 2-15-4 (R)	ALU	200510052735.X	ZL10052735.X	CN	Method, Apparatus And System For The Synchronized Combining Of Packet Data	09.03.2005
Bhandari 2-15-4 (R)	ALU	10/797916	US7974191	US	Method, Apparatus And System For The Synchronized Combining Of Packet Data	10.03.2004
Bhandari 2-15-4 (R)	ALU	05251000.5	EP1575199	DE	Method, Apparatus And System For The Synchronized Combining Of Packet Data	22.02.2005
Bhandari 2-15-4 (R)	ALU	05251000.5	EP1575199	GB	Method, Apparatus And System For The Synchronized Combining Of Packet Data	22.02.2005
Bhandari 2-15-4 (R)	ALU	05251000.5	EP1575199	FR	Method, Apparatus And System For The Synchronized Combining Of Packet Data	22.02.2005
Bhandari 3-16-5 (R)	ALU	10/797915	US7483448	US	Method And System For The Clock Synchronization Of Network Terminals	10.03.2004
Bhandari 3-16-5 (R)	ALU	2005066767	JP4856382	JP	Method And System For The Clock Synchronization Of Network Terminals	10.03.2005
Bhandari 3-16-5 (R)	ALU	20050018230	KR101126091	KR	Method And System For The Clock Synchronization Of Network Terminals	04.03.2005
Bhandari 7-3-4 (R)	ALU	11/617133	US7801245	US	Increased Reliability Of Data Captures For Signal Predistortion	28.12.2006
Bi 62-48-9 (Q)	ALU	12/218155	US7990855	US	Method And System For Joint Reverse Link Access And Traffic Channel Radio Frequency Overload Control	11.07.2008
Bhandari 3-16-5 (R)	ALU	200510052736.4	ZL10052736.4	CN	Method And System For The Clock Synchronization Of Network Terminals	09.03.2005
Bi 48-21-24-24 (Q)	ALU	11/298554	US7706311	US	Expanding Cell Radius In A Wireless Communication System	09.12.2005
Bickerstaff 4-1 (MA)	ALU	2003296369	JP4520122	JP	Higher Radix Log Map Processor	20.08.2003
Bickerstaff 4-1 (MA)	ALU	20030057882	KR101018982	KR	Higher Radix Log Map Processor	21.08.2003
Bickerstaff 4-1 (MA)	ALU	10/232202	US7107509	US	Higher Radix Log Map Processor	30.08.2002
Bisconti 1 (T)	ALU	09/425710	US6381108	US	Technique For Regulating A DC Source Voltage	22.10.1999
Bhatt 7-150-3 (JB)	ALU	12/536947	US8412240	US	Direct SMS Message Delivery Over Broadband Data Networks Through An SMS-C	06.08.2009
Bi 12-3-2 (Q)	ALU	98108706.X	ZL98108706.X	CN	Method For Estimating A Mobile-Telephone's Location	29.05.1998
Bhat 3 (KVS)	ALU	09/087339	US6075994	US	Method And Apparatus For Dynamically Determining The Optimal Communication Message Bundle Size For A Communication System	29.05.1998
Bhat 7 (KVS)	ALU	09/320604	US6438374	US	Dynamic Multi-Step Overload Control For Message Processing In Wireless Communication Service Network	26.05.1999
Boyle 3-2-4-1-9-2-10 (PJ)	ALU	09/199843	US6421324	US	Apparatus, Method And System For Roamer Originated Automatic Telecommunication Conferencing And Broadcasting	25.11.1998
Bosch 9-1-41 (P)	ALU	11/301355	US7965633	US	Method Of Downlink Rate Control	12.12.2005
Bosch 9-1-41 (P)	ALU	2008545671	JP5235675	JP	Method Of Downlink Rate Control	08.12.2006
Blahut 44 (DE)	ALU	09/356978	US6796555	US	Video Controller	19.07.1999
Blahut 44 (DE)	ALU	2000217061	JP4812158	JP	Video Controller	18.07.2000
Blahut 46-20 (DE)	ALU	2000217060	JP4652532	JP	Ranging Arrangement And Method For TDMA Communications	18.07.2000
Blahut 46-20 (DE)	ALU	09/356980	US6807188	US	Ranging Arrangement And Method For TDMA Communications	19.07.1999
Blahut 46-20 (DE)	ALU	10/897914	US7366196	US	Ranging Arrangement And Method For TDMA Communications	23.07.2004
Bouillet 3-5-1 (E)	ALU	11/245597	US7466913	US	Design Method For WDM Optical Networks Including Alternate Routes For Fault Recovery	07.10.2005
Bouillet 3-5-1 (E)	ALU	09/805021	US7058296	US	Design Method For WDM Optical Networks Including Alternate Routes For Fault Recovery	12.03.2001
Bitar 4-8-2 (N)	ALU	10/838788	US7304944	US	Unified Scheduling And Queueing Architecture For A Multiservice Switch	03.05.2004
Bitar 5-9-3 (N)	ALU	10/838780	US8665719	US	Variable Packet-Size Backplanes For Switching And Routing Systems	03.05.2004
Blyler 44-75-19 (LL)	ALU	09/387607	US6265018	US	Fabricating Graded Index Plastic Optical Fibers	31.08.1999
Blyler 44-75-19 (LL)	ALU	00307170.1	EP1080871	DE	Fabricating Graded Index Plastic Optical Fibers	21.08.2000
Blyler 44-75-19 (LL)	ALU	00307170.1	EP1080871	GB	Fabricating Graded Index Plastic Optical Fibers	21.08.2000
Blyler 47-10-81-9-23 (LL)	ALU	09/363542	US6361219	US	End Finishing Of Plastic Optical Fibers Using Laser Ablation	29.07.1999
Blyler 47-10-81-9-23 (LL)	ALU	00306066.2	EP1075926	DE	End Finishing Of Plastic Optical Fibers Using Laser Ablation	17.07.2000
Blyler 47-10-81-9-23 (LL)	ALU	00306066.2	EP1075926	GB	End Finishing Of Plastic Optical Fibers Using Laser Ablation	17.07.2000
Blumberg 20-25 (G)	ALU	12/368792	US7920766	US	Surface-Plasmon-Assisted Optical Frequency Conversion	10.02.2009

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Blumberg 3-1-1-3-3 (MR)	ALU	10/441700	US7146541	US	Back Out Provision For Failed Programmable Hardware Update	20.05.2003
Blumberg 4-1-1 (G)	ALU	20030057943	KR10952064	KR	Optical Routers Based On Surface Plasmons	21.08.2003
Blumberg 4-1-1 (G)	ALU	2003297716	JP4790209	JP	Optical Routers Based On Surface Plasmons	21.08.2003
Blumberg 4-1-1 (G)	ALU	10/350780	US7027689	US	Optical Routers Based On Surface Plasmons	24.01.2003
Blumberg 4-1-1 (G)	ALU	03255061.8	EP1445632	FR	Optical Routers Based On Surface Plasmons	14.08.2003
Blumberg 4-1-1 (G)	ALU	03255061.8	EP1445632	DE	Optical Routers Based On Surface Plasmons	14.08.2003
Blumberg 4-1-1 (G)	ALU	03255061.8	EP1445632	GB	Optical Routers Based On Surface Plasmons	14.08.2003
Blumberg 4-1-1 (G)	ALU	11/180351	US7039315	US	Optical Routers Based On Surface Plasmons	13.07.2005
Blumberg 4-1-1 (G)	ALU	11/181293	US7039277	US	Optical Routers Based On Surface Plasmons	14.07.2005
Blott 4-5-2-2-10 (SM)	ALU	09/276218	US6681230	US	Real-Time Event-Processing System With Service Authoring Environment	25.03.1999
Boie 20-26 (RA)	ALU	11/378169	US7435961	US	Imaging Sensor	17.03.2006
Bruno 7-4-14-22-51-1 (IL)	ALU	09/450036	US6675229	US	Methods And Apparatus For Providing Quality Of Service For Legacy Applications	29.11.1999
Bohannon 14 (PL)	ALU	10/651740	US6847856	US	Method For Determining Juxtaposition Of Physical Components With Use Of RFID Tags	29.08.2003
Bolle 25-13 (CA)	ALU	11/329374	US7317428	US	Forming An Antenna Beam Using An Array Of Antennas To Provide A Wireless Communication	10.01.2006
Bond 6-9-11 (AE)	ALU	09/588427	US6376272	US	InA1As Etch Stop Layer For Precise Semiconductor Waveguide Fabrication	06.06.2000
Borst 18-15 (SC)	ALU	2010502093	JP4949513	JP	Mimo Communication System With User Scheduling Based On Reduced Channel State Information	26.03.2008
Borst 18-15 (SC)	ALU	200880010787.2	ZL200880010787.2	CN	Mimo Communication System With User Scheduling Based On Reduced Channel State Information	26.03.2008
Borst 18-15 (SC)	ALU	11/694443	US7801238	US	Mimo Communication System With User Scheduling Based On Reduced Channel State Information	30.03.2007
Boivin 4-1 (L)	ALU	09/532679	US6459826	US	Programmable Optical Switch Apparatus	21.03.2000
Boivin 4-1 (L)	ALU	01302212.4	EP1137308	DE	Programmable Optical Switch Apparatus	12.03.2001
Boivin 4-1 (L)	ALU	01302212.4	EP1137308	GB	Programmable Optical Switch Apparatus	12.03.2001
Boivin 4-1 (L)	ALU	01302212.4	EP1137308	FR	Programmable Optical Switch Apparatus	12.03.2001
Bu 1-2-28 (T)	ALU	10/762391	US7991852	US	Network Architecture And Related Methods For Surviving Denial Of Service Attacks	22.01.2004
Bu 10-5-5-1 (T)	ALU	11/770430	US7779143	US	Scalable Methods For Detecting Significant Traffic Patterns In A Data Network	28.06.2007
Bu 11-35-26-1-3-7 (T)	ALU	20107006620	KR101141958	KR	Method And System For Correlating IP Layer Traffic And Wireless Layer Elements In A UMTS/GSM Network	16.09.2008
Bu 11-35-26-1-3-7 (T)	ALU	1577/CHENP/2010		IN	Method And System For Correlating IP Layer Traffic And Wireless Layer Elements In A UMTS/GSM Network	16.09.2008
Bu 11-35-26-1-3-7 (T)	ALU	11/905242	US9036540	US	Method And System For Correlating IP Layer Traffic And Wireless Layer Elements In A UMTS/GSM Network	28.09.2007
Bu 11-35-26-1-3-7 (T)	ALU	2010526897	JP5265685	JP	Method And System For Correlating IP Layer Traffic And Wireless Layer Elements In A UMTS/GSM Network	16.09.2008
Bu 11-35-26-1-3-7 (T)	ALU	200880107785.5	ZL200880107785.5	CN	Method And System For Correlating IP Layer Traffic And Wireless Layer Elements In A UMTS/GSM Network	16.09.2008
Botkin 2-8-3 (DJ)	ALU	10/856495	US7535850	US	Method And Apparatus For Providing Voice Path Assurance Testing Through A Packet Network	28.05.2004
Bogner 3-14-1 (N)	ALU	01303935.9	EP1255353	GB	Channel-Selective Amplifier With Tunable Filter	30.04.2001
Bogner 3-14-1 (N)	ALU	01303935.9	EP1255353	FR	Channel-Selective Amplifier With Tunable Filter	30.04.2001
Bogner 3-14-1 (N)	ALU	01303935.9	EP1255353	DE	Channel-Selective Amplifier With Tunable Filter	30.04.2001
Bogner 3-14-1 (N)	ALU	10/119516	US7054600	US	Channel-Selective Amplifier With Tunable Filter	10.04.2002
Bogner 3-14-1 (N)	ALU	2002128048	JP4011390	JP	Channel-Selective Amplifier With Tunable Filter	30.04.2002
Bosch 9-1-41 (P)	ALU	200680046257.4	ZL200680046257.4	CN	Method Of Downlink Rate Control	08.12.2006
Bosch 9-1-41 (P)	ALU	2902/CHENP/2008	IN284311	IN	Method Of Downlink Rate Control	08.12.2006
Bosch 9-1-41 (P)	ALU	20087014139	KR101379198	KR	Method Of Downlink Rate Control	08.12.2006
Boylan 6-7-8 (JJ)	ALU	09/090430	US5929618	US	System And Method Synchronizing And Interleaving Power Modules	04.06.1998

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Bosch 26-32 (P)	ALU	11/928307	US9413886	US	Method Of Providing User-Detectable Feedback Indicating Channel Conditions	30.10.2007
Boland 11-28 (RR)	ALU	10/719859	US7069002	US	Message Waiting Indication Operable To Overcome A Border Condition Between Mobile Switching Centers	20.11.2003
Boland 2-1-2-6-2 (RR)	ALU	09/153319	US6353621	US	Method To Allow Seamless Service To Mobile Subscribers Across Various Mobile Switching Centers Supporting Multiple Intersystem Standards	15.09.1998
Bolshtyansky 1-14 (MA)	ALU	10/084908	US6882664	US	Laser With Internally Coupled Pump Source	28.02.2002
Bosch 29-1 (P)	ALU	12/155501	US8488553	US	Method For Providing Seamless Transition Between Networks Following Different Protocols	05.06.2008
Bosch 29-1 (P)	ALU	2011512449	JP5073099	JP	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	200980120911.5	ZL200980120911.5	CN	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	20107027082	KR101169581	KR	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	7798/CHENP/2010		IN	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	2010154512	RU2463733	RU	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	Mx/a/2010/012889	MX309042	MX	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	209345	IL209345	IL	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Boland 7-18 (RR)	ALU	09/569983	US6738629	US	Method for Flood Paging In A Telecommunications Network	10.05.2000
Boland 9-26 (RR)	ALU	11/030215	US7460858	US	System For Providing Message Waiting Notification Updates In A Cellular Communication Network	05.01.2005
Boland 9-26 (RR)	ALU	10/610174	US7151923	US	System For Providing Message Waiting Notification Updates In A Cellular Communication Network	30.06.2003
Boles 1-14-2-3-1-3 (GM)	ALU	10/255008	US7123675	US	Clock, Data And Time Recovery Using Bit-Resolved Timing Registers	25.09.2002
Boles 2-15-4-2-4 (GM)	ALU	10/460572	US7242739	US	Method And Apparatus For Multiphase, Fast-Locking Clock And Data Recovery	12.06.2003
Cai 125-42 (Y)	ALU	12/193550	US8175975	US	An IMS Device Operable For Financial Transaction Authorization And ID Cards Display	18.08.2008
Cai 127-43 (Y)	ALU	12/023120	US8619988	US	A Method And Apparatus For Virtual WiFi Service With Authentication And Accounting Control	31.01.2008
Cai 130-45 (Y)	ALU	12/032668	US8023926	US	Offline Charging For Sessions Over A 3GPP Network And A WLAN Access Network	16.02.2008
Bushnell 29-6-1 (WJ)	ALU	2008504215	JP4989624	JP	A Method And Apparatus For Providing Enhanced Features To Multicast Content Services And Multiplayer Gaming Services	28.03.2006
Bushnell 29-6-1 (WJ)	ALU	20077022058	KR101298956	KR	A Method And Apparatus For Providing Enhanced Features To Multicast Content Services And Multiplayer Gaming Services	28.03.2006
Bushnell 29-6-1 (WJ)	ALU	06739689.5		EP	A Method And Apparatus For Providing Enhanced Features To Multicast Content Services And Multiplayer Gaming Services	28.03.2006
Cai 133-17 (Y)	ALU	08796888.9		EP	Online Charging For Sessions That Are Transferred Between Network Domains	30.07.2008
Cai 133-17 (Y)	ALU	2011521078	JP5117616	JP	Online Charging For Sessions That Are Transferred Between Network Domains	30.07.2008
Cai 133-17 (Y)	ALU	200880130595.5	ZL200880130595.5	CN	Online Charging For Sessions That Are Transferred Between Network Domains	30.07.2008
Cai 133-17 (Y)	ALU	12/999575	US8483135	US	Online Charging For Sessions That Are Transferred Between Network Domains	30.07.2008
Cai 133-17 (Y)	ALU	20117002105	KR101262689	KR	Online Charging For Sessions That Are Transferred Between Network Domains	30.07.2008
Cai 134-37 (Y)	ALU	208478	IL208478	IL	Charging In LTE/EPC Communication Networks	26.03.2009
Cai 134-37 (Y)	ALU	MX/a/2010/011239	MX310148	MX	Charging In LTE/EPC Communication Networks	26.03.2009
Cai 134-37 (Y)	ALU	2009238677	AU2009238677	AU	Charging In LTE/EPC Communication Networks	26.03.2009
Cai 134-37 (Y)	ALU	2010147446	RU2452134	RU	Charging In LTE/EPC Communication Networks	26.03.2009
Cai 134-37 (Y)	ALU	098112654	TWI466563	TW	Charging In LTE/EPC Communication Networks	16.04.2009
Cai 134-37 (Y)	ALU	6272/CHENP/2010		IN	Charging In LTE/EPC Communication Networks	26.03.2009
Cai 134-37 (Y)	ALU	PI0911302-9		BR	Charging In LTE/EPC Communication Networks	26.03.2009
Cai 134-37 (Y)	ALU	12/107507	US8116728	US	Charging In LTE/EPC Communication Networks	22.04.2008
Cai 134-37 (Y)	ALU	20107023714	KR101195362	KR	Charging In LTE/EPC Communication Networks	26.03.2009
Cai 135-38 (Y)	ALU	20107023029	KR101195691	KR	Online Charging For Roaming Users In A Proxy Online Charging System Of A Visited Network	26.03.2009
Cai 135-38 (Y)	ALU	2010146386	RU2451418	RU	Online Charging For Roaming Users In A Proxy Online Charging System Of A Visited Network	26.03.2009
Cai 135-38 (Y)	ALU	2009236665	AU2009236665	AU	Online Charging For Roaming Users In A Proxy Online Charging System Of A Visited Network	26.03.2009

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Cai 135-38 (Y)	ALU	6129/CHENP/2010		IN	Online Charging For Roaming Users In A Proxy Online Charging System Of A Visited Network	26.03.2009
Cai 135-38 (Y)	ALU	098110675	TWI456941	TW	Online Charging For Roaming Users In A Proxy Online Charging System Of A Visited Network	31.03.2009
Cai 137-18 (Y)	ALU	2010153374	RU2454030	RU	Online Charging Architecture In LTE/EPC Communciation Networks	30.05.2008
Cai 137-18 (Y)	ALU	209206	IL209206	IL	Online Charging Architecture In LTE/EPC Communciation Networks	30.05.2008
Cai 137-18 (Y)	ALU	Mx/a/2010/012806	MX308845	MX	Online Charging Architecture In LTE/EPC Communciation Networks	30.05.2008
Cai 137-18 (Y)	ALU	2008356856	AU2008356856	AU	Online Charging Architecture In LTE/EPC Communciation Networks	30.05.2008
Cai 137-18 (Y)	ALU	7321/CHENP/2010		IN	Online Charging Architecture In LTE/EPC Communciation Networks	30.05.2008
Cai 137-18 (Y)	ALU	2011511580	JP5269985	JP	Online Charging Architecture In LTE/EPC Communciation Networks	30.05.2008
Cai 137-18 (Y)	ALU	PI0822731-4		BR	Online Charging Architecture In LTE/EPC Communciation Networks	30.05.2008
Cai 137-18 (Y)	ALU	08874507.0		EP	Online Charging Architecture In LTE/EPC Communciation Networks	30.05.2008
Cai 143-55 (Y)	ALU	12/392420	US8375090	US	Advertisement Blocking In IMS Networks	25.02.2009
Brener 4-20 (IM)	ALU	08/912631	US5894125	US	Near Field Terahertz Imaging	18.08.1997
Brassil 4-1-6 (JT)	ALU	09/398979	US6771644	US	Program Insertion In Real Time IP Multicast	17.09.1999
Cai 135-38 (Y)	ALU	12/104145	US8175575	US	Online Charging For Roaming Users In A Proxy Online Charging System Of A Visited Network	16.04.2008
Cai 16 (Y)	ALU	09/527269	US6359975	US	Intelligent-Networked Telecommunication System Which Strategically creates And Employs Service-Dependent Pseudo Calling Line Identities To Eliminate Redundant Billing Errors	17.03.2000
Cai 137-18 (Y)	ALU	12/989621		US	Online Charging Architecture In LTE/EPC Communciation Networks	30.05.2008
Branigan 1-1-7 (S)	ALU	09/578633	US7299489	US	Method And Apparatus For Host Probing	25.05.2000
Cai 32-1-2-7-3-5-2 (Y)	ALU	10/926864	US7010104	US	Pre-Biller Capability In Enhanced Charging Collection Function (CCF) Applications	26.08.2004
Cai 38-4-5 (Y)	ALU	05257715.2	EP1675333	DE	Detection Of Unwanted Messages (SPAM)	15.12.2005
Cai 38-4-5 (Y)	ALU	20050127299	KR101186743	KR	Detection Of Unwanted Messages (SPAM)	21.12.2005
Cai 38-4-5 (Y)	ALU	200510137704.4	ZL10137704.4	CN	Detection Of Unwanted Messages (SPAM)	20.12.2005
Cai 38-4-5 (Y)	ALU	11/018269	US8396927	US	Detection Of Unwanted Messages (SPAM)	21.12.2004
Cai 39-5-6 (Y)	ALU	2005367330	JP4827518	JP	Unwanted Message (SPAM) Detection Based On Message Content	21.12.2005
Cai 39-5-6 (Y)	ALU	200510137705.9	ZL10137705.9	CN	Unwanted Message (SPAM) Detection Based On Message Content	20.12.2005
Cai 39-5-6 (Y)	ALU	20050127222	KR101170562	KR	Unwanted Message (SPAM) Detection Based On Message Content	21.12.2005
Cai 39-5-6 (Y)	ALU	05257705.3	EP1675330	DE	Unwanted Message (SPAM) Detection Based On Message Content	15.12.2005
Cai 39-5-6 (Y)	ALU	05257705.3	EP1675330	GB	Unwanted Message (SPAM) Detection Based On Message Content	15.12.2005
Cai 39-5-6 (Y)	ALU	05257705.3	EP1675330	FR	Unwanted Message (SPAM) Detection Based On Message Content	15.12.2005
Cai 30-5-1-2 (Y)	ALU	10/717849	US7356327	US	Enhanced Recharge Card Management System With Reseller Users' Security And Accessibility	19.11.2003
Bright 7-11-6-13 (PL)	ALU	10/417517	US7206574	US	Automated Exchange Of Broadband Communication Addresses Over A Non-Broadband Channel In A Wireless Telecommunication System	17.04.2003
Cai 38-4-5 (Y)	ALU	05257715.2	EP1675333	GB	Detection Of Unwanted Messages (SPAM)	15.12.2005
Cai 38-4-5 (Y)	ALU	05257715.2	EP1675333	FR	Detection Of Unwanted Messages (SPAM)	15.12.2005
Byers 54-1-3-4 (CC)	ALU	10/449169	US7131023	US	Programmable Clock Management Component Reconfiguration Upon Receipt Of One Or More Control Signals To Be Able To Process One Or More Frequency Signals	30.05.2003
Cai 44 (Y)	ALU	11/133934	US7643623	US	Flexible Mobile Prepaid Scratch Card Recharge	20.05.2005
Cai 44 (Y)	ALU	2008512373	JP5378789	JP	Flexible Mobile Prepaid Scratch Card Recharge	12.05.2006
Cai 46-4-4-5 (Y)	ALU	11/190731	US7940904	US	Converged Offline Charging And Online Charging	27.07.2005
Cai 46-4-4-5 (Y)	ALU	20077030024	KR101280214	KR	Converged Offline Charging And Online Charging	23.06.2006
Cai 46-4-4-5 (Y)	ALU	2008518496	JP4833284	JP	Converged Offline Charging And Online Charging	23.06.2006
Cai 46-4-4-5 (Y)	ALU	200510079123.X	ZL10079123.X	CN	Converged Offline Charging And Online Charging	24.06.2005
Cai 108 (Y)	ALU	11/624963	US7885661	US	Systems And Methods For Mobile Virtual Network Operator Mobile To Mobile Service	19.01.2007
Cai 111-35 (Y)	ALU	11/691913	US8165561	US	IMS Networks Providing Business-Related Content To Wireless Devices	27.03.2007
Cai 114 (Y)	ALU	11/807802	US8145514	US	IMS Charging Capacity Control	30.05.2007

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Cai 117-28 (Y)	ALU	11/833425	US8762474	US	Notification Of Waiting Voicemail Messages Between Different Types Of Communication Networks	03.08.2007
Cai 118 (Y)	ALU	11/850537	US8189752	US	Per-Session Dynamic Charging Caps In Communication Networks	05.09.2007
Cai 119 (Y)	ALU	11/850562	US8126124	US	Charging For Long Duration Sessions In Communication Networks	05.09.2007
Cai 121-39 (Y)	ALU	20107006690	KR101045706	KR	Charging For Roaming Users In IMS Networks	15.09.2008
Cai 121-39 (Y)	ALU	1607/CHENP/2010		IN	Charging For Roaming Users In IMS Networks	15.09.2008
Cai 121-39 (Y)	ALU	097134430	TW469571	TW	Charging For Roaming Users In IMS Networks	08.09.2008
Cai 121-39 (Y)	ALU	2010116349	RU2439822	RU	Charging For Roaming Users In IMS Networks	15.09.2008
Cai 121-39 (Y)	ALU	204671	IL204671	IL	Charging For Roaming Users In IMS Networks	15.09.2008
Cai 121-39 (Y)	ALU	11/862413	US7945241	US	Charging For Roaming Users In IMS Networks	27.09.2007
Cai 121-39 (Y)	ALU	2010526896	JP4991010	JP	Charging For Roaming Users In IMS Networks	15.09.2008
Cai 121-39 (Y)	ALU	200880108896.8	ZL200880108896.8	CN	Charging For Roaming Users In IMS Networks	15.09.2008
Cai 121-39 (Y)	ALU	2008305725	AU2008305725	AU	Charging For Roaming Users In IMS Networks	15.09.2008
Byers 64-1-1 (CC)	ALU	11/872153	US7688593	US	Servo Damper Control Of Airflow Within An Electronics Chassis	15.10.2007
Brok 6-1 (J)	ALU	11/052260	US7735118	US	Method And Apparatus For Preventing Bridging Of Secure Networks And Insecure Networks	07.02.2005
Brown 16-2-2-2 (MK)	ALU	09/168405	US6587822	US	Web-Based Platform for Interactive Voice Response (IVR)	06.10.1998
Brown 16-2-2-2 (MK)	ALU	2280331	CA2280331	CA	Web-Based Platform for Interactive Voice Response (IVR)	17.08.1999
Brown 16-2-2-2 (MK)	ALU	19990042747	KR661687	KR	Web-Based Platform for Interactive Voice Response (IVR)	05.10.1999
Brouwer 2-34 (WL)	ALU	10/140425	US7016474	US	Reduced Cost Digital Subscriber Line (DSL) Interface Arrangement	06.05.2002
Buddhikot 13-21-1 (MM)	ALU	11/772140	US8532023	US	Interference Aware Routing In Multi-Radio Wireless Mesh Networks	30.06.2007
Buddhikot 16-1 (MM)	ALU	11/862561	US9198033	US	Method And Apparatus for Authenticating Nodes In A Wireless Network	27.09.2007
Buddhikot 16-1 (MM)	ALU	1541/CHENP/2010		IN	Method And Apparatus for Authenticating Nodes In A Wireless Network	23.09.2008
Capasso 50-82-14-3-16-19-2 (F)	ALU	09/071219	US6091753	US	Article Comprising An Improved Superlattice Quantum Cascade Laser	01.05.1998
Capasso 50-82-14-3-16-19-2 (F)	ALU	99303044.4	EP0957547	DE	Article Comprising An Improved Superlattice Quantum Cascade Laser	20.04.1999
Capasso 50-82-14-3-16-19-2 (F)	ALU	99303044.4	EP0957547	GB	Article Comprising An Improved Superlattice Quantum Cascade Laser	20.04.1999
Capasso 50-82-14-3-16-19-2 (F)	ALU	99303044.4	EP0957547	FR	Article Comprising An Improved Superlattice Quantum Cascade Laser	20.04.1999
Capasso 53-85-6-18-22-4 (F)	ALU	09/176527	US6148012	US	Multiple Wavelength Quantum Cascade Light Source	21.10.1998
Buddhikot 16-1 (MM)	ALU	200880108732.5	ZL200880108732.5	CN	Method And Apparatus for Authenticating Nodes In A Wireless Network	23.09.2008
Buddhikot 16-1 (MM)	ALU	20107006050	KR101123610	KR	Method And Apparatus for Authenticating Nodes In A Wireless Network	23.09.2008
Burgess 19-39-21-37 (JK)	ALU	12/591341	US9042870	US	Methods For Capacity Limitation Mitigation In A Radio Frequency Device	17.11.2009
Burgess 5-2-1-1 (JK)	ALU	02253211.3	EP1261158	FR	Walsh Code Allocation/De-Allocation System	08.05.2002
Burgess 5-2-1-1 (JK)	ALU	02253211.3	EP1261158	DE	Walsh Code Allocation/De-Allocation System	08.05.2002
Burgess 5-2-1-1 (JK)	ALU	02253211.3	EP1261158	GB	Walsh Code Allocation/De-Allocation System	08.05.2002
Burgess 5-2-1-1 (JK)	ALU	2002137328	JP4024588	JP	Walsh Code Allocation/De-Allocation System	13.05.2002
Burgess 5-2-1-1 (JK)	ALU	09/858382	US7012886	US	Walsh Code Allocation/De-Allocation System	16.05.2001
Burgess 5-2-1-1 (JK)	ALU	20020026796	KR100947393	KR	Walsh Code Allocation/De-Allocation System	15.05.2002
Buehrer 4-3-4-1 (RM)	ALU	20000021207	KR662223	KR	Method Of Channel Estimation And Compensation Based Thereon	21.04.2000
Buehrer 4-3-4-1 (RM)	ALU	2000123004	JP3993734	JP	Method Of Channel Estimation And Compensation Based Thereon	24.04.2000
Buehrer 4-3-4-1 (RM)	ALU	305/MAS/2000	IN206491	IN	Method Of Channel Estimation And Compensation Based Thereon	20.04.2000
Buehrer 4-3-4-1 (RM)	ALU	09/296654	US6542560	US	Method Of Channel Estimation And Compensation Based Thereon	23.04.1999
Carlbohm 10-7-3-10 (IB)	ALU	10/167533	US7580912	US	Performance Data Mining Based On Real-Time Analysis Of Sensor Data	12.06.2002

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Carlbon 2-3-5 (IB)	ALU	09/102071	US6233007	US	Method And Apparatus For Tracking Position Of A Ball In Real Time	22.06.1998
Carlbon 3-4-6 (IB)	ALU	09/100948	US6441846	US	Method And Apparatus For Deriving Novel Sports Statistics From Real Time Tracking Of Sporting Events	22.06.1998
Carlbon 4-5-7 (IB)	ALU	09/100943	US6141041	US	Method And Apparatus For Determination And Visualization Of Player Field Coverage In Sporting Event	22.06.1998
Carver 6 (GE)	ALU	20030057876	KR10990324	KR	Polarization Independent Optical Taps	21.08.2003
Carver 6 (GE)	ALU	2003295431	JP4542321	JP	Polarization Independent Optical Taps	19.08.2003
Carver 6 (GE)	ALU	03254965.1	EP1408355	DE	Polarization Independent Optical Taps	09.08.2003
Carver 6 (GE)	ALU	03254965.1	EP1408355	GB	Polarization Independent Optical Taps	09.08.2003
Carver 6 (GE)	ALU	03254965.1	EP1408355	FR	Polarization Independent Optical Taps	09.08.2003
Carver 6 (GE)	ALU	10/269022	US6807004	US	Polarization Independent Optical Taps	10.10.2002
Capasso 47-79-8-11-14-16 (F)	ALU	09/012300	US6023482	US	Article Comprising A Strain-Compensated QC Laser	23.01.1998
Capasso 47-79-8-11-14-16 (F)	ALU	99300200.5	EP0932230	GB	Article Comprising A Strain-Compensated QC Laser	12.01.1999
Capasso 47-79-8-11-14-16 (F)	ALU	99300200.5	EP0932230	FR	Article Comprising A Strain-Compensated QC Laser	12.01.1999
Capasso 47-79-8-11-14-16 (F)	ALU	99300200.5	EP0932230	DE	Article Comprising A Strain-Compensated QC Laser	12.01.1999
Capasso 47-79-8-11-14-16 (F)	ALU	14257/1999	JP3923205	JP	Article Comprising A Strain-Compensated QC Laser	22.01.1999
Capasso 48-80-12-15-12-17-1 (F)	ALU	09/033250	US6144681	US	Article Comprising A Dual-Wavelength Quantum Cascade Photon Source	02.03.1998
Buehrer 8-5 (RM)	ALU	09/455947	US6549565	US	Code Division Multiple Access System And Method Of Operation With Improved Signal Acquisition And Processing	07.12.1999
Buehrer 8-5 (RM)	ALU	20000074186	KR757696	KR	Code Division Multiple Access System And Method Of Operation With Improved Signal Acquisition And Processing	07.12.2000
Buehrer 8-5 (RM)	ALU	2000372278	JP3980263	JP	Code Division Multiple Access System And Method Of Operation With Improved Signal Acquisition And Processing	07.12.2000
Byers 43-5 (CC)	ALU	2002237297	JP4065390	JP	Interconnecting Processing Units Of A Stored Program Controlled System Using Space Division Multiplexed Free Space Optics	16.08.2002
Byers 43-5 (CC)	ALU	2396605	CA2396605	CA	Interconnecting Processing Units Of A Stored Program Controlled System Using Space Division Multiplexed Free Space Optics	01.08.2002
Byers 43-5 (CC)	ALU	02255515.5	EP1284431	FR	Interconnecting Processing Units Of A Stored Program Controlled System Using Space Division Multiplexed Free Space Optics	07.08.2002
Byers 43-5 (CC)	ALU	02255515.5	EP1284431	DE	Interconnecting Processing Units Of A Stored Program Controlled System Using Space Division Multiplexed Free Space Optics	07.08.2002
Byers 43-5 (CC)	ALU	09/932706	US7162158	US	Interconnecting Processing Units Of A Stored Program Controlled System Using Space Division Multiplexed Free Space Optics	17.08.2001
Busschbach 1-9 (PB)	ALU	09/121148	US6202170	US	Equipment Protection System	23.07.1998
Busschbach 2-1-1-6 (PB)	ALU	09/918385	US7002957	US	Method Of Transporting Frames Of Information Between Parts Of A Network Through An Intermediate Network	30.07.2001
Busschbach 2-1-1-6 (PB)	ALU	02253957.1	EP1282250	FR	Method Of Transporting Frames Of Information Between Parts Of A Network Through An Intermediate Network	06.06.2002
Busschbach 2-1-1-6 (PB)	ALU	02253957.1	EP1282250	DE	Method Of Transporting Frames Of Information Between Parts Of A Network Through An Intermediate Network	06.06.2002
Busschbach 2-1-1-6 (PB)	ALU	2002220543	JP3902522	JP	Method Of Transporting Frames Of Information Between Parts Of A Network Through An Intermediate Network	30.07.2002
Byers 44-6 (CC)	ALU	09/932707	US7110679	US	Installation Of Processing Units Into A Stored Program Controlled System Wherein The Component Processing Units Are Interconnected Via Free Space Optics	17.08.2001
Byers 44-6 (CC)	ALU	02254818.4	EP1291693	FR	Installation Of Processing Units Into A Stored Program Controlled System Wherein The Component Processing Units Are Interconnected Via Free Space Optics	09.07.2002
Byers 44-6 (CC)	ALU	02254818.4	EP1291693	DE	Installation Of Processing Units Into A Stored Program Controlled System Wherein The Component Processing Units Are Interconnected Via Free Space Optics	09.07.2002
Byers 44-6 (CC)	ALU	02254818.4	EP1291693	GB	Installation Of Processing Units Into A Stored Program Controlled System Wherein The Component Processing Units Are Interconnected Via Free Space Optics	09.07.2002
Byers 45-7-7 (CC)	ALU	09/836029	US6771846	US	Optical Interconnect For Mezzanine Circuit Boards	17.04.2001
Bu 2-3-32 (I)	ALU	11/093457	US7515926	US	Detection Of Power-Drain Denial-Of-Service Attacks In Wireless Networks	30.03.2005

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Bu 2-3-32 (T)	ALU	06251054.0	EP1708538	DE	Detection Of Power-Drain Denial-Of-Service Attacks In Wireless Networks	28.02.2006
Bu 2-3-32 (T)	ALU	06251054.0	EP1708538	GB	Detection Of Power-Drain Denial-Of-Service Attacks In Wireless Networks	28.02.2006
Bu 2-3-32 (T)	ALU	06251054.0	EP1708538	FR	Detection Of Power-Drain Denial-Of-Service Attacks In Wireless Networks	28.02.2006
Bu 2-3-32 (T)	ALU	200610068343.7	ZL10068343.7	CN	Detection Of Power-Drain Denial-Of-Service Attacks In Wireless Networks	29.03.2006
Bu 2-3-32 (T)	ALU	200693315	JP4891641	JP	Detection Of Power-Drain Denial-Of-Service Attacks In Wireless Networks	30.03.2006
Bu 2-3-32 (T)	ALU	20060028985	KR101187720	KR	Detection Of Power-Drain Denial-Of-Service Attacks In Wireless Networks	30.03.2006
Bu 3-4-33 (T)	ALU	11/094416		US	Methods And Devices For Defending A 3G Wireless Network Against A Signaling Attack	31.03.2005
Bu 3-4-33 (T)	ALU	2008504141	JP4994359	JP	Methods And Devices For Defending A 3G Wireless Network Against A Signaling Attack	21.03.2006
Bu 3-4-33 (T)	ALU	20077022059	KR101235099	KR	Methods And Devices For Defending A 3G Wireless Network Against A Signaling Attack	27.09.2007
Burch 2-9 (HJ)	ALU	09/901286	US7356689	US	Method And Apparatus For Tracing Packets In A Communications Network	09.07.2001
Bu 6-6-40 (T)	ALU	11/303915	US8965334	US	Methods And Devices For Defending A 3G Wireless Network Against Malicious Attacks	19.12.2005
Bu 6-6-40 (T)	ALU	2008547354	JP5378799	JP	Methods And Devices For Defending A 3G Wireless Network Against Malicious Attacks	15.12.2006
Bu 9-8-29 (T)	ALU	11/647274	US8966270	US	Methods And Systems For Providing Controlled Access To The Internet	29.12.2006
Budka 28-3 (KC)	ALU	10715443.7		EP	A Method And A System For Targeted And Well-Timed Free Application/Service Offers For Mobile Users	20.04.2010
Budka 4-1-1 (KC)	ALU	09/315723	US6577871	US	Technique For Effectively Managing Processing Loads In A Communications Arrangement	20.05.1999
Byers 39-1 (CC)	ALU	09/932703	US6993260	US	Interconnecting Processing Units Of A Stored Program Controlled System Using Free Space Optics	17.08.2001
Byers 39-1 (CC)	ALU	02254778.0	EP1284429	GB	Interconnecting Processing Units Of A Stored Program Controlled System Using Free Space Optics	09.07.2002
Byers 39-1 (CC)	ALU	02254778.0	EP1284429	FR	Interconnecting Processing Units Of A Stored Program Controlled System Using Free Space Optics	09.07.2002
Byers 39-1 (CC)	ALU	02254778.0	EP1284429	DE	Interconnecting Processing Units Of A Stored Program Controlled System Using Free Space Optics	09.07.2002
Cabot 1-11-23-15-1 (S)	ALU	09/746922	US6597853	US	Device Packaging And Method	21.12.2000
Cai 86-5-12-10-2 (Y)	ALU	20097008405	KR101101015	KR	Third Party Charging For SIP Sessions	19.10.2007
Cai 86-5-12-10-2 (Y)	ALU	200780039198.2	ZL80039198.2	CN	Third Party Charging For SIP Sessions	19.10.2007
Cai 86-5-12-10-2 (Y)	ALU	1526/CHENP/2009		IN	Third Party Charging For SIP Sessions	19.10.2007
Cai 86-5-12-10-2 (Y)	ALU	11/553520	US8289885	US	Third Party Charging For SIP Sessions	27.10.2006
Cai 86-5-12-10-2 (Y)	ALU	2009534598	JP4975106	JP	Third Party Charging For SIP Sessions	19.10.2007
Chang 2-7-9-7 (SS)	ALU	2004335320	JP4526931	JP	Communication Device That Provides Enhanced Services	19.11.2004
Chang 2-7-9-7 (SS)	ALU	20040092299	KR101091698	KR	Communication Device That Provides Enhanced Services	12.11.2004
Chang 2-7-9-7 (SS)	ALU	10/717889	US7050553	US	Communication Device That Provides Enhanced Services	20.11.2003
Cai 72-27 (Y)	ALU	11/438175	US7962120	US	Allocation Of Internet Protocol (IP) Multimedia Subsystem (IMS) Charges	22.05.2006
Cai 76 (Y)	ALU	2009513255	JP4785967	JP	Alerting For Long Duration Sessions In Communication Networks	30.05.2007
Cai 76 (Y)	ALU	11/422009	US8102981	US	Alerting For Long Duration Sessions In Communication Networks	02.06.2006
Cai 76 (Y)	ALU	20087028883	KR101045496	KR	Alerting For Long Duration Sessions In Communication Networks	30.05.2007
Cai 99 (Y)	ALU	11/599024	US8090346	US	Controlling A Shutoff/Restrict Of Mobile Virtual Network Operations Prepaid Services	14.11.2006
Cao 8-5-1 (Q)	ALU	41167/99	AU719179	AU	Transmission Power Control For Packet Switched Communications Systems	27.07.1999
Cao 8-5-1 (Q)	ALU	19990030548	KR0343488	KR	Transmission Power Control For Packet Switched Communications Systems	27.07.1999

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Cao 8-5-1 (Q)	ALU	98306013.8	EP0977370	FR	Transmission Power Control For Packet Switched Communications Systems	28.07.1998
Cao 8-5-1 (Q)	ALU	11212628	JP3563302	JP	Transmission Power Control For Packet Switched Communications Systems	27.07.1999
Cao 8-5-1 (Q)	ALU	09/359264	US6647005	US	Transmission Power Control For Packet Switched Communications Systems	22.07.1999
Cao 8-5-1 (Q)	ALU	98306013.8	EP0977370	ES	Transmission Power Control For Packet Switched Communications Systems	28.07.1998
Cao 8-5-1 (Q)	ALU	98306013.8	EP0977370	DE	Transmission Power Control For Packet Switched Communications Systems	28.07.1998
Cao 8-5-1 (Q)	ALU	98306013.8	EP0977370	IT	Transmission Power Control For Packet Switched Communications Systems	28.07.1998
Cao 8-5-1 (Q)	ALU	98306013.8	EP0977370	FI	Transmission Power Control For Packet Switched Communications Systems	28.07.1998
Capece 2-11 (CJ)	ALU	10/686451	US7984001	US	Neural Network-Based Extension Of Global Position Timing	15.10.2003
Capece 2-11 (CJ)	ALU	04255945.0		EP	Neural Network-Based Extension Of Global Position Timing	29.09.2004
Capece 2-11 (CJ)	ALU	200410085684.6	ZL200410085684.6	CN	Neural Network-Based Extension Of Global Position Timing	29.09.2004
Capece 2-11 (CJ)	ALU	20040077943	KR101263493	KR	Neural Network-Based Extension Of Global Position Timing	30.09.2004
Cao 49-26-29-11 (Q)	ALU	02257634.2	EP1418780	DE	Method, And Telecommunications Apparatus, For Providing Measurement Reporting Criteria To A Mobile User Terminal	05.11.2002
Calme 2-49-11 (JA)	ALU	11/639938	US8139541	US	A Method And System For Bypassing Media Gateways In Wireless Networks	15.12.2006
Cao 8-5-1 (Q)	ALU	98306013.8	EP0977370	GB	Transmission Power Control For Packet Switched Communications Systems	28.07.1998
Capasso 54-86-16-7-19-13-23 (F)	ALU	99305717.3	EP0977329	DE	Long Wavelength Semiconductor Lasers Incorporating Waveguides Based On Surface Plasmons	20.07.1999
Capasso 54-86-16-7-19-13-23 (F)	ALU	99305717.3	EP0977329	GB	Long Wavelength Semiconductor Lasers Incorporating Waveguides Based On Surface Plasmons	20.07.1999
Capasso 54-86-16-7-19-13-23 (F)	ALU	99305717.3	EP0977329	FR	Long Wavelength Semiconductor Lasers Incorporating Waveguides Based On Surface Plasmons	20.07.1999
Cai 47-1-2-1-6 (Y)	ALU	2008518444	JP4829296	JP	IMS Gateway Systems And Methods That Validate Routing To Online Charging Systems	23.06.2006
Cai 47-1-2-1-6 (Y)	ALU	20077030022	KR101259721	KR	IMS Gateway Systems And Methods That Validate Routing To Online Charging Systems	23.06.2006
Cai 47-1-2-1-6 (Y)	ALU	5845/CHENP/2007		IN	IMS Gateway Systems And Methods That Validate Routing To Online Charging Systems	23.06.2006
Capasso 54-86-16-7-19-13-23 (F)	ALU	11212626	JP3545970	JP	Long Wavelength Semiconductor Lasers Incorporating Waveguides Based On Surface Plasmons	27.07.1999
Capasso 55-89-8-20-24-5 (F)	ALU	09/159127	US6055254	US	Quantum Cascade Light Emitter With Pre-Biased Internal Electronic Potential	23.09.1998
Capasso 55-89-8-20-24-5 (F)	ALU	268019/1999	JP3522606	JP	Quantum Cascade Light Emitter With Pre-Biased Internal Electronic Potential	22.09.1999
Capasso 55-89-8-20-24-5 (F)	ALU	99307257.8	EP0989644	FR	Quantum Cascade Light Emitter With Pre-Biased Internal Electronic Potential	14.09.1999
Capasso 55-89-8-20-24-5 (F)	ALU	99307257.8	EP0989644	DE	Quantum Cascade Light Emitter With Pre-Biased Internal Electronic Potential	14.09.1999
Capasso 55-89-8-20-24-5 (F)	ALU	99307257.8	EP0989644	GB	Quantum Cascade Light Emitter With Pre-Biased Internal Electronic Potential	14.09.1999
Capasso 56-91-9-9-21-25-6 (F)	ALU	09/195260	US6324199	US	Intersubband Light Source With Separate Electron Injector And Reflector/Extractor	18.11.1998
Capasso 57-93-10-22-26-7 (F)	ALU	09/316618	US6278134	US	Bi-Directional Unipolar Semiconductor Light Source	21.05.1999
Capasso 59-97-12-24-28-9 (F)	ALU	2001046367	JP3848841	JP	Distributed Feedback Surface Plasmon Laser	22.02.2001
Capasso 59-97-12-24-28-9 (F)	ALU	09/512566	US6501783	US	Distributed Feedback Surface Plasmon Laser	24.02.2000
Capasso 59-97-12-24-28-9 (F)	ALU	01104917.0	ZL01104917.0	CN	Distributed Feedback Surface Plasmon Laser	23.02.2001
Cai 47-1-2-1-6 (Y)	ALU	200510079122.5	ZL200510079122.5	CN	IMS Gateway Systems And Methods That Validate Routing To Online Charging Systems	24.06.2005
Cai 48 (Y)	ALU	11/261342	US7457609	US	Methods And Systems For Controlling Services Provided To Shared Plan Subscribers	28.10.2005
Cao 1 (X)	ALU	09/511150	US6486696	US	Termination Structure For High Speed, High Pin Density Chips	23.02.2000
Capasso 54-86-16-7-19-13-23 (F)	ALU	09/124295	US6301282	US	Long Wavelength Semiconductor Lasers Incorporating Waveguides Based On Surface Plasmons	29.07.1998

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Capasso 60-98-13-13-1-29-10 (F)	ALU	09/512757	US6400744	US	Apparatus Comprising A Quantum Cascade Laser Having Improved Distributed Feedback For Single-Mode Operation	25.02.2000
Capasso 60-98-13-13-1-29-10 (F)	ALU	2000324946	JP3833463	JP	Apparatus Comprising A Quantum Cascade Laser Having Improved Distributed Feedback For Single-Mode Operation	25.10.2000
Capasso 60-98-13-13-1-29-10 (F)	ALU	00307623.9	EP1137133	GB	Apparatus Comprising A Quantum Cascade Laser Having Improved Distributed Feedback For Single-Mode Operation	04.09.2000
Capasso 60-98-13-13-1-29-10 (F)	ALU	00307623.9	EP1137133	FR	Apparatus Comprising A Quantum Cascade Laser Having Improved Distributed Feedback For Single-Mode Operation	04.09.2000
Cai 55-2-2-4-1-10 (Y)	ALU	20087018087	KR101395389	KR	IMS Budget Control For A Media Change During An IMS Session	23.01.2007
Cai 55-2-2-4-1-10 (Y)	ALU	2008551463	JP5404053	JP	IMS Budget Control For A Media Change During An IMS Session	23.01.2007
Cai 55-2-2-4-1-10 (Y)	ALU	200610006044.0	ZL200610006044.0	CN	IMS Budget Control For A Media Change During An IMS Session	24.01.2006
Capasso 60-98-13-13-1-29-10 (F)	ALU	00307623.9	EP1137133	DE	Apparatus Comprising A Quantum Cascade Laser Having Improved Distributed Feedback For Single-Mode Operation	04.09.2000
Capasso 64-102-16-17-27-6-33-12-1 (F)	ALU	01117576.1	ZL01117576.1	CN	Flat Minibands With Spatially Symmetric Wavefunctions In Intersubband Superlattice Light Emitters	03.07.2001
Capasso 64-102-16-17-27-6-33-12-1 (F)	ALU	01304497.9	EP1215781	GB	Flat Minibands With Spatially Symmetric Wavefunctions In Intersubband Superlattice Light Emitters	22.05.2001
Capasso 64-102-16-17-27-6-33-12-1 (F)	ALU	01304497.9	EP1215781	CH	Flat Minibands With Spatially Symmetric Wavefunctions In Intersubband Superlattice Light Emitters	22.05.2001
Capasso 64-102-16-17-27-6-33-12-1 (F)	ALU	01304497.9	EP1215781	LI	Flat Minibands With Spatially Symmetric Wavefunctions In Intersubband Superlattice Light Emitters	22.05.2001
Capasso 64-102-16-17-27-6-33-12-1 (F)	ALU	01304497.9	EP1215781	FR	Flat Minibands With Spatially Symmetric Wavefunctions In Intersubband Superlattice Light Emitters	22.05.2001
Capasso 64-102-16-17-27-6-33-12-1 (F)	ALU	01304497.9	EP1215781	DE	Flat Minibands With Spatially Symmetric Wavefunctions In Intersubband Superlattice Light Emitters	22.05.2001
Capasso 64-102-16-17-27-6-33-12-1 (F)	ALU	09/708223	US6556604	US	Flat Minibands With Spatially Symmetric Wavefunctions In Intersubband Superlattice Light Emitters	08.11.2000
Cao 2-2-1 (X)	ALU	09/991231	US6819157	US	Delay Compensation Circuit	15.11.2001
Cai 55-2-2-4-1-10 (Y)	ALU	11/369132	US8295456	US	IMS Budget Control For A Media Change During An IMS Session	06.03.2006
Cao 1 (X)	ALU	00107027.4	ZL00107027.4	CN	Termination Structure For High Speed, High Pin Density Chips	22.02.2000
Calin 6 (D)	ALU	10/778190	US8031725	US	Methods And Devices For Obtaining And Forwarding Domain Access Rights For Nodes Moving As A Group	17.02.2004
Capasso 64-102-16-17-27-6-33-12-1 (F)	ALU	2001201723	JP5160708	JP	Flat Minibands With Spatially Symmetric Wavefunctions In Intersubband Superlattice Light Emitters	03.07.2001
Capasso 67-106-30-3-36-1 (F)	ALU	10/081313	US6690699	US	Quantum Cascade Laser With Relaxation-Stabilized Injection	21.02.2002
Capasso 68-107-2-21-3-37 (F)	ALU	2002035179	JP4215984	JP	Engineering The Gain/Loss Profile Of Intersubband Optical Devices Having Heterogeneous Cascades	13.02.2002
Capasso 68-107-2-21-3-37 (F)	ALU	09/883542	US6728282	US	Engineering The Gain/Loss Profile Of Intersubband Optical Devices Having Heterogeneous Cascades	18.06.2001
Capasso 69-109-3-23-1-38-1-2 (F)	ALU	10/096702	US6760354	US	Intersubband Light Emitters With Injection/Relaxation Regions Doped To Different Levels	12.03.2002
Capasso 70-110-24-39-3 (F)	ALU	10/155562	US6836499	US	Optical Amplifier For Quantum Cascade Laser	24.05.2002
Capasso 71-111-4-25-1-40 (F)	ALU	10/261423	US6816530	US	Nonlinear Semiconductor Light Sources	30.09.2002
Capasso 72-112-27-1-8-41-1 (F)	ALU	10/465253	US7010010	US	Broadband Cascade Light Emitters	19.06.2003
Capasso 73-113-5-28-1-9-42-1-15-4 (F)	ALU	10/651466	US7092421	US	Unipolar, Intraband Optoelectronic Transducers With Micro-Cavity Resonators	30.08.2003
Cao 48-25-28-10 (Q)	ALU	10/809881	US7277707	US	Radio Telecommunications Network, And A Method Of Selecting Base Station Antennas For Connection With A Mobile User Terminal	25.03.2004

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Cao 48-25-28-10 (Q)	ALU	05251544.2	EP1581023	FR	Radio Telecommunications Network, And A Method Of Selecting Base Station Antennas For Connection With A Mobile User Terminal	15.03.2005
Cao 48-25-28-10 (Q)	ALU	05251544.2	EP1581023	DE	Radio Telecommunications Network, And A Method Of Selecting Base Station Antennas For Connection With A Mobile User Terminal	15.03.2005
Cao 48-25-28-10 (Q)	ALU	05251544.2	EP1581023	GB	Radio Telecommunications Network, And A Method Of Selecting Base Station Antennas For Connection With A Mobile User Terminal	15.03.2005
Cao 48-25-28-10 (Q)	ALU	20050022765	KR101140236	KR	Radio Telecommunications Network, And A Method Of Selecting Base Station Antennas For Connection With A Mobile User Terminal	18.03.2005
Cao 48-25-28-10 (Q)	ALU	200588690	JP4959143	JP	Radio Telecommunications Network, And A Method Of Selecting Base Station Antennas For Connection With A Mobile User Terminal	25.03.2005
Cao 49-26-29-11 (Q)	ALU	02257634.2	EP1418780	FR	Method, And Telecommunications Apparatus, For Providing Measurement Reporting Criteria To A Mobile User Terminal	05.11.2002
Cao 49-26-29-11 (Q)	ALU	02257634.2	EP1418780	GB	Method, And Telecommunications Apparatus, For Providing Measurement Reporting Criteria To A Mobile User Terminal	05.11.2002
Cao 42-19-22 (Q)	ALU	10/400422	US7006826	US	Method Of Informing Mobile User Terminals Camped On A Cell Of A Base Station That A Service Is Unavailable, A Base Station, And A Network	27.03.2003
Cheng 10-6-6-2 (TS)	ALU	09/167157	US6240287	US	Processing Overload Control At Base Stations Of Cellular Wireless Communication Systems	06.10.1998
Chiussi 23-1-2-11-1 (FM)	ALU	2002000601	JP3953819	JP	Method And Apparatus For Hierarchical Bandwidth Distribution in a Packet Network	07.01.2002
Chambers 10-1-8-3-10 (MD)	ALU	11/172659	US7236791	US	Radio Channel Allocation For National Security And Emergency Preparedness Calls	30.06.2005
Chambers 14 (MD)	ALU	11/398045	US8045973	US	Mobile Device Subject To A Communication Restriction Responding To A Priority Call	05.04.2006
Chander 6-5 (SS)	ALU	09/480013	US7174177	US	System And Method For Providing Indication Of Maximum Teleservice Payload Size In A Wireless Communication Network	10.01.2000
Chin 7-1 (FM)	ALU	10/818384	US7515898	US	Connect Customized Ring Back Tone Service Only At One MSC When InterSystem Page Is Involved	05.04.2004
Chin 7-1-19 (MW)	ALU	10/390103	US7058389	US	Method For Processing Emergency Calls Initiated By Wireless Phones	17.03.2003
Centanni 2-32-9-22-5-7 (JC)	ALU	10/734803	US8032024	US	Method And Apparatus For Multi-Band Optical Switching Using Multi-Pump Parametric Devices	12.12.2003
Centanni 2-32-9-22-5-7 (JC)	ALU	2004357595	JP4813791	JP	Method And Apparatus For Multi-Band Optical Switching Using Multi-Pump Parametric Devices	10.12.2004
Centanni 2-32-9-22-5-7 (JC)	ALU	04257330.3	EP1542494	GB	Method And Apparatus For Multi-Band Optical Switching Using Multi-Pump Parametric Devices	25.11.2004
Centanni 2-32-9-22-5-7 (JC)	ALU	04257330.3	EP1542494	FR	Method And Apparatus For Multi-Band Optical Switching Using Multi-Pump Parametric Devices	25.11.2004
Chiang 3-3 (C)	ALU	10/893215	US7602729	US	Slow-Fast Programming Of Distributed Base Stations In A Wireless Network	19.07.2004
Chand 11-11-1-5-9 (N)	ALU	20000045182	KR633629	KR	System For Delivering Baseband And Multimedia Services On A Passive OpticalNetwork	04.08.2000
Centanni 2-32-9-22-5-7 (JC)	ALU	04257330.3	EP1542494	DE	Method And Apparatus For Multi-Band Optical Switching Using Multi-Pump Parametric Devices	25.11.2004
Chand 11-11-1-5-9 (N)	ALU	2000236353	JP3759385	JP	System For Delivering Baseband And Multimedia Services On A Passive OpticalNetwork	04.08.2000
Chand 11-11-1-5-9 (N)	ALU	00306301.3	EP1079553	GB	System For Delivering Baseband And Multimedia Services On A Passive OpticalNetwork	24.07.2000
Chand 11-11-1-5-9 (N)	ALU	00306301.3	EP1079553	FR	System For Delivering Baseband And Multimedia Services On A Passive OpticalNetwork	24.07.2000
Chand 11-11-1-5-9 (N)	ALU	00306301.3	EP1079553	DE	System For Delivering Baseband And Multimedia Services On A Passive OpticalNetwork	24.07.2000
Chand 11-11-1-5-9 (N)	ALU	09/450823	US6763193	US	System For Delivering Baseband And Multimedia Services On A Passive OpticalNetwork	29.11.1999
Chiussi 23-1-2-11-1 (FM)	ALU	10/008425	US7075934	US	Method And Apparatus For Hierarchical Bandwidth Distribution in a Packet Network	13.11.2001
Chiu 4-1-6-1 (Y)	ALU	09/239117	US6366705	US	Perceptual Preprocessing Techniques To Reduce Complexity Of Video Coders	28.01.1999
Chakrabarti 1-2 (S)	ALU	09/086400	US6163692	US	Telecommunication Network With Mobile Voice Conferencing System And Method	28.05.1998
Chang 4-15 (L)	ALU	09/630459	US6650290	US	Broadband, Low Loss, Modular Feed For Phased Array Antennas	02.08.2000
Chandross 97-41 (EA)	ALU	10/071381	US6457836	US	A Mirror And A Method Of Making The Same	08.02.2002
Chandross 97-41 (EA)	ALU	09/897671	US6382807	US	A Mirror And A Method Of Making The Same	02.07.2001

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Chandrasekhar 10-2 (S)	ALU	09/528979	US6400860	US	Wavelength Selective Polarization Beam Splitter/Combiner	21.03.2000
Cavgalar 1-1-1 (A)	ALU	11/093876	US7792268	US	Truck Architecture For Coupling Central Offices Associated With Public Switched Telephone Networks	30.03.2005
Chao 1-6 (JJ)	ALU	09/114840	US6314281	US	Method And Apparatus For Precisely Locating A Mobile Unit	14.07.1998
Chandrasekhar 18-8 (S)	ALU	10/855449	US7333553	US	Tunable Duobinary Transmitter	27.05.2004
Chan 1-4-2-4-2-8 (CK)	ALU	10/648628	US7363528	US	Brink Of Failure And Breach Of Security Detection And Recovery System	25.08.2003
Chao 3-32 (JJ)	ALU	11/950823	US7598908	US	A Method And Apparatus For Reducing Interference In A Wireless Device	05.12.2007
Chang 1-3-1-6-1-1 (J)	ALU	10/383271	US7554939	US	Handling Specialized Resource Functions Associated With Wireless Intelligent Network In Mobile Switch Center	07.03.2003
Chen 25-2 (Y)	ALU	10/133469	US7146109	US	Analog Modulation Of Optical Signals	26.04.2002
Clark 2-12-14 (AC)	ALU	11/238845	US7477902	US	Capacity Allocation In A Wireless Communication System	29.09.2005
Chen 4-20-5 (J)	ALU	09/041604	US6172565	US	Adaptive Joint Linearization, Equalization And Delay Alignment For A Wide-Band Power Amplifier	13.03.1998
Chen 30-4 (Y)	ALU	10/674722	US7292792	US	High Speed Modulation Of Optical Subcarriers	30.09.2003
Chen 33-4-6 (Y)	ALU	10/859894	US7190047	US	Transistors And Methods For Making The Same	03.06.2004
Chen 4-38-20-42 (T)	ALU	10/793013	US7852963	US	Method And System For Predicting Signal Power To Interference Metric	05.03.2004
Claussen 9 (H)	ALU	11/095351	US7299069	US	Adapting A Communications Network Of Wireless Access Nodes To A Changing Environment	31.03.2005
Chung 1-18 (S)	ALU	09/716558	US6799294	US	Method Of Producing Channel Error Flags For Error Mitigation And Concealment In Source Decoders	20.11.2000
Chung 1-18 (S)	ALU	2001107884	JP3577287	JP	Method Of Producing Channel Error Flags For Error Mitigation And Concealment In Source Decoders	06.04.2001
Chen 2-3 (F)	ALU	10/621324	US7697417	US	Methods And Devices For Re-Routing Traffic	18.07.2003
Chen 2-3-1-2-2 (G)	ALU	12/284972	US7570864	US	Polymeric Compositions Comprising Quantum Dots, Optical Devices Comprising These Compositions And Methods For Preparing Same	26.09.2008
Chen 2-3-1-2-2 (G)	ALU	11/402693	US7197226	US	Polymeric Compositions Comprising Quantum Dots, Optical Devices Comprising These Compositions And Methods For Preparing Same	11.04.2006
Chen 2-3-1-2-2 (G)	ALU	11/650668	US7457508	US	Polymeric Compositions Comprising Quantum Dots, Optical Devices Comprising These Compositions And Methods For Preparing Same	08.01.2007
Chen 2-3-1-2-2 (G)	ALU	10/724174	US7065285	US	Polymeric Compositions Comprising Quantum Dots, Optical Devices Comprising These Compositions And Methods For Preparing Same	01.12.2003
Chen 2-3-34 (IZ)	ALU	11/681883	US8804486	US	Base Stations Routing Traffic Over A Packet Backhaul Network To Multiple Routing Elements	05.03.2007
Chen 44-9-15 (Y)	ALU	20077030837	KR100933381	KR	COHERENT PHASE-SHIFT-KEYING	02.08.2006
Chen 44-9-15 (Y)	ALU	11/204607	US7747177	US	COHERENT PHASE-SHIFT-KEYING	15.08.2005
Chen 45-10-16 (Y)	ALU	11/236246	US7650084	US	Optical Heterodyne Receiver And Method Of Extracting Data From A Phase-Modulated Input Optical Signal	27.09.2005
Chen 46-17 (Y)	ALU	11/284865	US7403711	US	Optical Digital-To-Analog Converter And Method Of Optically Converting Digital Data To Analog Form	22.11.2005
Chen 47-18 (Y)	ALU	11/366145	US7929864	US	An Optical Beamforming Transmitter	02.03.2006
Chen 1-4-8 (C)	ALU	10/985927	US7817644	US	High Speed Weighted Fair Queuing System For ATM Switches	12.11.2004
Chen 1-4-8 (C)	ALU	99307086.1	EP1021060	DE	High Speed Weighted Fair Queuing System For ATM Switches	07.09.1999
Chen 1-4-8 (C)	ALU	99307086.1	EP1021060	GB	High Speed Weighted Fair Queuing System For ATM Switches	07.09.1999
Chen 1-4-8 (C)	ALU	99307086.1	EP1021060	FR	High Speed Weighted Fair Queuing System For ATM Switches	07.09.1999
Chen 2-3-4 (BH)	ALU	09/212261	US6748224	US	Local Positioning System	16.12.1998
Clark 1-12-9 (AC)	ALU	04253182.2	EP1487227	FR	Method For Increasing Wireless Communication System Capacity	28.05.2004
Clark 1-12-9 (AC)	ALU	04253182.2	EP1487227	DE	Method For Increasing Wireless Communication System Capacity	28.05.2004
Clark 1-12-9 (AC)	ALU	04253182.2	EP1487227	GB	Method For Increasing Wireless Communication System Capacity	28.05.2004
Cheng 22-15-12 (F)	ALU	6422/CHENP/2008		IN	Coordinating Transmission Scheduling Among Multiple Base Stations	29.05.2007
Cheng 22-15-12 (F)	ALU	20087029002	KR101101722	KR	Coordinating Transmission Scheduling Among Multiple Base Stations	29.05.2007
Cheng 22-15-12 (F)	ALU	07795466.7		EP	Coordinating Transmission Scheduling Among Multiple Base Stations	29.05.2007
Cheng 22-15-12 (F)	ALU	200780020239.3	ZL80020239.3	CN	Coordinating Transmission Scheduling Among Multiple Base Stations	29.05.2007
Cheng 22-15-12 (F)	ALU	2009513243	JP4966374	JP	Coordinating Transmission Scheduling Among Multiple Base Stations	29.05.2007

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Chen 3-2 (J)	ALU	11/415899	US7808907	US	Scheduling Method For Use In A Mesh Network	02.05.2006
Chen 30-4 (Y)	ALU	200410047664.X	ZL10047664.X	CN	High Speed Modulation Of Optical Subcarriers	28.05.2004
Chen 30-4 (Y)	ALU	2004158480	JP4541033	JP	High Speed Modulation Of Optical Subcarriers	28.05.2004
Chen 5-42-22 (I)	ALU	11/130165	US7603140	US	Method Of Phase Sweep Transmit Diversity (PSTD) And Apparatus For Providing PSTD	17.05.2005
Chen 50-3-15-22 (Y)	ALU	11/644536	US8073345	US	Frequency Estimation In An Intradyne Optical Receiver	22.12.2006
Chen 52-24-12-7 (Y)	ALU	11/957725	US8055141	US	Balanced Optical Signal Processor	17.12.2007
Cheng 14-1-6 (F)	ALU	11/055019	US7515579	US	Dynamic Switching Of A Transmission Time Interval In A Wireless System	09.02.2005
Cheong 5-1 (S)	ALU	09/885471	US6878420	US	MgB2 Superconductors	20.06.2001
Cheong 5-1 (S)	ALU	11/002860	US7668578	US	MgB2 Superconductors	02.12.2004
Chin 23-1-10-1 (FM)	ALU	11/422860	US8000460	US	Providing A Call Waiting Distinctive Ringback Feature In Wireless Networks	07.06.2006
Chen 2-1-5-3 (F)	ALU	10/247899	US7221649	US	Method And Apparatus For Identifying Delay Causes In Traffic Traversing A Network	20.09.2002
Cheng 15-14 (F)	ALU	11/194063	US8054826	US	Controlling Service Quality Of Voice Over Internet Protocol On A Downlink Channel High-Speed Wireless Data Networks	29.07.2005
Cheng 19-13-9 (F)	ALU	11/386065	US7844277	US	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	21.03.2006
Chen 2-18-3 (J)	ALU	09/053407	US6154093	US	Fast Adaptive Wideband Power Amplifier Feed Forward Linearizer Using A RLS Parameter Tracking Algorithm	01.04.1998
Cheng 19-13-9 (F)	ALU	4879/CHENP/2008		IN	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	2008141370	RU2443077	RU	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	2007227704	AU2007227704	AU	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	PI0709562.7		BR	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	200780009713.2	ZL80009713.2	CN	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	MX/a/2008/011861	MX280491	MX	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	20087022478	KR101320910	KR	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	2009501444	JP5094838	JP	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	096109559	TWI435579	TW	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	20.03.2007
Cheng 19-13-9 (F)	ALU	194081	IL194081	IL	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Chin 5-17 (MW)	ALU	10/340707	US7302250	US	Method Of Recognizing Fraudulent Wireless Emergency Service Calls	13.01.2003
Chin 5-43-3 (FM)	ALU	10/718242	US7218922	US	Administrator Designation Of One Or More Tones And/Or One Or More Announcements That Are Playable In A Communication Session As Interruptible	20.11.2003
Chin 6-18 (MW)	ALU	10/340705	US7565130	US	Emergency Intersystem Paging for Emergency Call Back	13.01.2003
Costa 3-1-1 (RS)	ALU	09/168448	US6092588	US	Mounting Bracket With Integral Heat Sink Capabilities	08.10.1998
Costa 3-1-1 (RS)	ALU	09/118239	US5960865	US	Mounting Bracket With Integral Heat Sink Capabilities	17.07.1998
Cooper 9-2 (SE)	ALU	10/458566	US7146192	US	Base Station For Mobile Telecommunications, An Antenna Assembly, And A Method Of Determining The Location Of An Antenna Assembly	10.06.2003
Cooper 9-2 (SE)	ALU	04253329.9	EP1487223	DE	Base Station For Mobile Telecommunications, An Antenna Assembly, And A Method Of Determining The Location Of An Antenna Assembly	04.06.2004
Cooper 9-2 (SE)	ALU	04253329.9	EP1487223	GB	Base Station For Mobile Telecommunications, An Antenna Assembly, And A Method Of Determining The Location Of An Antenna Assembly	04.06.2004
Cooper 9-2 (SE)	ALU	04253329.9	EP1487223	FR	Base Station For Mobile Telecommunications, An Antenna Assembly, And A Method Of Determining The Location Of An Antenna Assembly	04.06.2004
Chu 3-3-4-1 (TP)	ALU	10/357358	US7872991	US	Methods And Procedures In Providing MPLS-Based Layer-2 Virtual Private Network Services	04.02.2003
Chowdhury 15-1 (A)	ALU	20087027648	KR100977951	KR	Nonlinear Optical Devices Based On Metamaterials	14.05.2007
Chowdhury 15-1 (A)	ALU	2009511008	JP4990969	JP	Nonlinear Optical Devices Based On Metamaterials	14.05.2007
Chowdhury 15-1 (A)	ALU	200780017473.0	ZL80017473.0	CN	Nonlinear Optical Devices Based On Metamaterials	14.05.2007

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Chowdhury 15-1 (A)	ALU	6030/CHENP/2008	IN265307	IN	Nonlinear Optical Devices Based On Metamaterials	14.05.2007
Chowdhury 15-1 (A)	ALU	11/432803	US7586670	US	Nonlinear Optical Devices Based On Metamaterials	13.05.2006
Chu 14-1-3 (TP)	ALU	11/715774	US7764971	US	Control Procedure For Simultaneous Media Communications Within A Talk Group In Communication Networks For Public Safety	08.03.2007
Chu 9-14-9 (TP)	ALU	2005281376	JP5111749	JP	Apparatus For Decomposing An Automatic Cross Connect System At A Remote Wiring Hub	28.09.2005
Chu 9-14-9 (TP)	ALU	2517536	CA2517536	CA	Apparatus For Decomposing An Automatic Cross Connect System At A Remote Wiring Hub	30.08.2005
Chu 9-14-9 (TP)	ALU	10/954965	US7693168	US	Apparatus For Decomposing An Automatic Cross Connect System At A Remote Wiring Hub	30.09.2004
Chraplyvy 25-79 (AR)	ALU	09/231033	US6580536	US	Power And Wavelength Management For Mixed-Rate Optical Data Systems	14.01.1999
Chuah 12 (MC)	ALU	291775/1998	JP3443340	JP	Method For Admitting New Connections Based On Usage And Priorities In A Multiple Access System For Communications Networks	14.10.1998
Chuah 12 (MC)	ALU	98308330.4	EP0915592	FR	Method For Admitting New Connections Based On Usage And Priorities In A Multiple Access System For Communications Networks	13.10.1998
Chuah 12 (MC)	ALU	98308330.4	EP0915592	DE	Method For Admitting New Connections Based On Usage And Priorities In A Multiple Access System For Communications Networks	13.10.1998
Chuah 12 (MC)	ALU	09/083792	US6226277	US	Method For Admitting New Connections Based On Usage And Priorities In A Multiple Access System For Communications Networks	22.05.1998
Chuah 12 (MC)	ALU	98308330.4	EP0915592	GB	Method For Admitting New Connections Based On Usage And Priorities In A Multiple Access System For Communications Networks	13.10.1998
Clarke 13-3-6 (JE)	ALU	98309617.3	EP0926748	GB	Droppable Battery Packs	24.11.1998
Clarke 13-3-6 (JE)	ALU	98309617.3	EP0926748	SE	Droppable Battery Packs	24.11.1998
Clarke 13-3-6 (JE)	ALU	98309617.3	EP0926748	FI	Droppable Battery Packs	24.11.1998
Clarke 13-3-6 (JE)	ALU	98309617.3	EP0926748	FR	Droppable Battery Packs	24.11.1998
Clarke 13-3-6 (JE)	ALU	98309617.3	EP0926748	DE	Droppable Battery Packs	24.11.1998
Clarke 13-3-6 (JE)	ALU	10333779	JP3573259	JP	Droppable Battery Packs	25.11.1998
Clarke 13-3-6 (JE)	ALU	98122691.4	ZL98122691.4	CN	Droppable Battery Packs	25.11.1998
Clarke 13-3-6 (JE)	ALU	08/979055	US6232013	US	Droppable Battery Packs	26.11.1997
Chuah 21-13-1 (MC)	ALU	09/172493	US6674765	US	Methods And Apparatus For Random Chip Delay Access Priority In A Communications System	14.10.1998
Chuah 21-13-1 (MC)	ALU	99307818.7	EP0994603	GB	Methods And Apparatus For Random Chip Delay Access Priority In A Communications System	05.10.1999
Chuah 21-13-1 (MC)	ALU	99307818.7	EP0994603	DE	Methods And Apparatus For Random Chip Delay Access Priority In A Communications System	05.10.1999
Chuah 21-13-1 (MC)	ALU	999291	MX228497	MX	Methods And Apparatus For Random Chip Delay Access Priority In A Communications System	11.10.1999
Chuah 21-13-1 (MC)	ALU	291739/1999	JP3521125	JP	Methods And Apparatus For Random Chip Delay Access Priority In A Communications System	14.10.1999
Chuah 21-13-1 (MC)	ALU	19990044222	KR704068	KR	Methods And Apparatus For Random Chip Delay Access Priority In A Communications System	13.10.1999
Chuah 22-14-2 (MC)	ALU	99307823.7	EP0994604	GB	Methods And Apparatus For Random Backoff Based Access Priority In A Communications System	05.10.1999
Chuah 22-14-2 (MC)	ALU	99307823.7	EP0994604	FR	Methods And Apparatus For Random Backoff Based Access Priority In A Communications System	05.10.1999
Chuah 22-14-2 (MC)	ALU	99307823.7	EP0994604	DE	Methods And Apparatus For Random Backoff Based Access Priority In A Communications System	05.10.1999
Chuah 22-14-2 (MC)	ALU	999290	MX228496	MX	Methods And Apparatus For Random Backoff Based Access Priority In A Communications System	11.10.1999
Chuah 22-14-2 (MC)	ALU	291740/1999	JP3662789	JP	Methods And Apparatus For Random Backoff Based Access Priority In A Communications System	14.10.1999
Chuah 22-14-2 (MC)	ALU	19990044295	KR746017	KR	Methods And Apparatus For Random Backoff Based Access Priority In A Communications System	13.10.1999
Chuah 22-14-2 (MC)	ALU	09/172494	US6594240	US	Methods And Apparatus For Random Backoff Based Access Priority In A Communications System	14.10.1998
Chuah 29-1-4-20 (MC)	ALU	09/264053	US6993021	US	Lightweight Internet Protocol Encapsulation (LIPE) Scheme For Multimedia Traffic Transport	08.03.1999
Chuah 21-13-1 (MC)	ALU	99307818.7	EP0994603	FR	Methods And Apparatus For Random Chip Delay Access Priority In A Communications System	05.10.1999
Chuah 36-6-6 (MC)	ALU	09/138677	US6577643	US	Message And Communication System In Network	24.08.1998

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Chraplyvy 37-62-25 (AR)	ALU	12/194241	US8121494	US	System And Method For Receiving High Spectral Efficiency Optical DPSK Signals	19.08.2008
Chraplyvy 37-62-25 (AR)	ALU	2011523792	JP5480901	JP	System And Method For Receiving High Spectral Efficiency Optical DPSK Signals	05.08.2009
Chraplyvy 37-62-25 (AR)	ALU	1028/CHENP/2011		IN	System And Method For Receiving High Spectral Efficiency Optical DPSK Signals	05.08.2009
Chraplyvy 37-62-25 (AR)	ALU	20117003658	KR101248401	KR	System And Method For Receiving High Spectral Efficiency Optical DPSK Signals	05.08.2009
Chraplyvy 37-62-25 (AR)	ALU	200980132459.4	ZL200980132459.4	CN	System And Method For Receiving High Spectral Efficiency Optical DPSK Signals	05.08.2009
Chraplyvy 37-62-25 (AR)	ALU	09789063.6		EP	System And Method For Receiving High Spectral Efficiency Optical DPSK Signals	05.08.2009
Claussen 13-10-17-46 (H)	ALU	200780016697.X	ZL200780016697.X	CN	Method And Apparatus For Managing Interference In A Wireless Communication System	27.04.2007
Claussen 13-10-17-46 (H)	ALU	20087027386	KR101059610	KR	Method And Apparatus For Managing Interference In A Wireless Communication System	27.04.2007
Claussen 13-10-17-46 (H)	ALU	2009509628	JP5220729	JP	Method And Apparatus For Managing Interference In A Wireless Communication System	27.04.2007
Chuah 55 (MC)	ALU	09/935023	US7346023	US	Reconfigurable Wireless Communication Access System And Method	22.08.2001
Chuah 6-1-8 (MC)	ALU	09/126154	US6515994	US	Method Of Communication In A Communications Network And Apparatuses Therefor	30.07.1998
Chuah 76-11 (MC)	ALU	10/723591	US7330699	US	Power Allocation For MBMS Users Using Mixed FACH And DCH Approach	26.11.2003
Chromatis 3	ALU	11/258325	US7302180	US	Dual Homing for DWDM Networks in Fiber Rings	24.10.2005
Clark 8-10 (EA)	ALU	10/698573	US7558871	US	Data Stream Association With Call Through Employment Of Identifier Within Message Associated With The Call	31.10.2003
Clark 9 (EA)	ALU	10/698327	US7555112	US	Service(s) Provided To Telephony Device(s) Through Employment Of Data Stream(s) Associated With The Call	31.10.2003
Dajer 4-1-19 (M)	ALU	09/176922	US6781980	US	CDMA Transmitter And Method Generating Combined High-Rate And Low-Rate CDMA Signals	22.10.1998
Daniels 1 (WR)	ALU	09/882968	US6888849	US	Method For Evaluating Capacity Utilization Of A Terminus In A Communication System	15.06.2001
Colby 2-2-8-11-2-3 (LS)	ALU	09/075728	US6272502	US	Refreshing Materialized Views Of A Database To Maintain Consistency with Underlying Data	11.05.1998
Dajer 5-4-4 (M)	ALU	09/311159	US6446147	US	Wired-Or Connection in Differential Transmission Environment	13.05.1999
Dajer 7-6-2 (M)	ALU	09/396829	US6507732	US	Dynamic Path Gain Compensation For Radios In Wireless Communication Systems	14.09.1999
Dajer 7-6-2 (M)	ALU	10/209944	US7062242	US	Dynamic Path Gain Compensation For Radios In Wireless Communication Systems	02.08.2002
Dagdeviren 17-17-5-23 (NR)	ALU	09/017592	US6519291	US	Reduction Of Interference In Discrete Multi-Tone (DMT) Based Communications Systems	03.02.1998
Dagdeviren 17-17-5-23 (NR)	ALU	99300563.6	EP0933897	FR	Reduction Of Interference In Discrete Multi-Tone (DMT) Based Communications Systems	26.01.1999
Dagdeviren 17-17-5-23 (NR)	ALU	99300563.6	EP0933897	DE	Reduction Of Interference In Discrete Multi-Tone (DMT) Based Communications Systems	26.01.1999
Dagdeviren 17-17-5-23 (NR)	ALU	99300563.6	EP0933897	GB	Reduction Of Interference In Discrete Multi-Tone (DMT) Based Communications Systems	26.01.1999
Dajer 10-5-4-7 (M)	ALU	09/815855	US6930990	US	Serial Communications Link For Distributed Base Stations	23.03.2001
Dajer 10-5-4-7 (M)	ALU	20020014301	KR629640	KR	Serial Communications Link For Distributed Base Stations	16.03.2002
Cortes 5 (M)	ALU	11/772012	US8930522	US	A Replica/Cache Locator, An Overlay Network And A Method To Locate Replication Tables And Caches Therein	29.06.2007
Costa 4-2-3 (RS)	ALU	09/118746	US6045103	US	Multiple Axis Bracket With Keyed Mount	17.07.1998
De Lind Van Wijngaarden 21-10-13-18-7 (AJ)	ALU	11/848684	US8081560	US	Method And Apparatus For A Self-Tuning Precoder	31.08.2007
De Lind Van Wijngaarden 21-10-13-18-7 (AJ)	ALU	08795562.1		EP	Method And Apparatus For A Self-Tuning Precoder	25.08.2008
De Lind Van Wijngaarden 21-10-13-18-7 (AJ)	ALU	1016/CHENP/2010		IN	Method And Apparatus For A Self-Tuning Precoder	25.08.2008
De Lind Van Wijngaarden 21-10-13-18-7 (AJ)	ALU	200880104756.3	ZL200880104756.3	CN	Method And Apparatus For A Self-Tuning Precoder	25.08.2008
De Lind Van Wijngaarden 21-10-13-18-7 (AJ)	ALU	20107004486	KR10-1522237	KR	Method And Apparatus For A Self-Tuning Precoder	25.08.2008

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
De Lind Van Wijngaarden 26-3-17-2 (AJ)	ALU	20107027289	KR101216374	KR	Signal Suspension And Resumption In DSL Systems	28.05.2009
De Lind Van Wijngaarden 26-3-17-2 (AJ)	ALU	09758694.5	EP2289209	EP	Signal Suspension And Resumption In DSL Systems	28.05.2009
De Lind Van Wijngaarden 26-3-17-2 (AJ)	ALU	12/157461	US8306097	US	Signal Suspension And Resumption In DSL Systems	10.06.2008
Delavaux 28-4 (JP)	ALU	09/584900	US6850712	US	Optical Fiber Transmission System With Polarization Multiplexing To Reduce Stimulated Brillouin Scattering	31.05.2000
Delavaux 28-4 (JP)	ALU	2001163609	JP3751542	JP	Optical Fiber Transmission System With Polarization Multiplexing To Reduce Stimulated Brillouin Scattering	31.05.2001
De Lind Van Wijngaarden 26-3-17-2 (AJ)	ALU	200980120826.9	ZL200980120826.9	CN	Signal Suspension And Resumption In DSL Systems	28.05.2009
Creighton 1 (RS)	ALU	09/261348	US6529560	US	System And Method To Reduce The Peak-To-Average Power Ratio In A DS-CDMA Transmitter	03.03.1999
Dayal 3-45 (S)	ALU	09/483784	US6504528	US	Magnetic Mouse And/Or Mouse-Pad	14.01.2000
De Lind Van Wijngaarden 28-17-19-27 (AJ)	ALU	12/230080	US8630383	US	Communciation System For Transmitting Sync-Flags And Pilot Symbols And Method Thereof	22.08.2008
DeFelice 2-4 (RA)	ALU	09/498006	US6414884	US	Method And Apparatus For Securing Electronic Circuits	04.02.2000
DeFelice 3-10 (RA)	ALU	09/327936	US6014011	US	Battery Charging System For Portable Electronic Devices	08.06.1999
del Cacho 1-13-15 (C)	ALU	11/737202		US	Method And Apparatus For Instant Messaging	19.04.2007
Del Signore 10 (KW)	ALU	12/291792	US8224357	US	Method For Paging A Mobile Unit Based On Previous Network Interactions	13.11.2008
Del Signore 5-4 (KW)	ALU	11/455514	US8027693	US	Conservation Of Paging Resources In A Mobile Switching Center	19.06.2006
Del Signore 6-21-2 (KW)	ALU	11/589030	US7835739	US	A Method Of Excluding Ineffective Inter System Page Attempts	27.10.2006
de Weerd 4 (J)	ALU	09/099001	US5998887	US	Battery Test Circuit For Optical Network And Method Of Operation Thereof	17.06.1998
Cross 3 (WK)	ALU	08/960615	US6009156	US	Method For Accommodating Multiple Calling Cards During A Single Call In A Telecommunications Network	29.10.1997
Craft 10-1 (TF)	ALU	10/910701	US7100385	US	Thermal Management System For Electrical Enclosures	03.08.2004
Cyr 3 (BL)	ALU	08/957281	US6223055	US	Wireless Office Architecture And Method Of Operation Thereof	24.10.1997
D'herbement 1-1-1-26 (L)	ALU	10/075877	US6993331	US	Mobile Telecommunications System That Is Robust With Respect To Radio Network Controller Failures	13.02.2002
Cristallo 3-19 (G)	ALU	2789/CHENP/2011		IN	Distributed Resource Management In Networks	26.10.2009
Cristallo 3-19 (G)	ALU	200910212210.6	ZL200910212210.6	CN	Distributed Resource Management In Networks	05.11.2009
Cristallo 3-19 (G)	ALU	12/611983	US8542603	US	Distributed Resource Management In Networks	04.11.2009
Cristallo 3-19 (G)	ALU	2011533591	JP5271419	JP	Distributed Resource Management In Networks	26.10.2009
Cristallo 3-19 (G)	ALU	20117010215	KR101242885	KR	Distributed Resource Management In Networks	26.10.2009
Cunningham 43 (JE)	ALU	09/740446	US6434180	US	Vertical Cavity Surface Emitting Laser (VCSEL)	19.12.2000
Cupo 17-10-3-5 (RL)	ALU	09/293851	US6650717	US	Asymmetric Pulse Amplitude Modulation Transmission Of Multi-Stream Data Embedded In A Hybrid IBOC Channel	19.04.1999
Damask 3 (JN)	ALU	09/516396	US6377719	US	Apparatus And Method For Controlled Generation Of Polarization Mode Dispersion	01.03.2000
Dinu 2-1-1-49-6-6 (M)	ALU	2002148471	JP4047630	JP	Optical Performance Monitoring Using Optical Autocorrelations	23.05.2002
Dinu 2-1-1-49-6-6 (M)	ALU	10/109623	US7460785	US	Optical Performance Monitoring Using Optical Autocorrelations	28.03.2002
Das 3-5-43 (KP)	ALU	11/735687	US7809002	US	Method And Apparatus For Priority Services Management	16.04.2007
DiGiovanni 46-1 (DJ)	ALU	09/288201	US6363194	US	Optical Fiber Communication System Employing Nd Doped Fiber Amplifier For The 1400 nm Window	08.04.1999
DiGiovanni 46-1 (DJ)	ALU	2000105803	JP4040822	JP	Optical Fiber Communication System Employing Nd Doped Fiber Amplifier For The 1400 nm Window	07.04.2000
DiGiovanni 46-1 (DJ)	ALU	00302571.5	EP1043815	IT	Optical Fiber Communication System Employing Nd Doped Fiber Amplifier For The 1400 nm Window	28.03.2000
DiGiovanni 46-1 (DJ)	ALU	00302571.5	EP1043815	FR	Optical Fiber Communication System Employing Nd Doped Fiber Amplifier For The 1400 nm Window	28.03.2000
DiGiovanni 46-1 (DJ)	ALU	00302571.5	EP1043815	DE	Optical Fiber Communication System Employing Nd Doped Fiber Amplifier For The 1400 nm Window	28.03.2000
DiGiovanni 46-1 (DJ)	ALU	00302571.5	EP1043815	GB	Optical Fiber Communication System Employing Nd Doped Fiber Amplifier For The 1400 nm Window	28.03.2000

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0301

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Dimeo 1-19-4-9 (RW)	ALU	09/643647	US7181184	US	Band Edge Amplitude Reduction System And Method	22.08.2000
Dimeo 1-19-4-9 (RW)	ALU	2001251033	JP5409979	JP	Band Edge Amplitude Reduction System And Method	22.08.2001
Dodabalapur 18-1-15-17 (A)	ALU	2000258446	JP5132014	JP	Article Comprising A Plastic Laser	29.08.2000
Dodabalapur 18-1-15-17 (A)	ALU	09/385167	US6363096	US	Article Comprising A Plastic Laser	30.08.1999
DiGiovanni 52-4-1-16 (DJ)	ALU	09/847034	US6542679	US	Method Of Making An Improved Multimode Optical Fiber And Fiber Made By Method	01.05.2001
Das 6-8 (KP)	ALU	12/317900	US8249236	US	Network Call Back To Add Conference Participants And/Or Media Capabilities	30.12.2008
Ding 2-11-4-17-12 (L)	ALU	10/673223	US7471736	US	Frequency Based Modulator Compensation	30.09.2003
Das 19-17-41 (S)	ALU	2007217988	AU2007217988	AU	Methods Of Reverse Link Power Control	13.02.2007
Das 19-17-41 (S)	ALU	096106364	TW433482	TW	Methods Of Reverse Link Power Control	16.02.2007
Das 19-17-41 (S)	ALU	MX/a/2008/010457	MX290640	MX	Methods Of Reverse Link Power Control	13.02.2007
Das 19-17-41 (S)	ALU	2008555322	JP5247473	JP	Methods Of Reverse Link Power Control	13.02.2007
Das 19-17-41 (S)	ALU	193388	IL193388	IL	Methods Of Reverse Link Power Control	13.02.2007
Das 19-17-41 (S)	ALU	PI0707775-0		BR	Methods Of Reverse Link Power Control	13.02.2007
Das 19-17-41 (S)	ALU	2008137035	RU2446573	RU	Methods Of Reverse Link Power Control	13.02.2007
Das 19-17-41 (S)	ALU	200780005689.5	ZL80005689.5	CN	Methods Of Reverse Link Power Control	13.02.2007
Das 19-17-41 (S)	ALU	11/356242	US8260340	US	Methods Of Reverse Link Power Control	17.02.2006
Das 19-17-41 (S)	ALU	20087019660	KR101396164	KR	Methods Of Reverse Link Power Control	13.02.2007
Das 19-17-41 (S)	ALU	07750716.8		EP	Methods Of Reverse Link Power Control	13.02.2007
Degani 40-55 (Y)	ALU	09/041157	US6013877	US	Solder Bonding Printed Circuit Boards	12.03.1998
Das 2-6-9-3-4-9-24-18-5 (S)	ALU	10/941050	US7676223	US	Base Station Router For Use In A Wireless Communications System	13.09.2004
Das 2-6-9-3-4-9-24-18-5 (S)	ALU	10/941067	US7499437	US	Base Station Router For Use In A Wireless Communications System	13.09.2004
Das 2-6-9-3-4-9-24-18-5 (S)	ALU	10/941066	US7263371	US	Base Station Router For Use In A Wireless Communications System	13.09.2004
Das 2-6-9-3-4-9-24-18-5 (S)	ALU	04784084.8		EP	Base Station Router For Use In A Wireless Communications System	13.09.2004
Das 2-6-9-3-4-9-24-18-5 (S)	ALU	20077008421	KR101164807	KR	Base Station Router For Use In A Wireless Communications System	13.09.2004
Das 2-6-9-3-4-9-24-18-5 (S)	ALU	2007531148	JP4733703	JP	Base Station Router For Use In A Wireless Communications System	13.09.2004
Degani 40-55 (Y)	ALU	09/067271	US6100475	US	Solder Bonding Printed Circuit Boards	27.04.1998
Degani 40-55 (Y)	ALU	11064124	JP3352970	JP	Solder Bonding Printed Circuit Boards	10.03.1999
Daoud 290-91 (BH)	ALU	09/891629	US6552268	US	Insulation Displacement Connector With A Wire Ejection Feature	25.06.2001
Daoud 292-93 (BH)	ALU	09/884524	US6535681	US	Fiber-Optic Cable Routing And Bend Limiting Device And System	19.06.2001
Davis 1-13 (JP)	ALU	10/637837	US6847493	US	Optical Beamsplitter With Electro-Wetting Actuation	08.08.2003
Davis 1-13 (JP)	ALU	200410056322.4	ZL200410056322.4	CN	Optical Beamsplitter With Electro-Wetting Actuation	06.08.2004
Davis 1-13 (JP)	ALU	2004230148	JP4777624	JP	Optical Beamsplitter With Electro-Wetting Actuation	06.08.2004
Daoud 192 (BH)	ALU	09/391019	US6307999	US	Fiber-Optic Cable Routing And Separating Device	07.09.1999
Daoud 193 (BH)	ALU	09/391020	US6285815	US	High Density Fusion Splice Holder	07.09.1999
Daudelin 10 (DS)	ALU	08/987072	US6072807	US	Searching For Signals To Assign To The Fingers Of A Rake Receiver	09.12.1997
Daudelin 12-20 (DS)	ALU	09/205735	US6314532	US	Method And System For Recovering From A Software Failure	04.12.1998
Daoud 224 (BH)	ALU	09/387572	US6453107	US	Tray Locking Feature For A Fiber Enclosure	31.08.1999
Daoud 225 (BH)	ALU	09/386765	US6275641	US	Fiber Tray Insertion Apparatus And Method	31.08.1999
Daoud 43 (BH)	ALU	09/050510	US5989063	US	Splice Chamber And Connector Assembly For A Building Entrance Protector	30.03.1998
Daoud 235 (BH)	ALU	09/397888	US6259851	US	High Density Fiber Splice Holder	17.09.1999
Dragone 59 (CP)	ALU	09/396861	US6594054	US	Filtering System For Eliminating Dispersion And Method For Doing Same	15.09.1999
Dragone 69 (CP)	ALU	09/805609	US6574396	US	Wavelength Grating Arrangement Using A Segmented Reflector	12.03.2001
Dragone 69 (CP)	ALU	2002052817	JP4115714	JP	Wavelength Grating Arrangement Using A Segmented Reflector	28.02.2002
Dragone 70 (CP)	ALU	10/055587	US6782163	US	Waveguide Grating Arrangement Using A Segmented Reflector	22.01.2002
Dunn 21-1 (JP)	ALU	09/386728	US6580793	US	Method And Apparatus For Echo Cancellation With Self-Deactivation	31.08.1999
Dunn 21-1 (JP)	ALU	00307185.9	EP1104116	FR	Method And Apparatus For Echo Cancellation With Self-Deactivation	21.08.2000
Dunn 21-1 (JP)	ALU	00307185.9	EP1104116	DE	Method And Apparatus For Echo Cancellation With Self-Deactivation	21.08.2000

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Dunn 21-1 (JP)	ALU	00307185.9	EP1104116	GB	Method And Apparatus For Echo Cancellation With Self-Deactivation	21.08.2000
Dunn 21-1 (JP)	ALU	20000050840	KR394291	KR	Method And Apparatus For Echo Cancellation With Self-Deactivation	30.08.2000
Dragone 73 (CP)	ALU	10/421571	US6907160	US	Apparatus For Filtering Optical Signals	23.04.2003
Du 2-12-6-20 (M)	ALU	2002012098	JP3837074	JP	WDM Optical Communication System Using Co-Propagating Raman Amplification	21.01.2002
Du 2-12-6-20 (M)	ALU	09/768689	US6417958	US	WDM Optical Communication System Using Co-Propagating Raman Amplification	24.01.2001
den Bakker 1 (T)	ALU	09/070049	US6359941	US	System And Method For Improved Reference Threshold Setting In A Burst Mode Digital Data Receiver	30.04.1998
Dinu 6-5-13 (M)	ALU	10/838059	US7283744	US	Performance Monitoring Based On Optical Autocorrelation	03.05.2004
Dinu 7-16-74-9-15 (M)	ALU	200680016916.X	ZL200680016916.X	CN	Quantum Key Distribution	25.04.2006
Dinu 7-16-74-9-15 (M)	ALU	11/210941	US7706536	US	Quantum Key Distribution	24.08.2005
Dinu 7-16-74-9-15 (M)	ALU	2008512294	JP5036707	JP	Quantum Key Distribution	25.04.2006
Dinu 7-16-74-9-15 (M)	ALU	200680017099.X	ZL80017099.X	CN	Quantum Key Distribution	25.04.2006
Devine 1-1-5 (JM)	ALU	09/584195	US6452770	US	Power Buss Inhibit Through Data Input/Output Lines	31.05.2000
Devine 2-1-1 (JM)	ALU	10/609111	US7176739	US	Circuit To Improve Data Bus Performance	26.06.2003
Devine 5 (JM)	ALU	11/905251	US7646112	US	Parallel Supply Current Sharing Using Thermal Feedback	28.09.2007
Engelberth 8-1-30-1-33 (JW)	ALU	09/318011	US6144789	US	Temperature Compensating Device For Fiber Gratings And Package Therefor	25.05.1999
Ensor 15-5-9-30-3 (JR)	ALU	12/203582	US9596309	US	Method And Apparatus For Parameterized Promotion And Delivery Of Data	03.09.2008
Doerr 28-48 (CR)	ALU	2000298175	JP4388681	JP	Wavelength Division Add/Drop Multiplexer	29.09.2000
Doerr 28-48 (CR)	ALU	09/408932	US6519059	US	Wavelength Division Add/Drop Multiplexer	30.09.1999
Doerr 31-60-32-56 (CR)	ALU	09/400240	US6549313	US	Broadband Electronic NxN Cross-Connect Switch Using Tunable Lasers	21.09.1999
Ejzak 53-9 (RP)	ALU	12/235680	US8588791	US	A Method For Providing IMS Support For Enterprise PBX Users	23.09.2008
Doerr 47 (CR)	ALU	09/798501	US7330659	US	Wavelength Filter That Operates On Sets Of Wavelength Channels	02.03.2001
Doerr 47 (CR)	ALU	2002050785	JP4832700	JP	Wavelength Filter That Operates On Sets Of Wavelength Channels	27.02.2002
Erman 3-1-2 (B)	ALU	11/756839	US8027264	US	Method And Apparatus For Measuring Subjective Assessment of Digital Video Impairment	01.06.2007
Doerr 56 (CR1)	ALU	10/387667	US6836600	US	Optical Coupler With Low Loss Interconnections	13.03.2003
Doerr 57 (CR)	ALU	10/245666	US6892021	US	Dynamic Gain Equalization Arrangement For Optical Signals	17.09.2002
Doerr 61-4-6-6 (CR)	ALU	10/228800	US7437075	US	Integrated Reconfigurable Optical Add/Drop Multiplexer	27.08.2002
Doerr 63 (CR)	ALU	10/387620	US7006730	US	Multichannel Integrated Tunable Dispersion Compensator Employing A Thermo-optic Lens	13.03.2003
Doerr 63 (CR)	ALU	03808939.4	ZL03808939.4	CN	Multichannel Integrated Tunable Dispersion Compensator Employing A Thermo-optic Lens	14.03.2003
Doerr 63 (CR)	ALU	2479178	CA2479178	CA	Multichannel Integrated Tunable Dispersion Compensator Employing A Thermo-optic Lens	14.03.2003
Doerr 63 (CR)	ALU	03744663.0		EP	Multichannel Integrated Tunable Dispersion Compensator Employing A Thermo-optic Lens	14.03.2003
Ejzak 47-10 (RP)	ALU	11/141956	US7639669	US	Controlling Communication Path Reservations In A Packet Network With Non-Homogeneous Nodes	01.06.2005
Doerr 63 (CR)	ALU	20047014551	KR100990626	KR	Multichannel Integrated Tunable Dispersion Compensator Employing A Thermo-optic Lens	14.03.2003
Doerr 63 (CR)	ALU	2003577007	JP4359149	JP	Multichannel Integrated Tunable Dispersion Compensator Employing A Thermo-optic Lens	14.03.2003
Doerr 63 (CR)	ALU	2634293	CA2634293	CA	Multichannel Integrated Tunable Dispersion Compensator Employing A Thermo-optic Lens	14.03.2003
Dorrer 1-2 (CJ)	ALU	10/338355	US6856927	US	Method And Apparatus For The Characterization Of Optical Pulses And Modulators	08.01.2003
Dorrer 10-30 (CJ)	ALU	10/835023	US7336728	US	Method And Apparatus For Monitoring Phase-Shift Keyed Optical Signals	29.04.2004
Dorrer 11 (CJ)	ALU	10/949145	US7385706	US	Method And Apparatus For Determining The Nonlinear Properties Of Devices And Fibers	24.09.2004
Dorrer 14-8 (CJ)	ALU	11/067777	US7126739	US	Method And Apparatus For Optical Pulse Characterization Using Simplified Chronocyclic Tomography	28.02.2005
Dorrer 15 (CJ)	ALU	11/129244	US7298489	US	Method And Apparatus For Characterizing The Electric Field Of Periodic And Non-Periodic Optical Sources	13.05.2005
Dorrer 19 (CJ)	ALU	11/206622	US7609385	US	Method And Apparatus For Characterization Of The Response Of Optical Devices	18.08.2005
Dorrer 20 (CJ)	ALU	11/227051	US7298465	US	Measurement And Characterization Of Nonlinear Phase Shifts	15.09.2005

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Doerr 126 (CR)	ALU	11/690822	US7706648	US	Tunable Optical Dispersion Compensating Apparatus	24.03.2007
Doerr 129 (CR)	ALU	11/943949	US7403682	US	Dispersion Compensation Apparatus	21.11.2007
Doshi 33-17-10 (BT)	ALU	09/026830	US6219339	US	Method And Apparatus For Selectively Discarding Packets	20.02.1998
Doerr 97 (CR)	ALU	11/089640	US7302137	US	Optical Coupler Apparatus And Method	25.03.2005
Dominique 4-31-2-10 (F)	ALU	10/298551	US7499433	US	Method And Apparatus For DTX Frame Detection	19.11.2002
Dorrrer 22-27 (CJ)	ALU	11/245760	US7321454	US	Apparatus For Modulating One Or Both Of Spectral Phase And Amplitude Of An Optical Signal	07.10.2005
Dominique 10-7-2 (F)	ALU	10/844803	US7376208	US	Reception Method For Packetized Information With Automatic Repeat Request	13.05.2004
Dominique 10-7-2 (F)	ALU	05252782.7	EP1596523	FR	Reception Method For Packetized Information With Automatic Repeat Request	06.05.2005
Dorrrer 23 (CJ)	ALU	11/322613	US7411683	US	Electric Field Measurement Of Optical Waveforms	30.12.2005
Dorrrer 4-4 (CJ)	ALU	10/439828	US7006230	US	Interferometric Method And Apparatus For The Characterization Of Optical Pulses	16.05.2003
Dorrrer 5 (CJ)	ALU	10/629379	US7023556	US	Method And Apparatus For Measurement Of Group Delay	28.07.2003
Dorrrer 6-6 (CJ)	ALU	10/766977	US7068411	US	Method And Apparatus For Optical Sampling	29.01.2004
Dorrrer 7 (CJ)	ALU	10/783305	US7133135	US	Method And Apparatus For The Direct Characterization Of The Phase Of An Optical Signal	20.02.2004
Dominique 10-7-2 (F)	ALU	05252782.7	EP1596523	DE	Reception Method For Packetized Information With Automatic Repeat Request	06.05.2005
Dominique 10-7-2 (F)	ALU	05252782.7	EP1596523	GB	Reception Method For Packetized Information With Automatic Repeat Request	06.05.2005
Doerr 131-31 (CR)	ALU	12/006194	US7636501	US	Compact 16 QAM Optical Modulator	31.12.2007
Doerr 99-14 (CR)	ALU	11/073009	US7174063	US	Colorless Tunable Dispersion Compensator Employing A Planar Lightwave Circuit And A Deformable Mirror	04.03.2005
Duncan 1-39-32-1-38-7-1 (T)	ALU	08/925876	US5953331	US	Wireless Packet System For Efficient Wide Area Bandwidth Utilization	09.09.1997
Dominique 15-4 (F)	ALU	11/094439	US7532685	US	Methods Of Controlling Tracker Bandwidth In Wireless Communication Systems	31.03.2005
Doerr 136 (CR)	ALU	12/184889	US7903913	US	360-Degree Star Coupler	01.08.2008
Doerr 138 (CR)	ALU	12/194352	US8131120	US	Planar Polarization Splitter	19.08.2008
Doerr 105 (CR)	ALU	11/163422	US7433560	US	Rectangular-Passband Multiplexer	18.10.2005
Doerr 105 (CR)	ALU	1777/CHENP/2008	IN278150	IN	Rectangular-Passband Multiplexer	18.10.2006
Doerr 105 (CR)	ALU	2008536760	JP5106405	JP	Rectangular-Passband Multiplexer	18.10.2006
Dominique 19-15-9 (F)	ALU	11/139693	US8965440	US	Method Of Estimating A Current Channel Condition In A Wireless Communications Network	31.05.2005
Dominique 19-15-9 (F)	ALU	20077027919	KR101228234	KR	Method Of Estimating A Current Channel Condition In A Wireless Communications Network	05.05.2006
Dominique 19-15-9 (F)	ALU	2008514662	JP5004951	JP	Method Of Estimating A Current Channel Condition In A Wireless Communications Network	05.05.2006
Dominique 21-17 (F)	ALU	11/179576	US7929499	US	Methods Of Multipath Acquisition For Dedicated Traffic Channels	13.07.2005
Doerr 143 (CR)	ALU	12/407996	US8208817	US	High Speed Optical Modulation Using A Quantum-Well Modulator	20.03.2009
Doerr 145 (CR)	ALU	12/383159	US8280254	US	Optical Interleavers And De-Interleavers	20.03.2009
Doerr 79 (CR)	ALU	10/664340	US6941045	US	Tunable Dispersion Compensator	17.09.2003
Doerr 79 (CR)	ALU	04255426.1	EP1517462	FR	Tunable Dispersion Compensator	07.09.2004
Doerr 79 (CR)	ALU	04255426.1	EP1517462	DE	Tunable Dispersion Compensator	07.09.2004
Doerr 79 (CR)	ALU	04255426.1	EP1517462	GB	Tunable Dispersion Compensator	07.09.2004
Doerr 79 (CR)	ALU	200410079749.6	ZL200410079749.6	CN	Tunable Dispersion Compensator	16.09.2004
Doerr 79 (CR)	ALU	10/760516	US6961492	US	Tunable Dispersion Compensator	20.01.2004
Doerr 79 (CR)	ALU	2004270628	JP4559171	JP	Tunable Dispersion Compensator	17.09.2004
Doerr 82-8-11 (CR)	ALU	10/782003	US7042629	US	Linear Optical Sampling Method And Apparatus	19.02.2004
Dombkowski 6-27 (KE)	ALU	01130507.X	ZL01130507.X	CN	Line Card And Method For Supporting POTS, Asymmetric DSL And Symmetric DSL Services	15.11.2001
Dombkowski 6-27 (KE)	ALU	09/713745	US6898280	US	Line Card And Method For Supporting POTS, Asymmetric DSL And Symmetric DSL Services	15.11.2000
Dombkowski 6-27 (KE)	ALU	2001348930	JP4377094	JP	Line Card And Method For Supporting POTS, Asymmetric DSL And Symmetric DSL Services	14.11.2001
Dominique 26-22-10 (F)	ALU	11/194629	US7403745	US	Channel Quality Predictor And Method Of Estimating A Channel Condition In A Wireless Communications Network	02.08.2005
Feder 26-2 (PM)	ALU	200880023680.1	ZL200880023680.1	CN	Web-Based Over-The-Air Activation	01.07.2008
Faryar 10-5-10 (AF)	ALU	2001211091	JP4762445	JP	Methods And Apparatus For Nearly Lossless-Concatenated Block Transform Coding	11.07.2001

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Faryar 6-1-5-2 (AF)	ALU	09/326874	US6363113	US	Methods And Apparatus For Context-Based Perceptual Quantization	07.06.1999
Faryar 7-2-6 (AF)	ALU	09/326873	US6289052	US	Methods And Apparatus For Motion Estimation Using Causal Templates	07.06.1999
Faryar 9-4-8 (AF)	ALU	2000169846	JP4077135	JP	Methods And Apparatus For Context-Based Inter/Intra Coding Mode Selection	07.06.2000
Faryar 9-4-8 (AF)	ALU	00304632.3	EP1059812	DE	Methods And Apparatus For Context-Based Inter/Intra Coding Mode Selection	31.05.2000
Faryar 9-4-8 (AF)	ALU	00304632.3	EP1059812	GB	Methods And Apparatus For Context-Based Inter/Intra Coding Mode Selection	31.05.2000
Fatehi 24-1-1 (MT)	ALU	09/067909	US6317255	US	A Method And Apparatus For Controlling Optical Signal Power In Response To Faults In An Optical Fiber Path	28.04.1998
Feldman 12-1-1-9 (RD)	ALU	10/853836	US7161734	US	Method And Apparatus For Controlling Power Transients In An Optical Communication System	26.05.2004
Faryar 9-4-8 (AF)	ALU	00304632.3	EP1059812	FR	Methods And Apparatus For Context-Based Inter/Intra Coding Mode Selection	31.05.2000
Faryar 9-4-8 (AF)	ALU	09/326872	US6625215	US	Methods And Apparatus For Context-Based Inter/Intra Coding Mode Selection	07.06.1999
Fatehi 27-3 (MT)	ALU	09/336543	US6519064	US	Scalable Add/Drop Architecture For Lightwave Communication Systems	19.06.1999
Faynberg 4-6-1-1 (I)	ALU	05251007.0	EP1575228	FR	Prevention Of Spoofing Of The Sender In E-Mail By Direct Authentication Of The Message	22.02.2005
Faynberg 4-6-1-1 (I)	ALU	05251007.0	EP1575228	DE	Prevention Of Spoofing Of The Sender In E-Mail By Direct Authentication Of The Message	22.02.2005
Faynberg 4-6-1-1 (I)	ALU	05251007.0	EP1575228	GB	Prevention Of Spoofing Of The Sender In E-Mail By Direct Authentication Of The Message	22.02.2005
Faynberg 4-6-1-1 (I)	ALU	10/835146	US7752440	US	Prevention Of Spoofing Of The Sender In E-Mail By Direct Authentication Of The Message	29.04.2004
Faynberg 4-6-1-1 (I)	ALU	20050018915	KR1109817	KR	Prevention Of Spoofing Of The Sender In E-Mail By Direct Authentication Of The Message	08.03.2005
Faynberg 4-6-1-1 (I)	ALU	200510053073.8	ZL10053073.8	CN	Prevention Of Spoofing Of The Sender In E-Mail By Direct Authentication Of The Message	07.03.2005
Feder 26-2 (PM)	ALU	11/826937	US8516136	US	Web-Based Over-The-Air Activation	19.07.2007
Feder 26-2 (PM)	ALU	08779915.1		EP	Web-Based Over-The-Air Activation	01.07.2008
Faryar 10-5-10 (AF)	ALU	09/615565	US6909812	US	Methods And Apparatus For Nearly Lossless-Concatenated Block Transform Coding	13.07.2000
Faryar 10-5-10 (AF)	ALU	01304498.7	EP1173027	DE	Methods And Apparatus For Nearly Lossless-Concatenated Block Transform Coding	22.05.2001
Faryar 10-5-10 (AF)	ALU	01304498.7	EP1173027	GB	Methods And Apparatus For Nearly Lossless-Concatenated Block Transform Coding	22.05.2001
Faryar 10-5-10 (AF)	ALU	01304498.7	EP1173027	FR	Methods And Apparatus For Nearly Lossless-Concatenated Block Transform Coding	22.05.2001
Eckberg 3 (AE)	ALU	10/136840	US7496086	US	Techniques For Jitter Buffer Delay Management	30.04.2002
Dziong 8-25-16-32 (ZM)	ALU	10/673382	US7451340	US	Shared Mesh Network Protection	26.09.2003
Dziong 8-25-16-32 (ZM)	ALU	10/673381	US8296407	US	Shared Mesh Network Protection	26.09.2003
Dziong 8-25-16-32 (ZM)	ALU	10/673383	US7689693	US	Shared Mesh Network Protection	26.09.2003
Duttweiler 29 (DL)	ALU	09/393948	US6813352	US	Quadrature Filter Augmentation Of Echo Canceler Basis Functions	10.09.1999
Dziong 8-25-16-32 (ZM)	ALU	10/639728	US7606237	US	Shared Mesh Network Protection	12.08.2003
Eckl 13-7 (WF)	ALU	10/953892	US7810057	US	Characterizing Linearity Of Amplifiers	29.09.2004
Eckl 8-20-3 (WF)	ALU	10/601815	US7155182	US	Varactor With Extended Tuning Range	23.06.2003
Einstein 6-2 (DS)	ALU	10/320065	US6906804	US	WDM Channel Monitor And Wavelength Locker	16.12.2002
Edmon 3-5-18 (EL)	ALU	10/036272	US6813277	US	Method And Apparatus Enabling Multiple Access on a Broadband Communication Network	26.12.2001
Ford 23 (JE)	ALU	09/036610	US6304694	US	Method And Device For Aligning Optical Fibers In An Optical Fiber Array	07.03.1998
Ford 39-74-10-57 (JE)	ALU	09/332677	US6631246	US	Wavelength Division Multiplexed Optical Communication System Having Tunable Multi-Channel Dispersion Compensating Filters	14.06.1999
Ford 39-74-10-57 (JE)	ALU	00304794.1	EP1061674	DE	Wavelength Division Multiplexed Optical Communication System Having Tunable Multi-Channel Dispersion Compensating Filters	06.06.2000
Ford 39-74-10-57 (JE)	ALU	00304794.1	EP1061674	GB	Wavelength Division Multiplexed Optical Communication System Having Tunable Multi-Channel Dispersion Compensating Filters	06.06.2000
Ford 39-74-10-57 (JE)	ALU	00304794.1	EP1061674	FR	Wavelength Division Multiplexed Optical Communication System Having Tunable Multi-Channel Dispersion Compensating Filters	06.06.2000
Ford 39-74-10-57 (JE)	ALU	2000178073	JP4689791	JP	Wavelength Division Multiplexed Optical Communication System Having Tunable Multi-Channel Dispersion Compensating Filters	14.06.2000
Ford 41-1 (JE)	ALU	09/375305	US6337935	US	Dispersed Image Inverting Optical Wavelength Multiplexer	16.08.1999

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0305

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Fleming 38 (JW)	ALU	09/141440	US6041623	US	Process For Fabricating Article Comprising Refractory Dielectric Body	27.08.1998
Florkey 11-4 (C)	ALU	10/697484	US7107047	US	Employment Of Established Telephone Number Of Mobile Device Supported By Serving Mobile Switching Center To Connect A Call To The Mobile Device	29.10.2003
Espindola 12-10-15 (RP)	ALU	269675/1999	JP3521124	JP	Tapered Optical Fiber Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	24.09.1999
Espindola 12-10-15 (RP)	ALU	09/159705	US6115519	US	Tapered Optical Fiber Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	24.09.1998
Espindola 13-18-6 (RP)	ALU	09/159435	US6111999	US	Fiber Device Having Variable Refractive Index Region Proximal The Core	24.09.1998
Everett 1-1 (MW)	ALU	11/128641	US7660745	US	Methods And Apparatus For Management And Negotiation Of Prices Of Goods Purchased From A Vendor	13.05.2005
Everett 2-2 (MW)	ALU	11/128640	US8204777	US	Methods And Apparatus For Management And Analysis Of Costs And Savings	13.05.2005
Espindola 20-11-19 (RP)	ALU	269670/1999	JP3779846	JP	Tapered Optical Fiber Grating Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	24.09.1999
Espindola 20-11-19 (RP)	ALU	99307277.6	EP0989426	IT	Tapered Optical Fiber Grating Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	14.09.1999
Espindola 20-11-19 (RP)	ALU	99307277.6	EP0989426	FR	Tapered Optical Fiber Grating Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	14.09.1999
Espindola 20-11-19 (RP)	ALU	99307277.6	EP0989426	DE	Tapered Optical Fiber Grating Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	14.09.1999
Espindola 20-11-19 (RP)	ALU	99307277.6	EP0989426	GB	Tapered Optical Fiber Grating Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	14.09.1999
Espindola 20-11-19 (RP)	ALU	09/152893	US6301408	US	Tapered Optical Fiber Grating Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	24.09.1998
Espindola 22-20-7 (RP)	ALU	09/160779	US6151438	US	Fiber Device Having Variable Refractive Index Region Proximal The Core	24.09.1998
Espindola 22-20-7 (RP)	ALU	H11267385	JP3649321	JP	Fiber Device Having Variable Refractive Index Region Proximal The Core	21.09.1999
Espindola 22-20-7 (RP)	ALU	99307247.9	EP0989425	DE	Fiber Device Having Variable Refractive Index Region Proximal The Core	14.09.1999
Espindola 22-20-7 (RP)	ALU	99307247.9	EP0989425	GB	Fiber Device Having Variable Refractive Index Region Proximal The Core	14.09.1999
Feder 20-6 (PM)	ALU	200780002884.2	ZL200780002884.2	CN	QoS-Aware Paging In A Wireless Communication System	11.01.2007
Feder 20-6 (PM)	ALU	10-2008-7018332	KR101368357	KR	QoS-Aware Paging In A Wireless Communication System	11.01.2007
Feder 20-6 (PM)	ALU	2008552317	JP5172704	JP	QoS-Aware Paging In A Wireless Communication System	11.01.2007
Feder 20-6 (PM)	ALU	3671/CHENP/2008		IN	QoS-Aware Paging In A Wireless Communication System	11.01.2007
Feder 20-6 (PM)	ALU	11/339197	US9204420	US	QoS-Aware Paging In A Wireless Communication System	25.01.2006
Feder 21-7-18-17-25 (PM)	ALU	11/351805	US7839815	US	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	10.02.2006
Feder 21-7-18-17-25 (PM)	ALU	MX/a/2008/09996	MX289118	MX	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
Feder 21-7-18-17-25 (PM)	ALU	4047/CHENP/2008	IN284533	IN	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
Feder 21-7-18-17-25 (PM)	ALU	200780004738.3	ZL200780004738.3	CN	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
Feder 21-7-18-17-25 (PM)	ALU	2008554295	JP4960388	JP	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
Feder 21-7-18-17-25 (PM)	ALU	PI0707487-5		BR	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
Feder 21-7-18-17-25 (PM)	ALU	2007215477	AU2007215477	AU	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
Espindola 22-20-7 (RP)	ALU	99307247.9	EP0989425	IT	Fiber Device Having Variable Refractive Index Region Proximal The Core	14.09.1999
Espindola 22-20-7 (RP)	ALU	99307247.9	EP0989425	FR	Fiber Device Having Variable Refractive Index Region Proximal The Core	14.09.1999
Espindola 23-25-21-12 (RP)	ALU	11331301	JP3771403	JP	Temperature-Compensated Rare Earth Doped Optical Waveguide Amplifiers	22.11.1999
Espindola 23-25-21-12 (RP)	ALU	99308905.1	EP1003253	GB	Temperature-Compensated Rare Earth Doped Optical Waveguide Amplifiers	09.11.1999
Espindola 23-25-21-12 (RP)	ALU	99308905.1	EP1003253	FR	Temperature-Compensated Rare Earth Doped Optical Waveguide Amplifiers	09.11.1999

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Espindola 23-25-21-12 (RP)	ALU	99308905.1	EP1003253	DE	Temperature-Compensated Rare Earth Doped Optical Waveguide Amplifiers	09.11.1999
Espindola 23-25-21-12 (RP)	ALU	09/197396	US6049414	US	Temperature-Compensated Rare Earth Doped Optical Waveguide Amplifiers	20.11.1998
Feder 21-7-18-17-25 (PM)	ALU	193275	IL193275	IL	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
Feder 21-7-18-17-25 (PM)	ALU	20087019341	KR101342416	KR	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
Feder 21-7-18-17-25 (PM)	ALU	07749997.8		EP	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
Feder 21-7-18-17-25 (PM)	ALU	2008136070	RU2449498	RU	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
Essiambre 1-3-6 (R)	ALU	09/372486	US6606176	US	Modulation Format With Low Sensitivity To Fiber Nonlinearity	12.08.1999
Evans 5-1-1-1 (IJ)	ALU	10/852270	US6978075	US	Cable Protector For Central Office Cable Rack	24.05.2004
Essiambre 14-1-20 (R)	ALU	11/306174	US7474860	US	Optimum Sample Spacing In Over-Sampled Maximum Likelihood Sequence Estimation Receivers	19.12.2005
Essiambre 2 (R)	ALU	09/345513	US6583907	US	Optical Communications System And Method Of Operation For Performance Recovery By Post-Transmission Dispersion Compensation	01.07.1999
Essiambre 20-4-33-21 (R)	ALU	12/316389	US9374188	US	Time-Interleaved Polarization-Division-Multiplexed Transmission Systems And Transmitters	12.12.2008
Fried 1-5-2 (J)	ALU	09/408771	US6735192	US	Method And Apparatus For Dynamically Varying A Packet Delay In A Packet Network Based On A Log-Normal Delay Distribution	29.09.1999
Frigo 8 (NU)	ALU	08/940755	US6118565	US	Coherent Optical Communication System	30.09.1997
Fishman 16-4 (DA)	ALU	10/464726	US7202995	US	Method And Apparatus For Communicating Status In A Lightwave Communication System Employing Optical Amplifiers	18.06.2003
Fishman 18-32-19-1 (DA)	ALU	05255876.4	EP1643668	FR	Method And Apparatus For Dispersion Management In Optical Communication Systems	22.09.2005
Fishman 18-32-19-1 (DA)	ALU	05255876.4	EP1643668	DE	Method And Apparatus For Dispersion Management In Optical Communication Systems	22.09.2005
Fishman 18-32-19-1 (DA)	ALU	05255876.4	EP1643668	GB	Method And Apparatus For Dispersion Management In Optical Communication Systems	22.09.2005
Fingerman 1-1-1 (AW)	ALU	09/440434	US7143430	US	Method And Apparatus For Remote Audiovisual Signal Recording Service	15.11.1999
Fischer 17-1 (G)	ALU	01308075.9	EP1296464	GB	Fast Power Control For Existing User Equipment Of A Wireless Communication Network	24.09.2001
Fischer 34 (G)	ALU	11/055137	US7593696	US	A Tunable Radio Frequency Filter	10.02.2005
Fischer 17-1 (G)	ALU	01308075.9	EP1296464	FR	Fast Power Control For Existing User Equipment Of A Wireless Communication Network	24.09.2001
Fischer 17-1 (G)	ALU	01308075.9	EP1296464	DE	Fast Power Control For Existing User Equipment Of A Wireless Communication Network	24.09.2001
Fingerman 1-1-1 (AW)	ALU	2000348656	JP4762410	JP	Method And Apparatus For Remote Audiovisual Signal Recording Service	15.11.2000
Fink 3-3-3 (PE)	ALU	09/384116	US6941361	US	Method And Apparatus For Obtaining Inventory And User Information For A Remote Computer Device	26.08.1999
Fischer 39-1 (G)	ALU	11/646625	US7619469	US	Current Switched Circuit For Switch Mode Power Amplifiers	28.12.2006
Foschini 15-1 (GJ)	ALU	10/005650	US7006795	US	Wireless Communication System With Interference Compensation	05.12.2001
Freiberg 17-4 (LF)	ALU	99305516.9	EP1069798	FR	Universal Mobile Telephone System Network With Improved Rate Matching Method	12.07.1999
Freiberg 17-4 (LF)	ALU	99305516.9	EP1069798	DE	Universal Mobile Telephone System Network With Improved Rate Matching Method	12.07.1999
Freiberg 17-4 (LF)	ALU	99305516.9	EP1069798	GB	Universal Mobile Telephone System Network With Improved Rate Matching Method	12.07.1999
Freiberg 17-4 (LF)	ALU	09/611010	US6788657	US	Universal Mobile Telephone System Network With Improved Rate Matching Method	06.07.2000
Foschini 16-2 (GJ)	ALU	10/005506	US6937843	US	Wireless Communication System With Interference Compensation	05.12.2001
Foschini 18 (GJ)	ALU	10/245233	US7349438	US	Formatter, Method Of Formatting Encoded Symbols And Wireless Communication System Employing The Same	17.09.2002
Garay 13-4-24 (JA)	ALU	12/229987	US8452984	US	Message Authentication Code Pre-Computation With Application To Secure Memory	28.08.2008
Garay 13-4-24 (JA)	ALU	20117004620	KR101324825	KR	Message Authentication Code Pre-Computation With Application To Secure Memory	25.08.2009
Gadgil 1-1-5-10 (SM)	ALU	10/761060	US7058424	US	Method And Apparatus For Interconnecting Wireless And Wireline Networks	20.01.2004
Gandhi 15-2-9 (AD)	ALU	10/953552	US7489901	US	Method For Dynamically Estimating Noise Floor And Rise Over Thermal (ROT)	30.09.2004
Gabler 4-1 (K)	ALU	11/175907	US7471944	US	Method And Apparatus For Identifying And Tracking Target Subscribers In A Universal Mobile Telephone System	06.07.2005

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0307

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Gabler 4-1 (K)	ALU	2008520311	JP5361379	JP	Method And Apparatus For Identifying And Tracking Target Subscribers In A Universal Mobile Telephone System	29.06.2006
Gabler 4-1 (K)	ALU	200680024555.3	ZL200680024555.3	CN	Method And Apparatus For Identifying And Tracking Target Subscribers In A Universal Mobile Telephone System	29.06.2006
Gabler 4-1 (K)	ALU	20087000321	KR101249111	KR	Method And Apparatus For Identifying And Tracking Target Subscribers In A Universal Mobile Telephone System	29.06.2006
Gabler 4-1 (K)	ALU	12/CHENP/2008	IN272035	IN	Method And Apparatus For Identifying And Tracking Target Subscribers In A Universal Mobile Telephone System	29.06.2006
Ganguly 2-15-55-58 (S)	ALU	10/954901	US7669241	US	Streaming Algorithms For Robust, Real-Time Detection Of DDoS Attacks	30.09.2004
Gabara 71-9 (TJ)	ALU	20010028603	KR750820	KR	Control Technique For A Communication System	24.05.2001
Gabara 71-9 (TJ)	ALU	01119185.6	ZL01119185.6	CN	Control Technique For A Communication System	23.05.2001
Gabara 71-9 (TJ)	ALU	09/576999	US6950678	US	Control Technique For A Communication System	24.05.2000
Gabara 71-9 (TJ)	ALU	2001141358	JP5153037	JP	Control Technique For A Communication System	11.05.2001
Gannon 2 (JR)	ALU	09/511038	US6344748	US	Coaxial Cable Connector Testing Methods And Apparatus	23.02.2000
Garay 13-4-24 (JA)	ALU	200980133393.0	ZL200980133393.0	CN	Message Authentication Code Pre-Computation With Application To Secure Memory	25.08.2009
Garay 13-4-24 (JA)	ALU	2011524982	JP5306465	JP	Message Authentication Code Pre-Computation With Application To Secure Memory	25.08.2009
Garay 13-4-24 (JA)	ALU	09789201.2		EP	Message Authentication Code Pre-Computation With Application To Secure Memory	25.08.2009
Gill 21-14-5 (DM)	ALU	11/428031	US7561759	US	Optical Modulator	30.06.2006
Gill 21-14-5 (DM)	ALU	20087031772	KR101018921	KR	Optical Modulator	13.02.2007
Gill 26-4-17-10-8 (DM)	ALU	2009551977	JP5551446	JP	A High Speed Semiconductor Optical Modulator	30.10.2007
Gill 26-4-17-10-8 (DM)	ALU	11/681070	US7672553	US	A High Speed Semiconductor Optical Modulator	01.03.2007
Gill 26-4-17-10-8 (DM)	ALU	5536/DELNP/2009		IN	A High Speed Semiconductor Optical Modulator	30.10.2007
Gill 26-4-17-10-8 (DM)	ALU	20097018204	KR101158969	KR	A High Speed Semiconductor Optical Modulator	30.10.2007
Gill 26-4-17-10-8 (DM)	ALU	200780051941.6	ZL200780051941.6	CN	A High Speed Semiconductor Optical Modulator	30.10.2007
Glas 4-1-7 (J)	ALU	2000616116	JP3533182	JP	Method And Apparatus For Modulating Digital Data	03.05.2000
Glas 4-1-7 (J)	ALU	09/304639	US6560296	US	Method And Apparatus For Modulating Digital Data	04.05.1999
Ginzburg 1-4 (AY)	ALU	08/956722	US6078919	US	Method And Apparatus For Delivery Of Data Over A Network Based On Determination Of Network Parameters	23.10.1997
Gill 31-22 (DM)	ALU	12/270253	US8041158	US	Multithickness Layered Electronic-Photonic Devices	13.11.2008
Gill 32 (DM)	ALU	12/351282	US8049950	US	Tunable And Zero-Chirp Pulse Generator Using Plasma Dispersion Phase Modulator	09.01.2009
Gill 16-30 (DM)	ALU	10/874594	US7002724	US	Apparatus And Method For Generating A 90degree Alternate Phase Optical Pulsetrain	23.06.2004
Gill 18-39 (DM)	ALU	11/025436	US7133191	US	Optical Equalization	29.12.2004
Gill 7-5-6 (DM)	ALU	10/099105	US7277647	US	System And Method Of Optical Transmission	14.03.2002
Gill 8-6-7 (DM)	ALU	10/099077	US7277645	US	High-Bit-Rate Long-Haul Fiber Optic Communication System Techniques And Arrangements	14.03.2002
Garland 42-49-3-13 (SM)	ALU	09/520861	US6975862	US	Wireless Telemetry Access	07.03.2000
Garland 46-9 (SM)	ALU	01305718.7	EP1213902	GB	Telecommunications Call Processing Using Externally-Assigned Subscriber Characteristics	02.07.2001
Garland 46-9 (SM)	ALU	01305718.7	EP1213902	FR	Telecommunications Call Processing Using Externally-Assigned Subscriber Characteristics	02.07.2001
Garland 46-9 (SM)	ALU	01305718.7	EP1213902	DE	Telecommunications Call Processing Using Externally-Assigned Subscriber Characteristics	02.07.2001
Gao 2 (M)	ALU	2009522816	JP4977757	JP	Access Network Broadcast Control-Signaling Channel	27.07.2007
Gao 2 (M)	ALU	11/496942	US8005471	US	Access Network Broadcast Control-Signaling Channel	31.07.2006
Gao 2 (M)	ALU	421/CHENP/2009		IN	Access Network Broadcast Control-Signaling Channel	27.07.2007
Gao 2 (M)	ALU	20097001532	KR101073621	KR	Access Network Broadcast Control-Signaling Channel	27.07.2007
Gao 2 (M)	ALU	200780028390.1	ZL200780028390.1	CN	Access Network Broadcast Control-Signaling Channel	27.07.2007
Hu 19 (T)	ALU	05251547.5		EP	Method Of Stall Identification And Recovery	15.03.2005
Garcia 2-2-2-13 (H)	ALU	10/128939	US7206522	US	Dynamic Measurement Of And Compensation For Impairments To Optical Data Communication Pulses	24.04.2002
Garner 7-1-6 (WJ)	ALU	08/990852	US6035192	US	Mobile Telephony Standards Converter	15.12.1997
Garofalakis 2-1-13-33 (MN)	ALU	08/966095	US6330609	US	Admission Control System And Method For Media-On-Demand Servers	07.11.1997
Garland 46-9 (SM)	ALU	09/732405	US6819925	US	Telecommunications Call Processing Using Externally-Assigned Subscriber Characteristics	07.12.2000
Gehlot 33-30 (NL)	ALU	10/055051	US6822568	US	Space Area Network	23.01.2002
Gehlot 34-31 (NL)	ALU	10/055471	US6812840	US	Object Area Network	23.01.2002

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0308

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Garceran 2-12-20 (JA)	ALU	09/784846	US6944238	US	Digital Transmitter System And Method	16.02.2001
Garceran 2-12-20 (JA)	ALU	02250556.4	EP1233507	GB	Digital Transmitter System And Method	28.01.2002
Garceran 2-12-20 (JA)	ALU	02250556.4	EP1233507	FR	Digital Transmitter System And Method	28.01.2002
Garceran 2-12-20 (JA)	ALU	02250556.4	EP1233507	DE	Digital Transmitter System And Method	28.01.2002
Garceran 2-12-20 (JA)	ALU	20020006978	KR470255	KR	Digital Transmitter System And Method	07.02.2002
Garceran 2-12-20 (JA)	ALU	2002036400	JP4018406	JP	Digital Transmitter System And Method	14.02.2002
Gouthama 1-21-9-1-4-22 (S)	ALU	11/405745	US7720474	US	A Method And Apparatus For Call Delivery	18.04.2006
Goss 1 (J)	ALU	11/024180	US7454164	US	Providing A Multimedia Message With A Multimedia Messaging Service Message In A Mobile Environment	28.12.2004
Graybeal 4-17 (JM)	ALU	MX/a/2010/007494	MX310731	MX	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Goss 16-12-22-6-5-6-18-11-13 (SC)	ALU	09/882697	US7013129	US	Queueing For Radio Channel Availability	14.06.2001
Gopinathan 2-1-4 (V)	ALU	09/273180	US6211722	US	Low-Voltage High-Speed Multiplexer and Latch	19.03.1999
Gopinathan 4-1-9-6 (V)	ALU	09/343228	US6188291	US	Injection Locked Multi-Phase Signal Generator	30.06.1999
Gradl 7-12 (DA)	ALU	09/322827	US6381269	US	Test System with Signal Injection Network for Characterizing Interference and Noise Tolerance in a Digital Signal Link	28.05.1999
Goss 4 (SC)	ALU	09/399304	US7330693	US	Broadcast Channels For Wireless Telephony	17.09.1999
Goss 6 (SC)	ALU	09/382419	US6320534	US	A Location Based Personal Telephone Routing System	24.08.1999
Gorrepati 1-4 (PB)	ALU	09/398589	US6526033	US	Delivering Calls To GSM Subscribers Roaming To CDMA Networks Via IP Tunnels	17.09.1999
Gorrepati 2-5 (PB)	ALU	09/398591	US6526390	US	Independent Billing Settlement For Call Origination By Wireless Subscribers Roaming To Foreign Wireless Networks	17.09.1999
Gorrepati 3-6 (PB)	ALU	09/398844	US6493551	US	GSM MoU Bypass For Delivering Calls To GSM Subscribers Roaming To Networks	17.09.1999
Gerogiokas 1 (M)	ALU	09/854850	US6795716	US	System And Method Of Operating A Wireless Base Station With Quantized Use Of Transmitter Power	14.05.2001
Graybeal 4-17 (JM)	ALU	11/972906	US9537566	US	Realizing FDD Capability By Leveraging Existing TDD Technology	11.01.2008
Graybeal 4-17 (JM)	ALU	2009204500	AU2009204500	AU	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	20107017517	KR101226043	KR	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	98100174	TWI472181	TW	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	4085/CHENP/2010		IN	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	2010133490	RU2464709	RU	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	2010542263	JP5319701	JP	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	200980101868.8	ZL200980101868.8	CN	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	PI0906974-7		BR	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Gerdisch 2-31 (MR)	ALU	10/306511	US7307945	US	Methods For Providing A Reliable Server Architecture Using A Multicast Topology In A Communications Network	27.11.2002
Gordon 8-18-46-6 (JP)	ALU	10/306264	US6768541	US	Polarization Mode Dispersion Measurement	27.11.2002
Gordon 8-18-46-6 (JP)	ALU	09/520537	US6519027	US	Polarization Mode Dispersion Measurement	08.03.2000
Gruhl 13-19 (S)	ALU	10/620894	US7480243	US	Packet Ordering Method And Apparatus In A Mobile Communication Network Employing Hierarchical Routing With Data Packet Forwarding	16.07.2003
Guo 10-6-34-11 (KH)	ALU	10/789585	US7584248	US	Apparatus And Method For Fair Message Exchanges In Distributed Multi-Player Games	27.02.2004
Gupta 3-1-7 (P)	ALU	10/876808	US8027327	US	Distributed Scheduling In Wireless Networks With Service Differentiation	25.06.2004
Gupta 3-1-7 (P)	ALU	200550201	JP4744160	JP	Distributed Scheduling In Wireless Networks With Service Differentiation	25.02.2005

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PATENT
REEL: 043877 FRAME: 0309

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Gupta 3-1-7 (P)	ALU	200510050958.2	ZL10050958.2	CN	Distributed Scheduling In Wireless Networks With Service Differentiation	24.02.2005
Haleem 1-22 (MA)	ALU	08/911693	US6055432	US	Dynamic Channel Allocation Macrocells With Random Exclusion For Allowing Underlying Autonomous Microcells	15.08.1997
Haleem 2-24 (MA)	ALU	08/911694	US6047190	US	Dynamic Channel Allocation In Macrocells With Deterministic Exclusion For Allowing Underlying Autonomous Microcells	15.08.1997
Haimi-Cohen 15 (R)	ALU	12/327400	US8806551	US	Prioritized Retransmission Of Internet Protocol Television (IPTV) Packets	03.12.2008
Haimi-Cohen 16-4 (R)	ALU	20117026857	KR101286830	KR	Fast Channel Change Handling Of Late Multicast Join	29.04.2010
Guo 15-5 (KH)	ALU	11/316150	US8856310	US	ACORN: Providing Network-Level Security In P2P Overlay Architectures	22.12.2005
Guo 16-83-66 (KH)	ALU	11/396230	US8612619	US	Method And Apparatus For Improved Multicast Streaming In Wireless Networks	31.03.2006
Guo 16-83-66 (KH)	ALU	200780011809.2	ZL200780011809.2	CN	Method And Apparatus For Improved Multicast Streaming In Wireless Networks	19.03.2007
Guo 16-83-66 (KH)	ALU	2009502845	JP5498157	JP	Method And Apparatus For Improved Multicast Streaming In Wireless Networks	19.03.2007
Guo 16-83-66 (KH)	ALU	20087024011	KR101397854	KR	Method And Apparatus For Improved Multicast Streaming In Wireless Networks	19.03.2007
Guo 19-86-69 (KH)	ALU	11/396269	US7738476	US	Method And Apparatus For Improved Multicast Streaming In Wireless Networks	31.03.2006
Haalen 2-6-5-1-1 (Rv)	ALU	10/780509	US7636774	US	Method And Apparatus For Rebooting Network Bridges	17.02.2004
Hacena 3-1 (F)	ALU	10/785602	US7215963	US	Wireless Communication Network For Processing Call Traffic Over A Backhaul Network	24.02.2004
Hacena 4 (F)	ALU	200980103117.X	ZL200980103117.X	CN	Synchronization Of Call Traffic In The Forward Direction Over Backhaul Links	22.01.2009
Hadzic 6-5 (I)	ALU	11/093638	US7672416	US	High-Speed Serial Transceiver With Sub-Nominal Rate Operating Mode	30.03.2005
Hagerman 6 (WE)	ALU	10/331868	US6752551	US	Vertically Expandable Keyboard	30.12.2002
Guo 21-88-71 (KH)	ALU	07838215.7		EP	Method And Apparatus For A Zooming Feature For Mobile Video Service	14.09.2007
Guo 21-88-71 (KH)	ALU	20097006297	KR101036737	KR	Method And Apparatus For A Zooming Feature For Mobile Video Service	14.09.2007
Guo 21-88-71 (KH)	ALU	200780035375.X	ZL200780035375.X	CN	Method And Apparatus For A Zooming Feature For Mobile Video Service	14.09.2007
Guo 21-88-71 (KH)	ALU	2009530361	JP5026523	JP	Method And Apparatus For A Zooming Feature For Mobile Video Service	14.09.2007
Greywall 26 (DS)	ALU	10/261087	US6924581	US	Split Spring Providing Multiple Electrical Leads For MEMS Devices	30.09.2002
Greywall 26 (DS)	ALU	11/052256	US7015620	US	Split Spring Providing Multiple Electrical Leads For MEMS Devices	07.02.2005
Hacena 4 (F)	ALU	4612/CHENP/2010		IN	Synchronization Of Call Traffic In The Forward Direction Over Backhaul Links	22.01.2009
Hacena 4 (F)	ALU	20107018953	KR101178440	KR	Synchronization Of Call Traffic In The Forward Direction Over Backhaul Links	22.01.2009
Hacena 4 (F)	ALU	12/021163	US8054822	US	Synchronization Of Call Traffic In The Forward Direction Over Backhaul Links	28.01.2008
Haalen 6-8 (Rv)	ALU	11/239757	US8743693	US	Method For Dynamically Adjusting Token Bucket Sizes	30.09.2005
Haalen 7-9 (Rv)	ALU	11/239737	US7701853	US	Method For Policing-Based Adjustments To Transmission Window Size	30.09.2005
Hagirahim 11-8 (H)	ALU	09/841541	US7492733	US	Method Of Transmitting Packets In A Mobile 3G Network System	24.04.2001
Hagirahim 7-6 (H)	ALU	09/551121	US6771763	US	Method And Apparatus For Providing Efficient VoDSL Gateway-To-Gateway Communication	18.04.2000
Grosse 5 (E)	ALU	09/015563	US6205551	US	Computer Security Using Virus Probing	29.01.1998
Grosse 5 (E)	ALU	99300332.6	EP0936787	FR	Computer Security Using Virus Probing	19.01.1999
Grosse 5 (E)	ALU	99300332.6	EP0936787	DE	Computer Security Using Virus Probing	19.01.1999
Grosse 5 (E)	ALU	99300332.6	EP0936787	GB	Computer Security Using Virus Probing	19.01.1999
Greywall 29 (DS)	ALU	10/667937	US6872947	US	MEMS-Based Spectrophotometric System	22.09.2003
Halsell 19 (VM)	ALU	10/746623	US7142862	US	Intra-Service Number Portability In Wireless Network	24.12.2003
Guo 9-4-3-32-8 (KH)	ALU	04250831.7	EP1455480	GB	Optimally Provisioning Connectivity For Network-Based Mobile Virtual Private Network (VPN) Services	17.02.2004
Guo 9-4-3-32-8 (KH)	ALU	04250831.7	EP1455480	FR	Optimally Provisioning Connectivity For Network-Based Mobile Virtual Private Network (VPN) Services	17.02.2004
Guo 9-4-3-32-8 (KH)	ALU	04250831.7	EP1455480	DE	Optimally Provisioning Connectivity For Network-Based Mobile Virtual Private Network (VPN) Services	17.02.2004
Guo 9-4-3-32-8 (KH)	ALU	10/772080	US7756042	US	Optimally Provisioning Connectivity For Network-Based Mobile Virtual Private Network (VPN) Services	04.02.2004

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PATENT
REEL: 043877 FRAME: 0310

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Guo 9-4-3-32-8 (KH)	ALU	200451954	JP4629350	JP	Optimally Provisioning Connectivity For Network-Based Mobile Virtual Private Network (VPN) Services	26.02.2004
Grosz 1-3 (DF)	ALU	10/119080	US7099594	US	Optical Transmission Using All-Optical Regeneration And Dispersion Techniques	09.04.2002
Goh 1-1 (J)	ALU	09/410294	US6385259	US	Composite Code Match Filters	30.09.1999
Hakki 14 (BW)	ALU	09/052756	US6011253	US	Method And Apparatus For Analyzing Polarization Mode Dispersion Of An Optical Device	31.03.1998
Golestani 7-60-5 (SJ)	ALU	10/953355	US7522566	US	Computing Optimal Channel Allocations Using Decomposition Methods And Related Devices	30.09.2004
Gnesda 3-9-4 (N)	ALU	09/490605	US6970721	US	Apparatus And Method For Measuring And Controlling The Performance Of An Adjustable Antenna On A Sub-Sector Basis	25.01.2000
Gnesda 3-9-4 (N)	ALU	00306697.4	EP1120983	GB	Apparatus And Method For Measuring And Controlling The Performance Of An Adjustable Antenna On A Sub-Sector Basis	07.08.2000
Gnesda 3-9-4 (N)	ALU	00306697.4	EP1120983	IT	Apparatus And Method For Measuring And Controlling The Performance Of An Adjustable Antenna On A Sub-Sector Basis	07.08.2000
Gnesda 3-9-4 (N)	ALU	00306697.4	EP1120983	FR	Apparatus And Method For Measuring And Controlling The Performance Of An Adjustable Antenna On A Sub-Sector Basis	07.08.2000
Gnesda 3-9-4 (N)	ALU	00306697.4	EP1120983	DE	Apparatus And Method For Measuring And Controlling The Performance Of An Adjustable Antenna On A Sub-Sector Basis	07.08.2000
Goodwin 1-1 (LM)	ALU	12/457047	US8199679	US	Enterprise Virtual Private LAN Services	29.05.2009
Gopalakrishnan 11 (N)	ALU	20030019511	KR100994351	KR	Method For Encoding A User Identifier In A Communication System	28.03.2003
Gopalakrishnan 11 (N)	ALU	2003087599	JP4304282	JP	Method For Encoding A User Identifier In A Communication System	27.03.2003
Gopalakrishnan 11 (N)	ALU	10/116869	US6871313	US	Method For Encoding A User Identifier In A Communication System	05.04.2002
Gopalakrishnan 11 (N)	ALU	03251636.1	EP1357691	FR	Method For Encoding A User Identifier In A Communication System	18.03.2003
Gopalakrishnan 11 (N)	ALU	03251636.1	EP1357691	DE	Method For Encoding A User Identifier In A Communication System	18.03.2003
Gopalakrishnan 11 (N)	ALU	03251636.1	EP1357691	GB	Method For Encoding A User Identifier In A Communication System	18.03.2003
Gopalakrishnan 15-11-29-15 (N)	ALU	10/186007	US7356346	US	Method Of Uplink Scheduling For Data Communication	28.06.2002
Haase 2-11-2 (O)	ALU	10/349672	US7610328	US	Methods And Apparatus For A Multi-Technology Subscriber Base For Global Roaming	23.01.2003
Goldman 58-39-38-46 (SO)	ALU	11/747526	US7908546	US	Methods And Apparatus For Detection Of Performance Conditions In Processing System	11.05.2007
Haimi-Cohen 16-4 (R)	ALU	2012510842	JP5420759	JP	Fast Channel Change Handling Of Late Multicast Join	29.04.2010
Haimi-Cohen 16-4 (R)	ALU	12/464982	US8161515	US	Fast Channel Change Handling Of Late Multicast Join	13.05.2009
Haimi-Cohen 16-4 (R)	ALU	201080020303.X	ZL201080020303.X	CN	Fast Channel Change Handling Of Late Multicast Join	29.04.2010
Gollamudi 7-19 (S)	ALU	10/697449	US7801071	US	System And Method For Providing Multi-Beam Scheduling	30.10.2003
Gollamudi 9-5 (S)	ALU	10/853362	US7693099	US	Methods Of Wireless Communication	26.05.2004
Gopalakrishnan 19-17 (N)	ALU	10/619420	US7385954	US	Method Of Transmitting Or Retransmitting Packets In A Communication System	16.07.2003
Glowinke 1 (TS)	ALU	11/411627	US7482688	US	Attaching Heat Sinks To Integrated Circuit Packages	26.04.2006
Gmachl 26-3 (CF)	ALU	10/413820	US6882675	US	Optical Resonators That Include Chaotic Ray Paths	15.04.2003
Han 3-2 (S)	ALU	10/411844	US7586872	US	User Assignment Strategies For Hierarchical And Other Overlay Networks	11.04.2003
Harms 3-2 (DC)	ALU	11/820341	US8175270	US	Authentication Loading Control And Information Recapture In A UMTS Network	19.06.2007
Hansen 13-4 (PB)	ALU	08/928580	US5887093	US	Optical Fiber Dispersion Compensation	12.09.1997
Hansen 18-6-16 (PB)	ALU	114/MAS/2000	IN207567	IN	Method Of Optical Signal Transmission With Reduced Degradation By Non-Linear Effects	15.02.2000
Hansen 18-6-16 (PB)	ALU	00102336.5	ZL00102336.5	CN	Method Of Optical Signal Transmission With Reduced Degradation By Non-Linear Effects	17.02.2000
Hansen 18-6-16 (PB)	ALU	2298408	CA2298408	CA	Method Of Optical Signal Transmission With Reduced Degradation By Non-Linear Effects	14.02.2000
Hansen 18-6-16 (PB)	ALU	00301011.3	EP1054521	ES	Method Of Optical Signal Transmission With Reduced Degradation By Non-Linear Effects	09.02.2000
Hansen 18-6-16 (PB)	ALU	00301011.3	EP1054521	DE	Method Of Optical Signal Transmission With Reduced Degradation By Non-Linear Effects	09.02.2000
Hansen 18-6-16 (PB)	ALU	00301011.3	EP1054521	GB	Method Of Optical Signal Transmission With Reduced Degradation By Non-Linear Effects	09.02.2000
Hao 16-57-59 (F)	ALU	12/495236	US8218452	US	Network Detection Of Real-Time Applications Using Incremental Linear Regression	30.06.2009

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PATENT
REEL: 043877 FRAME: 0311

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Haunstein 13-3 (H)	ALU	10/954108	US7266311	US	Control Of Delay Line Interferometer	29.09.2004
Haunstein 13-3 (H)	ALU	04255949.2	EP1643665	DE	Control Of Delay Line Interferometer	29.09.2004
Haunstein 13-3 (H)	ALU	04255949.2	EP1643665	GB	Control Of Delay Line Interferometer	29.09.2004
Hansen 18-6-16 (PB)	ALU	00301011.3	EP1054521	IT	Method Of Optical Signal Transmission With Reduced Degradation By Non-Linear Effects	09.02.2000
Gripp 1-41 (J)	ALU	09/211201	US6067149	US	Enhanced Range For OTDR-Like Dispersion-Map Measurements	14.12.1998
Gripp 4-1 (J)	ALU	10/135785	US7149425	US	Monitoring System For An Optical Transmitter	30.04.2002
Grimes 88-53-28 (GJ)	ALU	09/903029	US6698937	US	Optical Connector Mechanism	11.07.2001
Grosse 13-39 (EH)	ALU	2008525147	JP4768020	JP	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks By Target Victim Self-Identification And Control	02.08.2006
Grosse 13-39 (EH)	ALU	20077030524	KR101067781	KR	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks By Target Victim Self-Identification And Control	02.08.2006
Grosse 13-39 (EH)	ALU	5964/CHENP/2007	IN257978	IN	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks By Target Victim Self-Identification And Control	02.08.2006
Grosse 14 (EH)	ALU	11/197841	US7889735	US	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks Based On Specified Source/Destination IP Address Pairs	05.08.2005
Grosse 14 (EH)	ALU	2008525173	JP4768021	JP	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks Based On Specified Source/Destination IP Address Pairs	02.08.2006
Grosse 14 (EH)	ALU	5966/CHENP/2007	IN257984	IN	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks Based On Specified Source/Destination IP Address Pairs	02.08.2006
Grosse 14 (EH)	ALU	20077030525	KR101217647	KR	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks Based On Specified Source/Destination IP Address Pairs	02.08.2006
Grosse 14 (EH)	ALU	200680023739.8	ZL80023739.8	CN	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks Based On Specified Source/Destination IP Address Pairs	02.08.2006
Grosse 15 (EH)	ALU	11/356721	US8776237	US	Method And Apparatus For End-To-End Security In A Heterogeneous Network	17.02.2006
Guenach 1-12-1-1-1-1-20-1-9 (M)	ALU	11/897809	US7830978	US	Determining Channel Matrices By Correlated Transmissions To Different Channels	31.08.2007
Guenach 1-12-1-1-1-1-20-1-9 (M)	ALU	200880104663.0	ZL200880104663.0	CN	Determining Channel Matrices By Correlated Transmissions To Different Channels	25.08.2008
Guenach 1-12-1-1-1-1-20-1-9 (M)	ALU	08829375.8		EP	Determining Channel Matrices By Correlated Transmissions To Different Channels	25.08.2008
Guenach 1-12-1-1-1-1-20-1-9 (M)	ALU	1018/CHENP/2010		IN	Determining Channel Matrices By Correlated Transmissions To Different Channels	28.08.2008
Gronbach 3 (S)	ALU	10/790620	US7075695	US	Method And Apparatus For Controlling A Bias Voltage Of A Mach-Zehnder Modulator	01.03.2004
Guenach 1-12-1-1-1-1-20-1-9 (M)	ALU	20107004556	KR101514225	KR	Determining Channel Matrices By Correlated Transmissions To Different Channels	25.08.2008
Greywall 31 (DS)	ALU	10/772847	US6995895	US	MEMS Actuator For Piston And Tilt Motion	05.02.2004
Grimes 58 (GJ)	ALU	08/284708	US6434537	US	Cellular Telephone Billing Management System	01.08.1994
Grinshpun 4-1-4 (E)	ALU	12/318850	US8041994	US	Asynchronous Checkpointing With Audits In High Availability Networks	09.01.2009
Hellenthal 1-2 (W)	ALU	10/764754	US7426737	US	Method And Apparatus For Operating An Open API Network Having A Proxy	26.01.2004
Hellenthal 1-2 (W)	ALU	05250064.2	EP1558001	GB	Method And Apparatus For Operating An Open API Network Having A Proxy	07.01.2005
Hellenthal 1-2 (W)	ALU	05250064.2	EP1558001	FR	Method And Apparatus For Operating An Open API Network Having A Proxy	07.01.2005
Hellenthal 1-2 (W)	ALU	05250064.2	EP1558001	DE	Method And Apparatus For Operating An Open API Network Having A Proxy	07.01.2005
Hellenthal 1-2 (W)	ALU	2005017563	JP4822713	JP	Method And Apparatus For Operating An Open API Network Having A Proxy	26.01.2005
Hellenthal 1-2 (W)	ALU	20050006490	KR101102674	KR	Method And Apparatus For Operating An Open API Network Having A Proxy	25.01.2005

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Hellenthal 1-2 (W)	ALU	200510004379.4	ZL200510004379.4	CN	Method And Apparatus For Operating An Open API Network Having A Proxy	20.01.2005
Hellenthal 1-2 (W)	ALU	1508/CHE/2004	IN262546	IN	Method And Apparatus For Operating An Open API Network Having A Proxy	31.12.2004
Hellenthal 1-2 (W)	ALU	12/170584	US8001555	US	Method And Apparatus For Operating An Open API Network Having A Proxy	10.07.2008
Hellenthal 2 (W)	ALU	11/435371	US7688734	US	Scheduling Incoming Packet Traffic On An Output Link Of A Network Device Associated With A Data Network	16.05.2006
Heinkel 2-4-4 (U)	ALU	11/027906	US7183819	US	Method And Circuit Configuration For Synchronous Resetting Of A Multiple Clock Domain Circuit	30.12.2004
Heinkel 4-4-3 (U)	ALU	06825358.2		EP	Method And Apparatus For Reconfiguring IC Architectures	03.10.2006
Heinkel 4-4-3 (U)	ALU	2009531363	JP5274469	JP	Method And Apparatus For Reconfiguring IC Architectures	03.10.2006
Hermesmeier 2-4-4 (C)	ALU	11/554122	US8763062	US	Method And Apparatus For Controlling Information Available From Content Distribution Points	30.10.2006
Hermesmeier 2-4-4 (C)	ALU	2009534590	JP4940454	JP	Method And Apparatus For Controlling Information Available From Content Distribution Points	12.10.2007
Hermesmeier 2-4-4 (C)	ALU	200780040225.8	ZL200780040225.8	CN	Method And Apparatus For Controlling Information Available From Content Distribution Points	12.10.2007
Hermesmeier 2-4-4 (C)	ALU	20097009085	KR101088575	KR	Method And Apparatus For Controlling Information Available From Content Distribution Points	12.10.2007
Hermesmeier 2-4-4 (C)	ALU	2200/CHENP/2009	IN283643	IN	Method And Apparatus For Controlling Information Available From Content Distribution Points	12.10.2007
Heinkel 4-4-3 (U)	ALU	1693/CHENP/2009		IN	Method And Apparatus For Reconfiguring IC Architectures	03.10.2006
Haner 7-1-14 (M)	ALU	11/080852	US7437161	US	Method Of Fast Data Transmission Of Mobile Stations Via The Same Base Station	16.03.2005
Hernandez 7 (G)	ALU	09/783979	US6956588	US	Liaison Technology To Connect Plural End User Devices To An Interface For A Computing Resource Having One Port Assigned To The Interface	16.02.2001
Hansen 18-6-16 (PB)	ALU	00301011.3	EP1054521	FR	Method Of Optical Signal Transmission With Reduced Degradation By Non-Linear Effects	09.02.2000
Hansen 18-6-16 (PB)	ALU	2000035785	JP3715168	JP	Method Of Optical Signal Transmission With Reduced Degradation By Non-Linear Effects	14.02.2000
Hansen 18-6-16 (PB)	ALU	09/253665	US6323993	US	Method Of Optical Signal Transmission With Reduced Degradation By Non-Linear Effects	19.02.1999
Hertlein 3-40-2 (GH)	ALU	2008537775	JP5059016	JP	A Method For Providing A Multicast Service Within A Wireless Communications System	16.10.2006
Hertlein 3-40-2 (GH)	ALU	200680040131.6	ZL200680040131.6	CN	A Method For Providing A Multicast Service Within A Wireless Communications System	16.10.2006
Hao 6-41-46-1 (F)	ALU	11/372898	US7639611	US	Method And Apparatus For Payload-Based Flow Estimation	10.03.2006
Hertlein 3-40-2 (GH)	ALU	20087010043	KR101452787	KR	A Method For Providing A Multicast Service Within A Wireless Communications System	16.10.2006
Hertlein 3-40-2 (GH)	ALU	11/262485	US7907558	US	A Method For Providing A Multicast Service Within A Wireless Communications System	28.10.2005
Hou 1-1-9 (YT)	ALU	09/277396	US6515965	US	Available Bit Rate Flow Control For Service Allocation In A Packet Network	26.03.1999
Hoekstra 5-5 (GJ)	ALU	200780021368.4	ZL80021368.4	CN	Maintaining Quality Of Service For Wireless Communications	06.06.2007
Hoekstra 5-5 (GJ)	ALU	6622/CHENP/2008	IN284036	IN	Maintaining Quality Of Service For Wireless Communications	06.06.2007
Hoekstra 5-5 (GJ)	ALU	20087029914	KR101011626	KR	Maintaining Quality Of Service For Wireless Communications	06.06.2007
Hoekstra 5-5 (GJ)	ALU	07777436.2		EP	Maintaining Quality Of Service For Wireless Communications	06.06.2007
Hoekstra 5-5 (GJ)	ALU	11/450546	US8009609	US	Maintaining Quality Of Service For Wireless Communications	09.06.2006
Hoekstra 7-6 (GJ)	ALU	11/461054	US7653019	US	Method Of Distributing Identical Data To Mobile Units	31.07.2006
Hoekstra 7-6 (GJ)	ALU	20097001548	KR101017541	KR	Method Of Distributing Identical Data To Mobile Units	11.07.2007
Hoekstra 7-6 (GJ)	ALU	419/CHENP/2009		IN	Method Of Distributing Identical Data To Mobile Units	11.07.2007
Hoekstra 7-6 (GJ)	ALU	200780028425.1	ZL80028425.1	CN	Method Of Distributing Identical Data To Mobile Units	11.07.2007
Hoekstra 7-6 (GJ)	ALU	2009522765	JP5017368	JP	Method Of Distributing Identical Data To Mobile Units	11.07.2007
Honcharenko 3-8-5 (W)	ALU	09/065855	US6349217	US	Multi-Mode/Multi-Rate Fixed Wireless Communication System	24.04.1998
Horn 9 (DN)	ALU	09/138001	US6556670	US	Method For Solving The Music-On-Hold Problem In An Audio Conference	21.08.1998
Horn 9 (DN)	ALU	11234130	JP3764003	JP	Method For Solving The Music-On-Hold Problem In An Audio Conference	20.08.1999
Beck 7-20-8 (A)	ALU	11/357144	US7693270	US	Method And Network For Providing Service Blending To A Subscriber	21.02.2006
Hofmann 19-7 (MA)	ALU	20087014225	KR101275421	KR	Method And Network For Providing Service Blending To A Subscriber	14.12.2006
Holland 12 (WR)	ALU	09/438855	US6504604	US	In Situ Polarization Mode Dispersion Measurement	12.11.1999
Holmqvist 1 (RS)	ALU	09/488327	US6919814	US	System And Method For Providing Ancillary Page Information	20.01.2000
Ma 29-67 (Z)	ALU	4641/CHENP/2010		IN	Method To Support User Location In In-Structure Coverage Systems	26.01.2009
Heer 9 (AJ)	ALU	11/096219	US7693144	US	Method And System For VPLS Using Ethernet Bridges	31.03.2005

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0313

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Hsi 2-14-3-41 (T)	ALU	2010500933	JP5124634	JP	Billing Based On Equivalent Quality Of Service Units	20.03.2008
Hsi 2-14-3-41 (T)	ALU	08727022.9		EP	Billing Based On Equivalent Quality Of Service Units	20.03.2008
Hsi 2-14-3-41 (T)	ALU	20097019858	KR101139281	KR	Billing Based On Equivalent Quality Of Service Units	20.03.2008
Hsi 2-14-3-41 (T)	ALU	11/691281	US8571950	US	Billing Based On Equivalent Quality Of Service Units	26.03.2007
House 1-1 (J)	ALU	00310342.1	EP1209850	FR	Telecommunications Network With Improved Timing Control	22.11.2000
House 1-1 (J)	ALU	00310342.1	EP1209850	DE	Telecommunications Network With Improved Timing Control	22.11.2000
House 1-1 (J)	ALU	00310342.1	EP1209850	GB	Telecommunications Network With Improved Timing Control	22.11.2000
Heer 15-1-2-1 (AJ)	ALU	11/263561	US8054842	US	Apparatus For Providing Internet Protocol Television Service And Internet Service	31.10.2005
Heer 15-1-2-1 (AJ)	ALU	200680040922.9	ZL200680040922.9	CN	Apparatus For Providing Internet Protocol Television Service And Internet Service	16.10.2006
Heer 15-1-2-1 (AJ)	ALU	2008537776	JP4847538	JP	Apparatus For Providing Internet Protocol Television Service And Internet Service	16.10.2006
Heer 15-1-2-1 (AJ)	ALU	06826169.2	EP1966949	EP	Apparatus For Providing Internet Protocol Television Service And Internet Service	16.10.2006
Heer 18 (AJ)	ALU	11/562041	US8295276	US	Method And Apparatus For Transporting Multiprotocol Label Switching Frames Over Physical Communication Links	21.11.2006
Heer 19 (AJ)	ALU	200780048329.3	ZL200780048329.3	CN	Method And Apparatus For Improved Multicast Routing	19.12.2007
Heer 19 (AJ)	ALU	11/617051	US8320374	US	Method And Apparatus For Improved Multicast Routing	28.12.2006
Heer 19 (AJ)	ALU	2009544039	JP5373625	JP	Method And Apparatus For Improved Multicast Routing	19.12.2007
He 2 (A)	ALU	09/571501	US6754500	US	Channel Grouping System And Method For A Wireless Communication System	15.05.2000
Heer 2-5-2-1 (AJ)	ALU	02253038.0	EP1359715	FR	Method For Establishing A Loop-Free Path For Transfer Of Data Packets Within A Circular Network	30.04.2002
Heer 2-5-2-1 (AJ)	ALU	02253038.0	EP1359715	DE	Method For Establishing A Loop-Free Path For Transfer Of Data Packets Within A Circular Network	30.04.2002
Heer 2-5-2-1 (AJ)	ALU	02253038.0	EP1359715	GB	Method For Establishing A Loop-Free Path For Transfer Of Data Packets Within A Circular Network	30.04.2002
Heer 4-3 (AJ)	ALU	04253184.8	EP1487158	FR	Method For Reconfiguring A Ring Network, A Network Node, And A Computer Program Product	28.05.2004
Heer 4-3 (AJ)	ALU	04253184.8	EP1487158	DE	Method For Reconfiguring A Ring Network, A Network Node, And A Computer Program Product	28.05.2004
Heer 4-3 (AJ)	ALU	04253184.8	EP1487158	GB	Method For Reconfiguring A Ring Network, A Network Node, And A Computer Program Product	28.05.2004
Heer 4-3 (AJ)	ALU	10/452626	US8543672	US	Method For Reconfiguring A Ring Network, A Network Node, And A Computer Program Product	02.06.2003
Heer 4-3 (AJ)	ALU	20040039592	KR101094049	KR	Method For Reconfiguring A Ring Network, A Network Node, And A Computer Program Product	01.06.2004
Heer 4-3 (AJ)	ALU	2004164581	JP4372618	JP	Method For Reconfiguring A Ring Network, A Network Node, And A Computer Program Product	02.06.2004
Hu 19 (T)	ALU	10/815128	US7957389	US	Method Of Stall Identification And Recovery	31.03.2004
Hu 19 (T)	ALU	200510059599.7	ZL10059599.7	CN	Method Of Stall Identification And Recovery	30.03.2005
Hu 19 (T)	ALU	20050026898	KR101107817	KR	Method Of Stall Identification And Recovery	31.03.2005
Hu 19 (T)	ALU	2005100591	JP4822728	JP	Method Of Stall Identification And Recovery	31.03.2005
Jachowski 1-9-22 (MD)	ALU	11/079861	US7217922	US	Planar Micro-Miniature Ion Trap Devices	14.03.2005
Jajoo 2-1 (SR)	ALU	11/647931	US7921224	US	Method Of Maintaining Traffic Services Through Congestion Caused By Network Failovers	29.12.2006
Innovance 2	ALU	10/159676	US7941047	US	Method For Engineering Connections In A Dynamically Reconfigurable Photonic Switched Network	31.05.2002
Ilas 2-6-6 (C)	ALU	09/980289	US7248571	US	Multi-User Time-Slots For TDMA	14.03.2000
Ilas 2-6-6 (C)	ALU	00909522.5	EP1188259	GB	Multi-User Time-Slots For TDMA	14.03.2000
Ilas 2-6-6 (C)	ALU	00909522.5	EP1188259	FR	Multi-User Time-Slots For TDMA	14.03.2000
Ilas 2-6-6 (C)	ALU	00909522.5	EP1188259	DE	Multi-User Time-Slots For TDMA	14.03.2000
Innovance 10	ALU	10/128092	US8521022	US	Dynamic Assignment Of Wavelengths In Agile Photonic Networks	23.04.2002
Himayat 1-6-3 (N)	ALU	09/353233	US6574202	US	Method For Interleaving Information Conveyed In A Wireless Communication System	14.07.1999
Himayat 1-6-3 (N)	ALU	00305572.0	EP1069711	GB	Method For Interleaving Information Conveyed In A Wireless Communication System	03.07.2000
Himayat 1-6-3 (N)	ALU	00305572.0	EP1069711	FR	Method For Interleaving Information Conveyed In A Wireless Communication System	03.07.2000
Himayat 1-6-3 (N)	ALU	00305572.0	EP1069711	DE	Method For Interleaving Information Conveyed In A Wireless Communication System	03.07.2000
Himayat 1-6-3 (N)	ALU	2000210726	JP3676201	JP	Method For Interleaving Information Conveyed In A Wireless Communication System	12.07.2000
Jakobsson 22-2 (BM)	ALU	09/538663	US7644274	US	Methods Of Protecting Against Spam Electronic Mail	31.03.2000
Hochwald 5-7-2 (BM)	ALU	09/285578	US6452916	US	Space-Time Spreading Method Of CDMA Wireless Communication	02.04.1999

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Hochwald 5-7-2 (BM)	ALU	99309995.1	EP1018808	FR	Space-Time Spreading Method Of CDMA Wireless Communication	10.12.1999
Hochwald 5-7-2 (BM)	ALU	99309995.1	EP1018808	DE	Space-Time Spreading Method Of CDMA Wireless Communication	10.12.1999
Hochwald 5-7-2 (BM)	ALU	99309995.1	EP1018808	GB	Space-Time Spreading Method Of CDMA Wireless Communication	10.12.1999
Hochwald 5-7-2 (BM)	ALU	H11368134	JP3901898	JP	Space-Time Spreading Method Of CDMA Wireless Communication	24.12.1999
Ho 3-3-22 (LT)	ALU	02254380.5	EP1343336	GB	A Method Of Selecting Maximum Transmission Power Level To Be Used By A Radio Telecommunications Base Station Or Base Stations In A Network, A Radio Telecommunications Base Station And A Radio Telecommunications Network	24.06.2002
Ho 3-3-22 (LT)	ALU	02254380.5	EP1343336	FR	A Method Of Selecting Maximum Transmission Power Level To Be Used By A Radio Telecommunications Base Station Or Base Stations In A Network, A Radio Telecommunications Base Station And A Radio Telecommunications Network	24.06.2002
Ho 3-3-22 (LT)	ALU	02254380.5	EP1343336	DE	A Method Of Selecting Maximum Transmission Power Level To Be Used By A Radio Telecommunications Base Station Or Base Stations In A Network, A Radio Telecommunications Base Station And A Radio Telecommunications Network	24.06.2002
Ho 3-3-22 (LT)	ALU	10/382403	US7088959	US	A Method Of Selecting Maximum Transmission Power Level To Be Used By A Radio Telecommunications Base Station Or Base Stations In A Network, A Radio Telecommunications Base Station And A Radio Telecommunications Network	06.03.2003
Hodgetts 1-1 (MW)	ALU	11/011988	US7161425	US	Radio Frequency Power Amplifier For Lossless Power Combining	14.12.2004
Hilt 11-32 (VF)	ALU	12/287815	US8266661	US	Method And Apparatus For Performing Template-Based Prefix Caching For Use In Video-On-Demand Applications	14.10.2008
Himayat 1-6-3 (N)	ALU	07015070.1	EP1848126	DE	Method For Interleaving Information Conveyed In A Wireless Communication System	01.08.2007
Himayat 1-6-3 (N)	ALU	07015070.1	EP1848126	GB	Method For Interleaving Information Conveyed In A Wireless Communication System	01.08.2007
Himayat 1-6-3 (N)	ALU	07015070.1	EP1848126	FR	Method For Interleaving Information Conveyed In A Wireless Communication System	03.07.2000
Hitzeman 4 (BM)	ALU	10/155046	US7035645	US	Methods For Mitigating Impact On Non-Privileged Users Of Potential Resource Limitations In A Communication System	24.05.2002
Jiang 21-2-12-7 (F)	ALU	2005362552	JP5165844	JP	Method For Detecting Reverse Link Collisions On An Air Interface	16.12.2005
Johnson 6-1-17 (RE)	ALU	2000277712	JP4676052	JP	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	13.09.2000
Joyner 25-1 (CH)	ALU	09/516295	US6571038	US	Multimode Interference Coupler With Tunable Power Splitting Ratios And Method Of Tuning	01.03.2000
Jiang 21-2-12-7 (F)	ALU	20050124860	KR101187588	KR	Method For Detecting Reverse Link Collisions On An Air Interface	16.12.2005
Johnson 6-1-17 (RE)	ALU	2317901	CA2317901	CA	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	07.09.2000
Jocher 4 (RW)	ALU	10/107441	US6795035	US	System For Antenna Sidelobe Modification	28.03.2002
Jocher 8 (RW)	ALU	10/442166	US6888421	US	Power Attenuator With Coupling Port	21.05.2003
Jocher 9 (RW)	ALU	10/443861	US7215294	US	Antenna With Reflector	23.05.2003
Jrad 2-4-1-14 (AM)	ALU	2010520984	JP5542054	JP	Method And Apparatus For Signaling A Call From A Caller Terminal To A Callee Terminal	05.08.2008
Jrad 2-4-1-14 (AM)	ALU	08836575.4		EP	Method And Apparatus For Signaling A Call From A Caller Terminal To A Callee Terminal	05.08.2008
Jopson 25-48-17 (RM)	ALU	11/307918	US7590355	US	Method And Apparatus For PMD Mitigation In Optical Communication Systems	28.02.2006
Jordan 3-16 (R)	ALU	09/573086	US6389203	US	Tunable All-Pass Optical Filters With Large Free Spectral Ranges	17.05.2000
Jordan 3-16 (R)	ALU	2001147159	JP3877976	JP	Tunable All-Pass Optical Filters With Large Free Spectral Ranges	17.05.2001
Jovanovic 3 (V)	ALU	11/647094	US8351943	US	Method And Apparatus For Handoff In A Wireless Network	28.12.2006
Joyce 14 (WB)	ALU	09/244528	US6327402	US	Lightwave Transmission System Having Wide Pump Wavebands	04.02.1999
Jiang 21-2-12-7 (F)	ALU	11/014288	US7885658	US	Method For Detecting Reverse Link Collisions On An Air Interface	16.12.2004
Johnson 6-1-17 (RE)	ALU	09/395490	US7409007	US	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	14.09.1999
Johnson 6-1-17 (RE)	ALU	20000054035	KR739356	KR	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	14.09.2000
Johnson 6-1-17 (RE)	ALU	56554/00	AU773197	AU	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	07.09.2000
Johnson 6-1-17 (RE)	ALU	760/MAS/2000		IN	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	14.09.2000
Jones 1-1-1-3 (DA)	ALU	10/720356	US7016478	US	911 Emergency Voice/Data Telecommunication Network	24.11.2003

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0315

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Jiang 21-2-12-7 (F)	ALU	200510129571.6	ZL200510129571.6	CN	Method For Detecting Reverse Link Collisions On An Air Interface	15.12.2005
Huo 12-41 (DD)	ALU	20050038445	KR101123021	KR	Hybrid Wireless Communications System	09.05.2005
Huo 12-41 (DD)	ALU	10/842701	US7706346	US	Hybrid Wireless Communications System	10.05.2004
Hua 46-8 (S)	ALU	12/163060	US9225940	US	A Method And Apparatus For Real-Time IPTV Channel Searching And Switching	27.06.2008
Jopson 14-40-2 (RM)	ALU	09/390033	US6380533	US	Method Of Measurement	03.09.1999
Jopson 15-42-3 (RM)	ALU	09/395238	US6144450	US	Apparatus And Method For Improving The Accuracy Of Polarization Mode Dispersion Measurements	13.09.1999
Jopson 16-43-4 (RM)	ALU	09/468968	US6385356	US	Higher-Order PMD Compensated Fiber Transmission System	22.12.1999
Jopson 17-44-5 (RM)	ALU	09/533044	US6385357	US	Method And Apparatus For compensating For Higher Order PMD In A Fiber Transmission System At The Fiber Output	22.03.2000
Hu 6-24 (TH)	ALU	09/994490	US7075891	US	Method And Apparatus For Transmitting And Receiving Data Packets To Avoid Stall During Re-Sequencing Of Data Packets	26.11.2001
Huh 2-1 (YU)	ALU	00311512.8	EP1113680	GB	Mobile-To-Mobile DTMF Signaling In Tandem Free Operation	21.12.2000
Huh 2-1 (YU)	ALU	00311512.8	EP1113680	FR	Mobile-To-Mobile DTMF Signaling In Tandem Free Operation	21.12.2000
Huh 2-1 (YU)	ALU	00311512.8	EP1113680	DE	Mobile-To-Mobile DTMF Signaling In Tandem Free Operation	21.12.2000
Huh 2-1 (YU)	ALU	2000396370	JP3828356	JP	Mobile-To-Mobile DTMF Signaling In Tandem Free Operation	27.12.2000
Huh 2-1 (YU)	ALU	09/738702	US6791976	US	Mobile-To-Mobile DTMF Signaling In Tandem Free Operation	15.12.2000
Judkins 8-29-5 (JB)	ALU	09/053236	US6084996	US	Broadband Long-Period Gratings	01.04.1998
Huo 7 (DD)	ALU	09/893363	US7197024	US	Telecommunications System Having Layered Protocol With Delimiter Of Payload	27.06.2001
Huo 7 (DD)	ALU	2002177020	JP3914100	JP	Telecommunications System Having Layered Protocol With Delimiter Of Payload	18.06.2002
Huo 9 (DD)	ALU	10/608445	US7477605	US	Methods Providing Variable Granularity For Data Flow Control Using A Leaky Bucket	30.06.2003
Hua 1-61-3 (N)	ALU	12/425576	US8250016	US	Variable-Stride Stream Segmentation and Multi-Pattern Matching	17.04.2009
Hua 1-61-3 (N)	ALU	2012506101	JP5373184	JP	Variable-Stride Stream Segmentation and Multi-Pattern Matching	13.04.2010
Hua 1-61-3 (N)	ALU	10717927.7		EP	Variable-Stride Stream Segmentation and Multi-Pattern Matching	13.04.2010
Hua 1-61-3 (N)	ALU	201080016841.1		CN	Variable-Stride Stream Segmentation and Multi-Pattern Matching	13.04.2010
K V M 3-71-2-3 (N)	ALU	11/783137	US9171006	US	Mobile Station With Expanded Storage Space And Method Of Retrieving Files By the Mobile Station	06.04.2007
Kermalli 1 (MH)	ALU	10/183379	US7162271	US	Band Pass Filter And Method Of Filtering For A Base Station In A Wireless Communication System	28.06.2002
Kermalli 3 (MH)	ALU	10/448354	US7196578	US	Amplifier Memory Effect Compensator	30.05.2003
Kamath 3 (KK)	ALU	10/345581	US6785313	US	Distributed Bragg Reflector Laser And Fabrication Method	16.01.2003
Kamath 3 (KK)	ALU	09/610267	US6548320	US	Distributed Bragg Reflector Laser And Fabrication Method	06.07.2000
Kao 4-23-15 (Y)	ALU	04255617.5	EP1519499	FR	System And Method For Optical Transmission	16.09.2004
Kao 4-23-15 (Y)	ALU	04255617.5	EP1519499	DE	System And Method For Optical Transmission	16.09.2004
Kao 4-23-15 (Y)	ALU	04255617.5	EP1519499	GB	System And Method For Optical Transmission	16.09.2004
Kao 5-31 (Y)	ALU	10/856729	US7466926	US	Method And Apparatus For RZ-DPSK Optical Signal Generation	28.05.2004
Kataria 1-1-2-26 (D)	ALU	09/188023	US6687229	US	Quality Of Service Based Path Selection For Connection-Oriented Networks	06.11.1998
Kaul 1-11 (S)	ALU	12/453135	US8271634	US	Buffer System For Managing Service Measurements Requests	30.04.2009
Ke 4 (M)	ALU	09/368029	US6356852	US	Multi-Port Programmable Tester	03.08.1999
Ke 5 (M)	ALU	09/437522	US6292053	US	Power Amplifier System	10.11.1999
Ke 5 (M)	ALU	00309585.8	EP1100147	GB	Power Amplifier System	30.10.2000
Ke 5 (M)	ALU	00309585.8	EP1100147	FR	Power Amplifier System	30.10.2000
Ke 5 (M)	ALU	00309585.8	EP1100147	DE	Power Amplifier System	30.10.2000
Ke 5 (M)	ALU	20000066466	KR767885	KR	Power Amplifier System	09.11.2000
Ke 5 (M)	ALU	2000343740		JP	Power Amplifier System	10.11.2000
Ke 5 (M)	ALU	200710414	JP5398957	JP	Power Amplifier System	10.11.2000
Ke 6 (M)	ALU	09/419450	US6323742	US	RF Smart Combiner/Splitter	15.10.1999
Kasera 3-19-8-7-1 (S)	ALU	10/242051	US7317686	US	Fair Sharing Of Multi-Access Channels	12.09.2002
Kahn 12-6-10-7-2-17-23-11 (CL)	ALU	20107027329	KR101286386	KR	Method And Apparatus For Providing Quality-Of-Service In Radio Access Networks	29.05.2009
Kahn 12-6-10-7-2-17-23-11 (CL)	ALU	2011512458	JP5214803	JP	Method And Apparatus For Providing Quality-Of-Service In Radio Access Networks	29.05.2009
Kahn 12-6-10-7-2-17-23-11 (CL)	ALU	09758703.4		EP	Method And Apparatus For Providing Quality-Of-Service In Radio Access Networks	29.05.2009
Kahn 12-6-10-7-2-17-23-11 (CL)	ALU	200980120266.7		CN	Method And Apparatus For Providing Quality-Of-Service In Radio Access Networks	29.05.2009

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0316

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Kazarinov 29-3-4-10 (RF)	ALU	09/182980	US6289151	US	All-Pass Optical Filters	30.10.1998
Kasturia 17 (S)	ALU	09/244645	US6388998	US	Improved Reuse Of Codes And Spectrum In A CDMA System With Multiple-Sector Cells	04.02.1999
Jiang 5-17 (F)	ALU	09/143666	US6212405	US	Extended Range Concentric Cell Base Station	31.08.1998
Jedlicka 3-26 (TE)	ALU	11/141436	US7271718	US	Protection Against Loss Or Theft Of Identification Badges And Other Items	31.05.2005
Jiang 6-1-60-1 (S)	ALU	12/164253	US8078054	US	Apparatus And Method For Improving The Tolerance Of Tone-Based Optical Channel Monitoring To Stimulated Raman Scattering	30.06.2008
Jiang 6-1-60-1 (S)	ALU	20107029224	KR101216375	KR	Apparatus And Method For Improving The Tolerance Of Tone-Based Optical Channel Monitoring To Stimulated Raman Scattering	13.05.2009
Jiang 6-1-60-1 (S)	ALU	09773878.5		EP	Apparatus And Method For Improving The Tolerance Of Tone-Based Optical Channel Monitoring To Stimulated Raman Scattering	13.05.2009
Jiang 6-1-60-1 (S)	ALU	200980125091.9	ZL200980125091.9	CN	Apparatus And Method For Improving The Tolerance Of Tone-Based Optical Channel Monitoring To Stimulated Raman Scattering	13.05.2009
Jiang 6-1-60-1 (S)	ALU	2011516267	JP5236074	JP	Apparatus And Method For Improving The Tolerance Of Tone-Based Optical Channel Monitoring To Stimulated Raman Scattering	13.05.2009
Jeske 7-12 (DR)	ALU	10/261252	US7257133	US	Method For Estimating Offset For Clocks At Network Elements	30.09.2002
Ji 4-1-26 (H)	ALU	09/651792	US7400630	US	Call Admission Control With Overbooking Support And Cell Loss Ratio And Cell Delay Variation Guarantee	30.08.2000
Kisel 10-11-3 (A)	ALU	12/356214	US9661099	US	Resource Arbitration In A Converged Multi-Media Environment	29.12.2008
Kisel 10-11-3 (A)	ALU	2010542563	JP5450446	JP	Resource Arbitration In A Converged Multi-Media Environment	07.01.2009
Kisel 10-11-3 (A)	ALU	200910126716.5	ZL200910126716.5	CN	Resource Arbitration In A Converged Multi-Media Environment	20.01.2009
Kisel 10-11-3 (A)	ALU	4585/CHENP/2010		IN	Resource Arbitration In A Converged Multi-Media Environment	07.01.2009
Kisel 10-11-3 (A)	ALU	20107018572	KR1256718	KR	Resource Arbitration In A Converged Multi-Media Environment	07.01.2009
Khawer 2-1 (MR)	ALU	10/056950	US7058029	US	Dynamic Power Control For A TDMA Based Air Interface	25.01.2002
Kisel 15-16 (A)	ALU	20117008582	KR101247842	KR	Feedback Between Recommendation Engines And Content Caching	09.09.2009
Kisel 15-16 (A)	ALU	2011526410	JP5346377	JP	Feedback Between Recommendation Engines And Content Caching	09.09.2009
Kisel 15-16 (A)	ALU	200910173136.1	ZL200910173136.1	CN	Feedback Between Recommendation Engines And Content Caching	11.09.2009
Kisel 15-16 (A)	ALU	08290861.7		EP	Feedback Between Recommendation Engines And Content Caching	15.09.2008
Kisel 17-18 (A)	ALU	09290002.6		EP	Intelligent Bursting - Optimised BW Utilisation In Multimedia Networks with QoS	06.01.2009
Klein 28-2-1 (TE)	ALU	11/862321	US8199196	US	Method And Apparatus For Controlling Video Streams	27.09.2007
Kisel 3-3 (A)	ALU	2010530305	JP5208216	JP	Method For Caching Content Data Packages In Caching Nodes	13.10.2008
Kisel 3-3 (A)	ALU	200810177894.6	ZL200810177894.6	CN	Method For Caching Content Data Packages In Caching Nodes	24.10.2008
Kisel 7-7-2 (A)	ALU	20107012121	KR101453594	KR	Resilient Service Quality In A Managed Multimedia Delivery Network	13.10.2008
Kisel 7-7-2 (A)	ALU	2426/CHENP/2010		IN	Resilient Service Quality In A Managed Multimedia Delivery Network	13.10.2008
Kisel 7-7-2 (A)	ALU	2010531439	JP5181031	JP	Resilient Service Quality In A Managed Multimedia Delivery Network	13.10.2008
Kisel 8-9 (A)	ALU	200810144626.4	ZL200810144626.4	CN	Content-On-Demand Method And Network Therefor	20.06.2008
Kisel 8-9 (A)	ALU	2010512551	JP5296064	JP	Content-On-Demand Method And Network Therefor	30.05.2008
Kisel 8-9 (A)	ALU	12/665625	US8370426	US	Content-On-Demand Method And Network Therefor	30.05.2008
Kisel 8-9 (A)	ALU	07290771.0		EP	Content-On-Demand Method And Network Therefor	21.06.2007
Kisel 8-9 (A)	ALU	20107001307	KR101510910	KR	Content-On-Demand Method And Network Therefor	30.05.2008
Khan 46 (FU)	ALU	10/888559	US7738423	US	Cell Switching And Packet Combining In A Wireless Communication System	09.07.2004
Khan 46 (FU)	ALU	20050060309	KR101163973	KR	Cell Switching And Packet Combining In A Wireless Communication System	05.07.2005
Khan 46 (FU)	ALU	200510083276.1	ZL200510083276.1	CN	Cell Switching And Packet Combining In A Wireless Communication System	08.07.2005
Khan 46 (FU)	ALU	2005201168		JP	Cell Switching And Packet Combining In A Wireless Communication System	11.07.2005
Khan 47 (FU)	ALU	11/906309	US7577128	US	A Multiplexing Scheme For Unicast And Broadcast/Multicast Traffic	06.03.2008
Kim 6 (D)	ALU	11/172965	US7856355	US	Speech Quality Assessment Method And System	05.07.2005
Kim 7 (J)	ALU	09/876772	US6903604	US	Method And Apparatus For Modeling And Estimating The Characteristics Of A Power Amplifier	07.06.2001

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PATENT
REEL: 043877 FRAME: 0317

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Knepper 3 (JD)	ALU	09/158055	US6212469	US	Device For Measuring And Displaying Various Travel Information	22.09.1998
Kang 1-49 (I)	ALU	10/354718	US7209669	US	Method For Synchronizing The Pulse Carver And Electroabsorption Data Modulator In RZ Optical Transmitters	30.01.2003
Kalavade 4 (A)	ALU	09/525696	US6901067	US	Method And Device For Generating A PCM Signal Stream From A Streaming Packet Source	14.03.2000
Kalavade 5 (AP)	ALU	09/525595	US7149772	US	Media Gateway Appliance	14.03.2000
Kamel 1-2-14-15 (RE)	ALU	148994/1999	JP3505104	JP	Wireless CDMA System Having A Unique Forward Configuration Control Channel	28.05.1999
Kamel 1-2-14-15 (RE)	ALU	99303870.2	EP0961513	EP	Wireless CDMA System Having A Unique Forward Configuration Control Channel	18.05.1999
Kamel 1-2-14-15 (RE)	ALU	09/086485	US6381235	US	Wireless CDMA System Having A Unique Forward Configuration Control Channel	29.05.1998
Kocherlakota 4 (S)	ALU	00309857.1	EP1102488	DE	Method And Apparatus For Remote Audiovisual Signal Recording	06.11.2000
Kocherlakota 4 (S)	ALU	00309857.1	EP1102488	GB	Method And Apparatus For Remote Audiovisual Signal Recording	06.11.2000
Kocherlakota 4 (S)	ALU	00309857.1	EP1102488	FR	Method And Apparatus For Remote Audiovisual Signal Recording	06.11.2000
Kocherlakota 4 (S)	ALU	2000348654	JP4633913	JP	Method And Apparatus For Remote Audiovisual Signal Recording	15.11.2000
Kamel 2-15-11-11 (RE)	ALU	09/157758	US7190688	US	Method And Apparatus For Adaptive Setting Of Initial Traffic Power	21.09.1998
Kaminski 8-12 (WJ)	ALU	09/549919	US6574459	US	Multiple Branch Receiver System And Method	14.04.2000
Kaminski 8-12 (WJ)	ALU	00309823.3	EP1154589	GB	Multiple Branch Receiver System And Method	06.11.2000
Kaminski 8-12 (WJ)	ALU	00309823.3	EP1154589	SE	Multiple Branch Receiver System And Method	06.11.2000
Kaminski 8-12 (WJ)	ALU	00309823.3	EP1154589	FI	Multiple Branch Receiver System And Method	06.11.2000
Kaminski 8-12 (WJ)	ALU	00309823.3	EP1154589	FR	Multiple Branch Receiver System And Method	06.11.2000
Kaminski 8-12 (WJ)	ALU	00309823.3	EP1154589	DE	Multiple Branch Receiver System And Method	06.11.2000
Kaminski 8-12 (WJ)	ALU	20010020022	KR555166	KR	Multiple Branch Receiver System And Method	14.04.2001
Kaminski 8-12 (WJ)	ALU	01116545.6	ZL01116545.6	CN	Multiple Branch Receiver System And Method	12.04.2001
Kaneda 1-2-2 (N)	ALU	10/627098	US7471904	US	Method And Apparatus For Electronic Equalization In Optical Communication Systems	25.07.2003
Kaneda 5 (N)	ALU	11/937561	US7696929	US	Tunable Microstrip Devices	09.11.2007
Kaneda 6-29 (N)	ALU	12/182221	US8095019	US	Digital Clock And Data Recovery Scheme	30.07.2008
Kramer 19-22 (GG)	ALU	12/370148	US8218419	US	Simultaneous Estimation Of Multiple Channel Coefficients Using A Common Probing Sequence	12.02.2009
Kramer 19-22 (GG)	ALU	10705945.3		EP	Simultaneous Estimation Of Multiple Channel Coefficients Using A Common Probing Sequence	10.02.2010
Kramer 19-22 (GG)	ALU	20117021245	KR10-1276153	KR	Simultaneous Estimation Of Multiple Channel Coefficients Using A Common Probing Sequence	10.02.2010
Kodialam 52-55-26 (MS)	ALU	10711310.2		EP	Advertisement Scheduling In A Packet-Based Media-Delivery System	22.03.2010
Kodialam 52-55-26 (MS)	ALU	20117023140	KR101314430	KR	Advertisement Scheduling In A Packet-Based Media-Delivery System	22.03.2010
Krishnamoorthy 21-29-4 (AV)	ALU	09/510044	US6396970	US	Asynchronous Transfer Of High Speed Data Signals Through An Optoelectronic VLSI Switch	22.02.2000
Krishnamoorthy 7-8 9-6 (R)	ALU	09/361861	US6625165	US	Data Link Protocol For Wireless Systems	27.07.1999
Kodialam 40-7 (MS)	ALU	11/316071	US7920991	US	Characterizing The Capacity Region In Multi-Channel, Multi-Radio Mesh Networks	22.12.2005
Krishnamoorthy 7-8 9-6 (R)	ALU	00306062.1	EP1073228	GB	Data Link Protocol For Wireless Systems	17.07.2000
Krishnamoorthy 7-8 9-6 (R)	ALU	00306062.1	EP1073228	SE	Data Link Protocol For Wireless Systems	17.07.2000
Krishnamoorthy 7-8 9-6 (R)	ALU	00306062.1	EP1073228	FI	Data Link Protocol For Wireless Systems	17.07.2000
Krishnamoorthy 7-8 9-6 (R)	ALU	00306062.1	EP1073228	FR	Data Link Protocol For Wireless Systems	17.07.2000
Krishnamoorthy 7-8 9-6 (R)	ALU	00306062.1	EP1073228	DE	Data Link Protocol For Wireless Systems	17.07.2000
Krishnamoorthy 7-8 9-6 (R)	ALU	20000043060	KR716439	KR	Data Link Protocol For Wireless Systems	26.07.2000

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0318

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Krishnamoorthy 7-8 9-6 (R)	ALU	573/MAS/2000	IN201619	IN	Data Link Protocol For Wireless Systems	24.07.2000
Krishnamoorthy 7-8 9-6 (R)	ALU	00121707.0	ZL00121707.0	CN	Data Link Protocol For Wireless Systems	25.07.2000
Kroupenkine 4 (TN)	ALU	02253224.6	EP1306702	FR	MicroLens	08.05.2002
Kroupenkine 4 (TN)	ALU	02253224.6	EP1306702	DE	MicroLens	08.05.2002
Kroupenkine 4 (TN)	ALU	02253224.6	EP1306702	GB	MicroLens	08.05.2002
Kroupenkine 4 (TN)	ALU	10/021458	US6674940	US	MicroLens	29.10.2001
Kroupenkine 8 (TN)	ALU	10/139124	US6965480	US	Method And Apparatus For Calibrating A Tunable MicroLens	03.05.2002
Kroupenkine 8 (TN)	ALU	10/884592	US7006299	US	Method And Apparatus For Calibrating A Tunable MicroLens	02.07.2004
Krishnamoorthy 7-8 9-6 (R)	ALU	2000224836	JP4711361	JP	Data Link Protocol For Wireless Systems	26.07.2000
Kodialam 48-51 (MS)	ALU	11/693825	US7710953	US	Method And Apparatus For Operating Fast Switches Using Slow Schedulers	30.03.2007
Kodialam 52-55-26 (MS)	ALU	201080015332.7		CN	Advertisement Scheduling In A Packet-Based Media-Delivery System	22.03.2010
Kodialam 52-55-26 (MS)	ALU	12/415392	US8250600	US	Advertisement Scheduling In A Packet-Based Media-Delivery System	31.03.2009
Kodialam 52-55-26 (MS)	ALU	2012503487	JP5816611	JP	Advertisement Scheduling In A Packet-Based Media-Delivery System	22.03.2010
Kim 4 (J)	ALU	09/515023	US6542756	US	Method For Detecting Forward Link Power Control Bits In A Communication System	29.02.2000
Kim 4-3 (KS)	ALU	09/406723	US6323950	US	Chromatic Dispersion Measurement For Optical Components	28.09.1999
Khan 1-6-10-1-35 (FU)	ALU	09/312167	US6654422	US	Efficient Automatic Repeat Request Method Using Variable Length Sequence Numbers	14.05.1999
Kramer 19-22 (GG)	ALU	201080007518.8	ZL201080007518.8	CN	Simultaneous Estimation Of Multiple Channel Coefficients Using A Common Probing Sequence	10.02.2010
Kramer 9-16-6 (GG)	ALU	11/897877	US7843990	US	Determining A Channel Matrix By Measuring Interference	31.08.2007
Kramer 9-16-6 (GG)	ALU	5927/CHENP/2009		IN	Determining A Channel Matrix By Measuring Interference	01.04.2008
Kramer 9-16-6 (GG)	ALU	2010503011	JP5204212	JP	Determining A Channel Matrix By Measuring Interference	01.04.2008
Kramer 9-16-6 (GG)	ALU	200880011167.0	ZL200880011167.0	CN	Determining A Channel Matrix By Measuring Interference	01.04.2008
Kilper 12-11 (DC)	ALU	11/846845	US7746548	US	Optical Amplifier Transient Control With Gain Error	29.08.2007
Kilper 7-3-1-1-7 (DC)	ALU	200510087922.1	ZL10087922.1	CN	Transient-Based Channel Growth For Optical Transmission Systems	29.07.2005
Kilper 7-3-1-1-7 (DC)	ALU	10/903872	US7327958	US	Transient-Based Channel Growth For Optical Transmission Systems	30.07.2004
Kilper 7-3-1-1-7 (DC)	ALU	05254497.0	EP1624604	DE	Transient-Based Channel Growth For Optical Transmission Systems	20.07.2005
Kilper 7-3-1-1-7 (DC)	ALU	05254497.0	EP1624604	GB	Transient-Based Channel Growth For Optical Transmission Systems	20.07.2005
Kilper 7-3-1-1-7 (DC)	ALU	05254497.0	EP1624604	FR	Transient-Based Channel Growth For Optical Transmission Systems	20.07.2005
Kraml 1-1-15-2 (MH)	ALU	09/325968	US6490297	US	System And Method For Automatic Signaling Channel Identification	04.06.1999
Kramer 9-16-6 (GG)	ALU	20097020446	KR101084965	KR	Determining A Channel Matrix By Measuring Interference	01.04.2008
Kilper 7-3-1-1-7 (DC)	ALU	2005220120	JP4612499	JP	Transient-Based Channel Growth For Optical Transmission Systems	29.07.2005
Kuipers 6-5 (R)	ALU	09/118186	US6045949	US	Aparatus For Improving The Compression Uniformity Of A Cell Stack In A Battery	17.07.1998
Kulkarni 3-122 (NA)	ALU	200780016252.1	ZL200780016252.1	CN	Measurement Data Record Method For Detecting Hybrid Mobile Tune Away	30.04.2007
Kulkarni 3-122 (NA)	ALU	5892/CHENP/2008		IN	Measurement Data Record Method For Detecting Hybrid Mobile Tune Away	30.04.2007
Kulkarni 3-122 (NA)	ALU	20087026739	KR101054680	KR	Measurement Data Record Method For Detecting Hybrid Mobile Tune Away	30.04.2007
Kulkarni 3-122 (NA)	ALU	2009509642	JP4949464	JP	Measurement Data Record Method For Detecting Hybrid Mobile Tune Away	30.04.2007
Lauer 2 (BA)	ALU	10/695086	US7570590	US	Decision Tree Logic For Determining The Optimal Value For QoS Uplink And Downlink Maximum Bitrate Attributes	28.10.2003

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Lauer 2 (BA)	ALU	04255962.5		EP	Decision Tree Logic For Determining The Optimal Value For QoS Uplink And Downlink Maximum Bitrate Attributes	29.09.2004
Lauer 2 (BA)	ALU	200410100587.X	ZL200410100587.X	CN	Decision Tree Logic For Determining The Optimal Value For QoS Uplink And Downlink Maximum Bitrate Attributes	29.09.2004
Lauer 2 (BA)	ALU	20040077843	KR101097719	KR	Decision Tree Logic For Determining The Optimal Value For QoS Uplink And Downlink Maximum Bitrate Attributes	30.09.2004
Lauer 2 (BA)	ALU	2004286001	JP4495562	JP	Decision Tree Logic For Determining The Optimal Value For QoS Uplink And Downlink Maximum Bitrate Attributes	30.09.2004
La Porta 41-5-12-2-3 (TF)	ALU	09/209705	US6763007	US	Two Phase Local Mobility Scheme For Wireless Access To Packet Based Networks	11.12.1998
La Porta 41-5-12-2-3 (TF)	ALU	11349357	JP3573266	JP	Two Phase Local Mobility Scheme For Wireless Access To Packet Based Networks	08.12.1999
La Porta 41-5-12-2-3 (TF)	ALU	99309565.2	EP1009141	SE	Two Phase Local Mobility Scheme For Wireless Access To Packet Based Networks	30.11.1999
Laham 2-3-1 (MA)	ALU	09/163940	US6507737	US	Method For Automatically Monitoring Continuity And Integrity Of Communication Trunks	30.09.1998
Lai 1 (MC)	ALU	09/186005	US6446087	US	System For Maintaining The Integrity Of Application Data	04.11.1998
La Porta 41-5-12-2-3 (TF)	ALU	99309565.2	EP1009141	FI	Two Phase Local Mobility Scheme For Wireless Access To Packet Based Networks	30.11.1999
La Porta 41-5-12-2-3 (TF)	ALU	99309565.2	EP1009141	GB	Two Phase Local Mobility Scheme For Wireless Access To Packet Based Networks	30.11.1999
Lavranchuk 3 (JS)	ALU	11/618257	US8210755	US	Identifiable Optical Fibers	29.12.2006
Lai 9 (Y)	ALU	09/433197	US6594715	US	Method And Apparatus For Interfacing Asymmetric Digital Subscriber Lines To A Codec	03.11.1999
Lau 2-2-37-19 (K)	ALU	10/355140	US7583637	US	Methods of Controlling Data Rate in Wireless Communications Systems	31.01.2003
Lee 11-7-5 (JA)	ALU	11/089339	US7486954	US	Method Of Controlling Load Sharing Between In-Cell And Soft Handoff Users	25.03.2005
Lanzerotti 8-75 (LU)	ALU	200410036685.1	ZL200410036685.1	CN	Telecommunications System With Reflective Airborne Platform	28.04.2004
Lanzerotti 8-75 (LU)	ALU	10/425963	US7403772	US	Telecommunications System With Reflective Airborne Platform	30.04.2003
Lanzerotti 8-75 (LU)	ALU	04252280.5	EP1473851	GB	Telecommunications System With Reflective Airborne Platform	19.04.2004
Lanzerotti 8-75 (LU)	ALU	04252280.5	EP1473851	IE	Telecommunications System With Reflective Airborne Platform	19.04.2004
Lanzerotti 8-75 (LU)	ALU	04252280.5	EP1473851	IT	Telecommunications System With Reflective Airborne Platform	19.04.2004
Lanzerotti 8-75 (LU)	ALU	04252280.5	EP1473851	FR	Telecommunications System With Reflective Airborne Platform	19.04.2004
Lanzerotti 8-75 (LU)	ALU	04252280.5	EP1473851	DE	Telecommunications System With Reflective Airborne Platform	19.04.2004
Lanzone 2-1-1 (CA)	ALU	09/544748	US6295210	US	Chassis Grounding Ring For A Printed Wiring Board Mounting Aperture	07.04.2000
Kogiantis 11-6 (AG)	ALU	2002249360	JP4002157	JP	Method For Multi-Antenna Scheduling Of HDR Wireless Communication Systems	28.08.2002
Kogiantis 11-6 (AG)	ALU	20020053775	KR10925998	KR	Method For Multi-Antenna Scheduling Of HDR Wireless Communication Systems	06.09.2002
Kogiantis 11-6 (AG)	ALU	09/950913	US7558602	US	Method For Multi-Antenna Scheduling Of HDR Wireless Communication Systems	12.09.2001
Kogiantis 11-6 (AG)	ALU	02252094.4		EP	Method For Multi-Antenna Scheduling Of HDR Wireless Communication Systems	22.03.2002
Kolsrud 21 (A)	ALU	10/124297	US7039386	US	Cellular Base Station Broadcast Method and System	18.04.2002
Kong 5-10-5-4 (H)	ALU	20050029474	KR101092871	KR	Sector Switching Detection Method	08.04.2005
Kong 5-10-5-4 (H)	ALU	10/822434	US7421271	US	Sector Switching Detection Method	12.04.2004
Kong 5-10-5-4 (H)	ALU	2005114051	JP4711400	JP	Sector Switching Detection Method	12.04.2005
Kong 5-10-5-4 (H)	ALU	200510064118.1	ZL10064118.1	CN	Sector Switching Detection Method	11.04.2005
Laroia 6-24 (R)	ALU	09/843502	US6580761	US	A Decoding Technique in Discrete Multi-Tone (DMT) Based Communications Systems	26.04.2001
Koren 29-14 (U)	ALU	08/910939	US6072612	US	WDM Transmitter For Optical Networks Using A Loop-Back Spectrally-Sliced Light Emitting Device	08.08.1997
Kolsrud 9-8 (A)	ALU	09/533109	US6515599	US	High-Power Selective Signal Attenuator And Method Of Attenuation	22.03.2000
Kolsrud 9-8 (A)	ALU	255/MAS/2001	IN208687	IN	High-Power Selective Signal Attenuator And Method Of Attenuation	20.03.2001
Kolsrud 9-8 (A)	ALU	20010014577	KR850053	KR	High-Power Selective Signal Attenuator And Method Of Attenuation	21.03.2001

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0320

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Kolsrud 9-8 (A)	ALU	01111840.7	ZL01111840.7	CN	High-Power Selective Signal Attenuator And Method Of Attenuation	21.03.2001
Kolsrud 9-8 (A)	ALU	2337601	CA2337601	CA	High-Power Selective Signal Attenuator And Method Of Attenuation	19.02.2001
Leonard 2-21 (ED)	ALU	09/517980	US6359937	US	Method And Apparatus For Performing Analog Mode Operations When Transmitting Audio And Data In A Wireless TDMA System	03.03.2000
Leonard 2-21 (ED)	ALU	20010010683	KR814738	KR	Method And Apparatus For Performing Analog Mode Operations When Transmitting Audio And Data In A Wireless TDMA System	02.03.2001
Leonard 2-21 (ED)	ALU	2001056416	JP3916875	JP	Method And Apparatus For Performing Analog Mode Operations When Transmitting Audio And Data In A Wireless TDMA System	01.03.2001
Li 1-15-4-4 (Q)	ALU	09/245204	US6590873	US	Channel Structure For Forward Link Power Control	05.02.1999
Li 1-2-2 (K)	ALU	200510006547.3	ZL200510006547.3	CN	Personalized Information Subscribing And Delivering Over Instant Messaging	23.02.2005
Li 1-2-2 (K)	ALU	11/117403	US8892656	US	Personalized Information Subscribing And Delivering Over Instant Messaging	29.04.2005
Lemke 1 (MJ)	ALU	10/109027	US7136653	US	Wireless Base Station Supporting Multiple Hyperbands	28.03.2002
Leonard 7 (ED)	ALU	11/818536	US7671798	US	Optimal Combining Of Noisy Measurements	14.06.2007
Lifton 3-7-13 (VA)	ALU	10/371258	US7573723	US	Method For Attaching Chips In A Flip-Chip Arrangement	21.02.2003
Li 13-33-55 (L)	ALU	12/124332	US8243601	US	Routing Protocol For A Network Employing Multi-User Wireless Channels	21.05.2008
Li 10-31-52 (L)	ALU	12/124258	US8149752	US	Superposition Coding For Wireless Mesh Networks	21.05.2008
Li 6-9 (Q)	ALU	09/375598	US6721339	US	Method Of Providing Downlink Transmit Diversity	17.08.1999
Li 6-9 (Q)	ALU	20000047113	KR661679	KR	Method Of Providing Downlink Transmit Diversity	16.08.2000
Levy 5-1 (DS)	ALU	10/142475	US7155123	US	Method And Apparatus For Locating Faults In An Optical Network	10.05.2002
Li 10-31-52 (L)	ALU	2010516022	JP5174161	JP	Superposition Coding For Wireless Mesh Networks	26.06.2008
Li 10-31-52 (L)	ALU	200880023628.6	ZL200880023628.6	CN	Superposition Coding For Wireless Mesh Networks	26.06.2008
Li 10-31-52 (L)	ALU	20097027403	KR101595745	KR	Superposition Coding For Wireless Mesh Networks	26.06.2008
Li 10-31-52 (L)	ALU	603/CHENP/2010		IN	Superposition Coding For Wireless Mesh Networks	26.06.2008
Leuthold 4-1 (J)	ALU	09/871393	US6832053	US	3R Optical Signal Regeneration	31.05.2001
Lin 1 (I)	ALU	09/888188	US7050414	US	Method And Apparatus For Setting Up A Call Over A Packet-Based Transport Network	22.06.2001
Leven 3 (A)	ALU	200410002467.6	ZL200410002467.6	CN	Direct Optical N-State Phase Shift Keying	20.01.2004
Leven 3 (A)	ALU	200414109	JP4441275	JP	Direct Optical N-State Phase Shift Keying	22.01.2004
Leven 3 (A)	ALU	10/443328	US6798557	US	Direct Optical N-State Phase Shift Keying	22.05.2003
Lin 2-2-17 (YJ)	ALU	11/421810	US7818000	US	Selection Of A Preferred Foreign Wireless Network	02.06.2006
Lin 3 (W)	ALU	09/759685	US6952568	US	Tracking Power Levels In A Wireless Telecommunications Network	12.01.2001
Lin 5-1 (SL)	ALU	09/289070	US6360107	US	Apparatus, Method And System For Topological Channel Assignment For Focused Beam, Fixed Wireless Telecommunications	08.04.1999
Lin 5-1 (W)	ALU	10/645807	US7769406	US	Monitoring And Adjusting Transmit Power Level(s) In A Communications System	21.08.2003
Lin 5-17 (C)	ALU	09/282236	US6405256	US	Data Streaming Using Caching Servers With Expandable Buffers And Adjustable Rate Of Data Transmission To Absorb Network Congestion	31.03.1999
Lin 9 (SL)	ALU	11/090114	US7929444	US	Communication Nodes And Methods Using Small Routers To Communicate Over A Backhaul Facility	25.03.2005
Lieuwen 9 (DF)	ALU	09/128445	US6353835	US	Technique For Effectively Maintaining Materialized Views In A Data Warehouse	03.08.1998
Lakshman 52-1-5 (TV)	ALU	11/799036	US8289851	US	Lightweight Bandwidth-Management Scheme For Elastic Traffic	30.04.2007
Liu 1-1-1-1-1 (X)	ALU	3796/CHENP/2009		IN	Method And System Of Using A Wireless Link In The Backhaul Connection	17.12.2007
Liu 1-1-1-1-1 (X)	ALU	07867789.5		EP	Method And System Of Using A Wireless Link In The Backhaul Connection	17.12.2007
Liu 1-1-1-1-1 (X)	ALU	200610130906.0	ZL200610130906.0	CN	Method And System Of Using A Wireless Link In The Backhaul Connection	29.12.2006
Liu 1-1-1-1-1 (X)	ALU	11/812786	US7948942	US	Method And System Of Using A Wireless Link In The Backhaul Connection	21.06.2007
Liu 1-1-1-1-1 (X)	ALU	2009544025	JP5137967	JP	Method And System Of Using A Wireless Link In The Backhaul Connection	17.12.2007
Liu 1-1-1-1-1 (X)	ALU	20097013592	KR101172724	KR	Method And System Of Using A Wireless Link In The Backhaul Connection	17.12.2007

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Liu 2-1 (J)	ALU	11/445291	US8010122	US	Method Of Scheduling Data Transmission For A Multi-Carrier Wireless Communication System	02.06.2006
Ma 11-10 (Z)	ALU	01301204.2	EP1191707	SE	Power Amplifier Sharing In A Wireless Communication System With Transmit Diversity	12.02.2001
Ma 11-10 (Z)	ALU	01301204.2	EP1191707	FR	Power Amplifier Sharing In A Wireless Communication System With Transmit Diversity	12.02.2001
Ma 11-10 (Z)	ALU	01301204.2	EP1191707	DE	Power Amplifier Sharing In A Wireless Communication System With Transmit Diversity	12.02.2001
Ma 11-10 (Z)	ALU	01301204.2	EP1191707	GB	Power Amplifier Sharing In A Wireless Communication System With Transmit Diversity	12.02.2001
Ma 11-10 (Z)	ALU	01301204.2	EP1191707	FI	Power Amplifier Sharing In A Wireless Communication System With Transmit Diversity	12.02.2001
Ma 11-10 (Z)	ALU	2001004697	KR773028	KR	Power Amplifier Sharing In A Wireless Communication System With Transmit Diversity	03.08.2001
Ma 11-10 (Z)	ALU	09/631885	US7054384	US	Power Amplifier Sharing In A Wireless Communication System With Transmit Diversity	04.08.2000
Loo 2-39 (Y)	ALU	10/098202	US6946332	US	Forming Nanoscale Patterned Thin Film Metal Layers	15.03.2002
Lyons 20-5 (AM)	ALU	11/115636	US7425930	US	Light-Weight Signal Transmission Lines And Radio Frequency Antenna System	27.04.2005
Lyons 20-5 (AM)	ALU	10/697498	US7095377	US	Light-Weight Signal Transmission Lines And Radio Frequency Antenna System	30.10.2003
Ma 18-5 (Z)	ALU	10/744750	US7333567	US	Digital Detector Utilizable In Providing Closed-Loop Gain Control In A Transmitter	23.12.2003
Ma 18-5 (Z)	ALU	04257333.7	EP1548929	FR	Digital Detector Utilizable In Providing Closed-Loop Gain Control In A Transmitter	25.11.2004
Ma 18-5 (Z)	ALU	04257333.7	EP1548929	GB	Digital Detector Utilizable In Providing Closed-Loop Gain Control In A Transmitter	25.11.2004
Ma 18-5 (Z)	ALU	04257333.7	EP1548929	SE	Digital Detector Utilizable In Providing Closed-Loop Gain Control In A Transmitter	25.11.2004
Ma 18-5 (Z)	ALU	04257333.7	EP1548929	FI	Digital Detector Utilizable In Providing Closed-Loop Gain Control In A Transmitter	25.11.2004
Lou 10-2-25 (H)	ALU	09/288833	US6842724	US	Method And Apparatus For Reducing Start-Up Delay In Data Packet-Based Network Streaming Applications	08.04.1999
Lou 10-2-25 (H)	ALU	00302558.2	EP1043877	GB	Method And Apparatus For Reducing Start-Up Delay In Data Packet-Based Network Streaming Applications	28.03.2000
Lou 10-2-25 (H)	ALU	00302558.2	EP1043877	FR	Method And Apparatus For Reducing Start-Up Delay In Data Packet-Based Network Streaming Applications	28.03.2000
Lou 10-2-25 (H)	ALU	00302558.2	EP1043877	DE	Method And Apparatus For Reducing Start-Up Delay In Data Packet-Based Network Streaming Applications	28.03.2000
Lou 10-2-25 (H)	ALU	2000102549	JP3705729	JP	Method And Apparatus For Reducing Start-Up Delay In Data Packet-Based Network Streaming Applications	04.04.2000
Lou 7-10-36 (H)	ALU	09/280280	US6430401	US	Techniques For Effectively Communicating Multiple Digital Representations Of A Signal	29.03.1999
Lou 7-10-36 (H)	ALU	00302601.0	EP1041756	GB	Techniques For Effectively Communicating Multiple Digital Representations Of A Signal	29.03.2000
Lou 7-10-36 (H)	ALU	00302601.0	EP1041756	DE	Techniques For Effectively Communicating Multiple Digital Representations Of A Signal	29.03.2000
Lou 7-10-36 (H)	ALU	2000089513	JP4247768	JP	Techniques For Effectively Communicating Multiple Digital Representations Of A Signal	28.03.2000
Lou 7-10-36 (H)	ALU	2300579	CA2300579	CA	Techniques For Effectively Communicating Multiple Digital Representations Of A Signal	13.03.2000
Lou 7-10-36 (H)	ALU	09/290819	US6353637	US	Techniques For Effectively Communicating Multiple Digital Representations Of A Signal	13.04.1999
Loughran 5-4 (K)	ALU	2260281	CA2260281	CA	Wireless Telecommunications System Architecture Supporting Receive Diversity	25.01.1999
Loughran 5-4 (K)	ALU	991420	MX216724	MX	Wireless Telecommunications System Architecture Supporting Receive Diversity	10.02.1999
Loughran 5-4 (K)	ALU	99102302.1	ZL99102302.1	CN	Wireless Telecommunications System Architecture Supporting Receive Diversity	12.02.1999
Loughran 5-4 (K)	ALU	88100899	TWNI-121706	TW	Wireless Telecommunications System Architecture Supporting Receive Diversity	21.01.1999
Loughran 5-4 (K)	ALU	19990004337	KR0350542	KR	Wireless Telecommunications System Architecture Supporting Receive Diversity	09.02.1999
Loughran 5-4 (K)	ALU	09/023469	US6539239	US	Wireless Telecommunications System Architecture Supporting Receive Diversity	13.02.1998
Liu 18-14 (C)	ALU	09/515482	US6392999	US	Conferencing And Announcement Generation For Wireless VoIP and VoATM Calls	29.02.2000
Liu 18-14 (C)	ALU	200153521	JP3630236	JP	Conferencing And Announcement Generation For Wireless VoIP and VoATM Calls	28.02.2001
Lou 7-10-36 (H)	ALU	00302601.0	EP1041756	FR	Techniques For Effectively Communicating Multiple Digital Representations Of A Signal	29.03.2000

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Ma 11-10 (Z)	ALU	2001235155	JP4948717	JP	Power Amplifier Sharing In A Wireless Communication System With Transmit Diversity	02.08.2001
Ma 29-67 (Z)	ALU	20107019137	KR101261394	KR	Method To Support User Location In In-Structure Coverage Systems	26.01.2009
Ma 27-1 (Z)	ALU	11/896558	US8010099	US	Method Of Reconfiguring Sector Coverage In In-Building Communications System	04.09.2007
Lee 38-20 (CC)	ALU	10/299401	US7212506	US	System For The Secure Distribution Of Priority Call Access Codes To Provide Guaranteed Wireless Communication Service To Priority Wireless Communication Subscribers	18.11.2002
Ma 29-67 (Z)	ALU	12/010668	US8666428	US	Method To Support User Location In In-Structure Coverage Systems	29.01.2008
Ma 29-67 (Z)	ALU	2010545069	JP5490022	JP	Method To Support User Location In In-Structure Coverage Systems	26.01.2009
Ma 29-67 (Z)	ALU	09705872.1		EP	Method To Support User Location In In-Structure Coverage Systems	26.01.2009
Ma 29-67 (Z)	ALU	097150727	TWI452918	TW	Method To Support User Location In In-Structure Coverage Systems	25.12.2008
Lenz 14-21 (G)	ALU	01125851.9	ZL01125851.9	CN	Chalcogenide Glass Based Raman Optical Amplifier	29.08.2001
Lenz 14-21 (G)	ALU	01302211.6	EP1184943	FR	Chalcogenide Glass Based Raman Optical Amplifier	12.03.2001
Lenz 14-21 (G)	ALU	01302211.6	EP1184943	DE	Chalcogenide Glass Based Raman Optical Amplifier	12.03.2001
Lenz 14-21 (G)	ALU	01302211.6	EP1184943	GB	Chalcogenide Glass Based Raman Optical Amplifier	12.03.2001
Lenz 14-21 (G)	ALU	09/689213	US6504645	US	Chalcogenide Glass Based Raman Optical Amplifier	12.10.2000
Lee 4-14 (Y)	ALU	11/093782	US8725138	US	Methods For Network Selection And Discovery Of Service Information In Public Wireless Hotspots	30.03.2005
Lenz 8-11-36 (G)	ALU	09/287430	US6259847	US	Optical Communication System Including Broadband All-Pass Filter For Dispersion Compensation	07.04.1999
Lee 8 (JA)	ALU	10/822478	US7492741	US	Space-Time Multipath Searcher	12.04.2004
Lee 8-12 (M)	ALU	10/953907	US7391737	US	Method And Apparatus For Measuring Quality Of Service In Voice-Over-IP Network Applications Based On Speech Characteristics	29.09.2004
Madsen 15 (CK)	ALU	09/573085	US6907156	US	Reconfigurable Multi-Channel Filters Having Enhanced Channel Bandwidth	17.05.2000
Marcuse 32-80 (D)	ALU	09/166358	US6310999	US	Directional Coupler and Method Using Polymer Material	05.10.1998
Marcuse 34-82 (D)	ALU	09/166830	US6144780	US	Polymer Waveguide Switch And Method	05.10.1998
Martin 10-4 (RB)	ALU	09/305382	US6198916	US	Call Screening In Wireless Systems	05.05.1999
Martin 14 (CE)	ALU	10/812598	US7170393	US	Method And Apparatus For The Automatic Determination Of Network Cable Connections Using RFID Tags And An Antenna Grid	30.03.2004
Manzione 26-1-4 (LT)	ALU	10/188036	US7053832	US	Antenna Arrangement	03.07.2002
Liu 40-20 (X)	ALU	06250734.8	EP1696588	FR	Method And Apparatus For Demodulation Of Optical Differential Phase Shift Keyed Signals	10.02.2006
Liu 40-20 (X)	ALU	06250734.8	EP1696588	DE	Method And Apparatus For Demodulation Of Optical Differential Phase Shift Keyed Signals	10.02.2006
Liu 40-20 (X)	ALU	200610019801.8	ZL10019801.8	CN	Method And Apparatus For Demodulation Of Optical Differential Phase Shift Keyed Signals	27.02.2006
Liu 40-20 (X)	ALU	200651461	JP4732922	JP	Method And Apparatus For Demodulation Of Optical Differential Phase Shift Keyed Signals	28.02.2006
Liu 43-1-21 (X)	ALU	11/161711	US7702246	US	Optical Label Switching Scheme Employing Differential Phase-Shift Keying For Payloads And Intensity Modulation For Labels Using A Single Optical Modulator	13.08.2005
Marks 1-4 (RJ)	ALU	98308423.7	EP0912032	DE	Automatic Data Service Selection Method And Apparatus For Digital Wireless Communication Networks	15.10.1998
Marks 1-4 (RJ)	ALU	08/957634	US6434125	US	Automatic Data Service Selection Method And Apparatus For Digital Wireless Communication Networks	24.10.1997
Liu 45-22 (X)	ALU	11/162830	US7558487	US	Multilevel Amplitude And Phase Encoded Signal Generation	15.09.2005
Liu 46 (X)	ALU	11/163190	US7526210	US	Optical Demodulating Apparatus And Method	08.10.2005
Liu 46 (X)	ALU	2008534714	JP5339910	JP	Optical Demodulating Apparatus And Method	05.10.2006
Liu 46 (X)	ALU	200680037304.9	ZL200680037304.9	CN	Optical Demodulating Apparatus And Method	05.10.2006
Liu 47 (X)	ALU	11/164222	US7508889	US	Digital Apparatus For Soft Detection Of Multi-Chip DBPSK Signals	15.11.2005
Liu 50 (X)	ALU	11/307899	US7623796	US	Data-Aided Multi-Symbol Phase Estimation For Optical Differential Multilevel Phase-Shift Keying Signals	27.02.2006
Liu 25-18-17-7 (X)	ALU	04257203.2	EP1542417	GB	Duobinary Receiver	22.11.2004
Liu 25-18-17-7 (X)	ALU	04257203.2	EP1542417	FR	Duobinary Receiver	22.11.2004
Liu 25-18-17-7 (X)	ALU	04257203.2	EP1542417	DE	Duobinary Receiver	22.11.2004

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Liu 25-18-17-7 (X)	ALU	10/730413	US7613402	US	Duobinary Receiver	08.12.2003
Liu 25-18-17-7 (X)	ALU	20040101226	KR101138630	KR	Duobinary Receiver	03.12.2004
Liu 25-18-17-7 (X)	ALU	200410100212.3	ZL200410100212.3	CN	Duobinary Receiver	07.12.2004
Matusevich 1 (A)	ALU	11260088	JP3402279	JP	TDMA Communication System And Method Including Discontinuous Modulation For Reducing Adjacent And Co-Channel Interference	14.09.1999
Matusevich 1 (A)	ALU	99307096.0	EP0987835	GB	TDMA Communication System And Method Including Discontinuous Modulation For Reducing Adjacent And Co-Channel Interference	07.09.1999
Matusevich 1 (A)	ALU	99307096.0	EP0987835	FR	TDMA Communication System And Method Including Discontinuous Modulation For Reducing Adjacent And Co-Channel Interference	07.09.1999
Matusevich 1 (A)	ALU	99307096.0	EP0987835	DE	TDMA Communication System And Method Including Discontinuous Modulation For Reducing Adjacent And Co-Channel Interference	07.09.1999
Marom 25 (DM)	ALU	11/241853	US7372607	US	Apparatus For Reducing Drops In A Transmission Spectrum Due To Inter-Pixel Gaps	01.10.2005
Marom 26-19 (DM)	ALU	11/241830	US7262898	US	Apparatus For Reducing Drops In A Transmission Spectrum Due To Inter-Pixel Gaps	01.10.2005
Marom 6 (DM)	ALU	10/621556	US6867920	US	Optical Beam-Steering Switching System Having Beam Coupling Control	17.07.2003
Matusevich 1 (A)	ALU	09/156761	US7082113	US	TDMA Communication System And Method Including Discontinuous Modulation For Reducing Adjacent And Co-Channel Interference	18.09.1998
Matusevich 3 (A)	ALU	09/095173	US6119016	US	Synchronizing Base Stations In A Wireless Telecommunications System	10.06.1998
Matusevich 3 (A)	ALU	19990020903	KR512543	KR	Synchronizing Base Stations In A Wireless Telecommunications System	07.06.1999
Matusevich 3 (A)	ALU	163168/1999	JP3561180	JP	Synchronizing Base Stations In A Wireless Telecommunications System	10.06.1999
Liu 25-18-17-7 (X)	ALU	2004354755	JP4629423	JP	Duobinary Receiver	08.12.2004
Liu 4-12 (S)	ALU	09/659877	US6504517	US	Variable Sectorization Tower Top Applique For Base Stations	12.09.2000
Liu 40-20 (X)	ALU	11/068349	US7489874	US	Method And Apparatus For Demodulation Of Optical Differential Phase Shift Keyed Signals	28.02.2005
Liu 40-20 (X)	ALU	06250734.8	EP1696588	GB	Method And Apparatus For Demodulation Of Optical Differential Phase Shift Keyed Signals	10.02.2006
Meier 1 (SK)	ALU	09/088750	US6201969	US	Control Of Handoff In CDMA Cellular Systems	02.06.1998
Meier 1 (SK)	ALU	32275/99	AU748260	AU	Control Of Handoff In CDMA Cellular Systems	27.05.1999
Meier 1 (SK)	ALU	11153697	JP4145424	JP	Control Of Handoff In CDMA Cellular Systems	01.06.1999
Meier 1 (SK)	ALU	19990019680	KR312538	KR	Control Of Handoff In CDMA Cellular Systems	31.05.1999
Meier 1 (SK)	ALU	99304030.2	EP0963130	GB	Control Of Handoff In CDMA Cellular Systems	25.05.1999
Meier 1 (SK)	ALU	99304030.2	EP0963130	SE	Control Of Handoff In CDMA Cellular Systems	25.05.1999
Meier 1 (SK)	ALU	99304030.2	EP0963130	FI	Control Of Handoff In CDMA Cellular Systems	25.05.1999
Meier 1 (SK)	ALU	99304030.2	EP0963130	FR	Control Of Handoff In CDMA Cellular Systems	25.05.1999
Meier 1 (SK)	ALU	99304030.2	EP0963130	DE	Control Of Handoff In CDMA Cellular Systems	25.05.1999
Meier 1 (SK)	ALU	446/MAS/99	IN216652	IN	Control Of Handoff In CDMA Cellular Systems	21.04.1999
McBride 1 (CJ)	ALU	10/103419	US6715930	US	Optical Fiber Shutter Adapter	21.03.2002
Metz 12 (C)	ALU	11/168781	US7483606	US	Planar Power Splitter	28.06.2005
McHarg 7-2 (CG)	ALU	10/319191	US7251267	US	System And Method For Determining A Best Round Trip Delay Indicator	13.12.2002
Menten 2 (LE)	ALU	11/323743	US7805757	US	Control Of Communication Session Attributes In Network Employing Firewall Protection	30.12.2005
Menten 4 (LE)	ALU	12/143914	US8320372	US	Processing Of Packet Fragments	23.06.2008
Mailaender 7-17 (LE)	ALU	10/160126	US7421039	US	Method And System For Employing Antenna Arrays	04.06.2002
Mailhot 5-1-1-1-3 (JN)	ALU	10/199236	US7286571	US	Systems And Methods For Providing On-Demand Datacasting	19.07.2002
Malek 1-5 (M)	ALU	08/936386	US6253207	US	Method And Apparatus For Transporting Multimedia Information Over Heterogeneous Wide Area Networks	25.09.1997
Malhotra 10 (R)	ALU	3369/CHENP/2010		IN	Controlling Congestion In A Packet Switched Data Network	24.11.2008
Malhotra 10 (R)	ALU	2010536351	JP5325231	JP	Controlling Congestion In A Packet Switched Data Network	24.11.2008
Malhotra 10 (R)	ALU	200810179791.3	ZL200810179791.3	CN	Controlling Congestion In A Packet Switched Data Network	05.12.2008
Malhotra 10 (R)	ALU	12/315472	US8072888	US	Controlling Congestion In A Packet Switched Data Network	03.12.2008
Malhotra 10 (R)	ALU	20107012923	KR10-1467614	KR	Controlling Congestion In A Packet Switched Data Network	24.11.2008
Meyers 34-13-41 (MH)	ALU	20040032270	KR101092870	KR	Power Control Method With DTX Frame Detection For A Communication Channel	07.05.2004

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Mahajan 1 (S1)	ALU	10/060752	US7130280	US	Enhanced Call Service Packet Data Terminal	30.01.2002
Meyers 34-13-41 (MH)	ALU	2004145275	JP4463001	JP	Power Control Method With DTX Frame Detection For A Communication Channel	14.05.2004
Meyers 34-13-41 (MH)	ALU	04252625.1	EP1478103	GB	Power Control Method With DTX Frame Detection For A Communication Channel	05.05.2004
Meyers 34-13-41 (MH)	ALU	04252625.1	EP1478103	FR	Power Control Method With DTX Frame Detection For A Communication Channel	05.05.2004
Meyers 34-13-41 (MH)	ALU	04252625.1	EP1478103	DE	Power Control Method With DTX Frame Detection For A Communication Channel	05.05.2004
Meyers 34-13-41 (MH)	ALU	10/438105	US7224993	US	Power Control Method With DTX Frame Detection For A Communication Channel	15.05.2003
Meyer 2 (JA)	ALU	11/045647	US7227465	US	Security Bar With Fiber Optic Cable Based Security Monitoring	28.01.2005
Meyer 3-1 (G)	ALU	11/394259	US8849109	US	Fault Isolation And Provisioning For Optical Switches	30.03.2006
Mikkelsen 1-4 (BP)	ALU	09/499132	US6614582	US	Optical Regeneration And Wavelength Conversion Using Semi-Conductor Optical Amplifier Based Interferometers	07.02.2000
Meyers 46-21-44 (MH)	ALU	11/221329	US8219106	US	Reverse Link Load Control	07.09.2005
Mendiratta 1-10-8 (VB)	ALU	11/316531	US7493121	US	Processing Calls From Wireless Handsets To Toll-Free Telephone Numbers	22.12.2005
Mills 16 (AP)	ALU	09/888878	US6542397	US	Read Only Memory Structure	25.06.2001
Mizuhara 7 (O)	ALU	09/411118	US6522438	US	High-Speed Optical Duobinary Modulation Scheme	04.10.1999
McKinstry 8 (CJ)	ALU	11/154483	US7483203	US	Phase-Sensitive Amplification In A Fiber	16.06.2005
McKinstry 8 (CJ)	ALU	11/750252	US7724421	US	Phase-Sensitive Amplification In A Fiber	17.05.2007
Moeller 26 (LB)	ALU	11/525787	US7929580	US	Inexpensive Terahertz Pulse Wave Generator	22.09.2006
Moeller 26 (LB)	ALU	2009527467	JP5197605	JP	Inexpensive Terahertz Pulse Wave Generator	19.09.2007
Moeller 26 (LB)	ALU	07838502.8	EP2069759	EP	Inexpensive Terahertz Pulse Wave Generator	19.09.2007
McKinstry 9 (CJ)	ALU	11/172104	US7630126	US	Two-Pump Optical Parametric Devices Having Reduced Stimulated Raman Scattering Noise Levels	30.06.2005
Moeller 26 (LB)	ALU	20097005803	KR101050631	KR	Inexpensive Terahertz Pulse Wave Generator	19.09.2007
Moeller 26 (LB)	ALU	200780034603.1	ZL200780034603.1	CN	Inexpensive Terahertz Pulse Wave Generator	19.09.2007
Moeller 3 (LBE)	ALU	09/273949	US6456408	US	Method And Apparatus For Controlling The Optical Power Of An Optical Transmission Signal	22.03.1999
McCormick 14-6 (MA)	ALU	09/546248	US6731943	US	System For Efficient Mobile Subscriber Station Paging In Cellular Mobile Telecommunication Networks	10.04.2000
McGowan 23-16 (JW)	ALU	11/819970	US8036642	US	Wireless Network And Method Of Transmitting Content From Locally Stored Server	29.06.2007
McGowan 24-17 (JW)	ALU	11/819969	US8433292	US	Network Based Mobile User Proxy And Agent	29.06.2007
Mooney 9-42-27 (CF)	ALU	20097019503	KR101097033	KR	Low Cost End To End Solution For Multicast Short Messaging	18.03.2008
Mooney 9-42-27 (CF)	ALU	11/837028	US8165072	US	Low Cost End To End Solution For Multicast Short Messaging	10.08.2007
Mooney 9-42-27 (CF)	ALU	2009554551	JP5086376	JP	Low Cost End To End Solution For Multicast Short Messaging	18.03.2008
McCormick 7-3 (MA)	ALU	09/200333	US6169894	US	Apparatus, Method And System For Mobile Broadcast Of Information Specific To A Geographic Region	25.11.1998
Mazzarella 2-9 (NJ)	ALU	09/773572	US6819921	US	Method Of Subscriber Initiated Porting Of A Wireless Number For A Mobile Station	02.02.2001
Morrison 7-18-10 (JA)	ALU	11/080961	US7610058	US	Reverse Loop Protocol	15.03.2005
McKinstry 1-4 (CJ)	ALU	11/068555	US7164526	US	Parametric Amplification Using Two Pump Waves	28.02.2005
Nagarajan 16-13-2 (R)	ALU	09/687348	US7099327	US	Data Communications Networks With High Performance And Reliability	12.10.2000
Nagarajan 19-1-14-30 (R)	ALU	10/261090	US7406082	US	Sequence Number Schemes For Acceptance/Rejection Of Duplicated Packets In A Packet-Based Data Network	30.09.2002
Nagesh 10-26-12-10-40 (HS)	ALU	10/785352	US7440404	US	Load Balancing Method And Apparatus For Ethernet Over Sonet And Other Types Of Networks	24.02.2004
Mujtaba 7 (SA)	ALU	2287004	CA2287004	CA	Method And Apparatus For Wireless Communication Using Time Division Duplex Time-Slotted CDMA	19.10.1999
Mujtaba 7 (SA)	ALU	11333384	JP3950272	JP	Method And Apparatus For Wireless Communication Using Time Division Duplex Time-Slotted CDMA	24.11.1999
Mujtaba 7 (SA)	ALU	09/200522	US6542485	US	Method And Apparatus For Wireless Communication Using Time Division Duplex Time-Slotted CDMA	25.11.1998
Mueckenheim 24-13 (J)	ALU	11/025668	US7471654	US	Channel Assignment Based On Service Type And Wireless Communication Environment	29.12.2004
Murphy 3-33 (TO)	ALU	09/439016	US6538780	US	Apparatus And Method For Reducing The Number Of Control Elements For Crosstalk Reduction Device In An Optical Switching Network	12.11.1999

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Mukherjee 2-29 (S)	ALU	10/279310	US7426195	US	Method And Apparatus For Providing User Identity Based Routing In A Wireless Communications Environment	24.10.2002
Mukherjee 25-1 (S)	ALU	12/270990	US8381258	US	Creating Channel Sequence Segments For Fast Channel Change In IPTV	14.11.2008
Mukherjee 8-3-13 (S)	ALU	10/880753	US7400611	US	Discovery Of Border Gateway Protocol (BGP) Multi-Protocol Label Switching (MPLS) Virtual Private Networks (VPNs)	30.06.2004
Nexabit 11	ALU	09/200377	US6272567	US	Method of and System For Using Multi-Port Internally Cached Dynamic Random Access Memory (Ampic Dram) in the Control Path of Systems For Switching and Routing Data Packets Amongst I/O Source and Destination Resources Through Shared Memory Cores Comprised o	24.11.1998
Nexabit 11	ALU	99952738.5	EP1177558	GB	Method of and System For Using Multi-Port Internally Cached Dynamic Random Access Memory (Ampic Dram) in the Control Path of Systems For Switching and Routing Data Packets Amongst I/O Source and Destination Resources Through Shared Memory Cores Comprised o	08.11.1999
Nexabit 11	ALU	99952738.5	EP1177558	IT	Method of and System For Using Multi-Port Internally Cached Dynamic Random Access Memory (Ampic Dram) in the Control Path of Systems For Switching and Routing Data Packets Amongst I/O Source and Destination Resources Through Shared Memory Cores Comprised o	08.11.1999
Nexabit 11	ALU	99952738.5	EP1177558	SE	Method of and System For Using Multi-Port Internally Cached Dynamic Random Access Memory (Ampic Dram) in the Control Path of Systems For Switching and Routing Data Packets Amongst I/O Source and Destination Resources Through Shared Memory Cores Comprised o	08.11.1999
Nagaraj 4 (S)	ALU	10/853102	US7453821	US	Methods Of Detecting Signaling Information In A Wireless Communication System	26.05.2004
Mujtaba 1 (SA)	ALU	08/970987	US6091781	US	Single Sideband Transmission Of QPSK, QAM and Other Signals	14.11.1997
Mujtaba 1 (SA)	ALU	10323636	JP3432156	JP	Single Sideband Transmission Of QPSK, QAM and Other Signals	13.11.1998
Mujtaba 1 (SA)	ALU	98308978.0	EP0917325	FR	Single Sideband Transmission Of QPSK, QAM and Other Signals	03.11.1998
Mujtaba 1 (SA)	ALU	98308978.0	EP0917325	DE	Single Sideband Transmission Of QPSK, QAM and Other Signals	03.11.1998
Mujtaba 1 (SA)	ALU	98308978.0	EP0917325	GB	Single Sideband Transmission Of QPSK, QAM and Other Signals	03.11.1998
Neilson 13 (DT)	ALU	11/280091	US7203400	US	Dispersion Compensator	16.11.2005
Neilson 24 (DT)	ALU	11/614325	US8750723	US	Generation Of A Full-Rate Optical Duobinary Signal Using Half-Rate Electrical Binary Signals	21.12.2006
Nagarajan 16-13-2 (R)	ALU	2001311455	JP3901977	JP	Data Communications Networks With High Performance And Reliability	09.10.2001
Nagarajan 16-13-2 (R)	ALU	01303932.6	EP1198157	GB	Data Communications Networks With High Performance And Reliability	30.04.2001
Nexabit 11	ALU	99952738.5	EP1177558	FR	Method of and System For Using Multi-Port Internally Cached Dynamic Random Access Memory (Ampic Dram) in the Control Path of Systems For Switching and Routing Data Packets Amongst I/O Source and Destination Resources Through Shared Memory Cores Comprised o	08.11.1999
Nexabit 11	ALU	99952738.5	EP1177558	DE	Method of and System For Using Multi-Port Internally Cached Dynamic Random Access Memory (Ampic Dram) in the Control Path of Systems For Switching and Routing Data Packets Amongst I/O Source and Destination Resources Through Shared Memory Cores Comprised o	08.11.1999
Nexabit 2	ALU	08/901502	US6212597	US	Apparatus and Method of Architecturally Enhancing the Performance of Multi Port Internally Cached Drams and the Like	28.07.1997
Nexabit 2	ALU	98932443.9	EP1015989	FR	Apparatus and Method of Architecturally Enhancing the Performance of Multi Port Internally Cached Drams and the Like	23.07.1998
Nexabit 2	ALU	98932443.9	EP1015989	GB	Apparatus and Method of Architecturally Enhancing the Performance of Multi Port Internally Cached Drams and the Like	23.07.1998
Nexabit 2	ALU	98807724.8	ZL98807724.8	CN	Apparatus and Method of Architecturally Enhancing the Performance of Multi Port Internally Cached Drams and the Like	23.07.1998
Nexabit 2	ALU	82367/98	AU748133	AU	Apparatus and Method of Architecturally Enhancing the Performance of Multi Port Internally Cached Drams and the Like	23.07.1998
Mitra 27-3 (D)	ALU	08726113.7		EP	Time Scale Separated Network Management And Network Provisioning Optimizations	26.02.2008
Mitra 27-3 (D)	ALU	11/679515	US8953938	US	Time Scale Separated Network Management And Network Provisioning Optimizations	27.02.2007
Nexabit 2	ALU	01101019.4	HK1030281	HK	Apparatus and Method of Architecturally Enhancing the Performance of Multi Port Internally Cached Drams and the Like	23.07.1998
Nexabit 2	ALU	2000504513	JP4046943	JP	Apparatus and Method of Architecturally Enhancing the Performance of Multi Port Internally Cached Drams and the Like	23.07.1998
Nexabit 4	ALU	09/038720	US6085290	US	Method of and Apparatus for Validating Data Read Put of a Memory Multi Port Internally Cached Dynamic Random Access Memory (AMPIC DRAM)	10.03.1998

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Nair 3-11-13 (SP)	ALU	200510118677.6	ZL200510118677.6	CN	Method And Apparatus For Activating A Dormant Mobile Unit In A Distributed Network	07.11.2005
Nair 3-11-13 (SP)	ALU	20050105845	KR101210236	KR	Method And Apparatus For Activating A Dormant Mobile Unit In A Distributed Network	07.11.2005
Nair 3-11-13 (SP)	ALU	10/984020	US7848749	US	Method And Apparatus For Activating A Dormant Mobile Unit In A Distributed Network	08.11.2004
Minkoff 2 (J)	ALU	09/004577	US5926135	US	Steerable ing Of Wideband Interference Signals	08.01.1998
Minkoff 5 (J)	ALU	09/630170	US6434235	US	Acoustic Echo Canceler	01.08.2000
Nexabit 2	ALU	98932443.9	EP1015989	DE	Apparatus and Method of Architecturally Enhancing the Performance of Multi Port Internally Cached Drams and the Like	23.07.1998
Ng 12 (H)	ALU	11/456428	US7952109	US	Light-Emitting Crystal Structures	10.07.2006
Nair 3-11-13 (SP)	ALU	05256620.5	EP1655985	FR	Method And Apparatus For Activating A Dormant Mobile Unit In A Distributed Network	25.10.2005
Nair 3-11-13 (SP)	ALU	05256620.5	EP1655985	DE	Method And Apparatus For Activating A Dormant Mobile Unit In A Distributed Network	25.10.2005
Nair 3-11-13 (SP)	ALU	05256620.5	EP1655985	GB	Method And Apparatus For Activating A Dormant Mobile Unit In A Distributed Network	25.10.2005
Narayanaswamy 1-11 (S)	ALU	10/289082	USRE40821	US	Multi-Display Electronic Devices Having Open And Closed Configurations	06.11.2002
Nlu 2-5-2-2 (Z)	ALU	11/702553	US9204363	US	Method Of Sending Data	06.02.2007
Nuss 32-27 (MC)	ALU	10/252904	US7483432	US	GigaChannel Architecture Compatability With 10G Standard	23.09.2002
Nordin 6-23-20 (RA)	ALU	2001210517	JP4875258	JP	DSL-Compatible POTS Line Card	11.07.2001
Nordin 6-23-20 (RA)	ALU	09/617446	US6836509	US	DSL-Compatible POTS Line Card	17.07.2000
Nordin 6-23-20 (RA)	ALU	01300758.8	EP1175077	DE	DSL-Compatible POTS Line Card	29.01.2001
Nordin 6-23-20 (RA)	ALU	01300758.8	EP1175077	GB	DSL-Compatible POTS Line Card	29.01.2001
Nordin 6-23-20 (RA)	ALU	01300758.8	EP1175077	NL	DSL-Compatible POTS Line Card	29.01.2001
Nordin 6-23-20 (RA)	ALU	01300758.8	EP1175077	FR	DSL-Compatible POTS Line Card	29.01.2001
Pancha 5-12 (P)	ALU	08/947703	US6148005	US	A Layered Video Multicast Transmission System With Retransmission-Based Error Recovery	09.10.1997
Pai 26-15-8 (C)	ALU	10/789091	US6967326	US	Mass Spectrometers On Wafer-Substrates	27.02.2004
Pai 26-15-8 (C)	ALU	200549892	JP4495616	JP	Mass Spectrometers On Wafer-Substrates	25.02.2005
Mueckenheim 33-2-1 (J)	ALU	11/388374	US8103284	US	Method For Reporting Uplink Load Measurements	24.03.2006
Ozarow 9-33-7 (LH)	ALU	20050131914	KR10-1162781	KR	Method And Apparatus For Reducing Transmitted Energy In Power-Controlled Systems Based On Early Decoding	28.12.2005
Ozarow 9-33-7 (LH)	ALU	2005371536	JP4959187	JP	Method And Apparatus For Reducing Transmitted Energy In Power-Controlled Systems Based On Early Decoding	26.12.2005
Ozarow 9-33-7 (LH)	ALU	200510134184.1	ZL10134184.1	CN	Method And Apparatus For Reducing Transmitted Energy In Power-Controlled Systems Based On Early Decoding	27.12.2005
Ozarow 9-33-7 (LH)	ALU	11/023991	US7454225	US	Method And Apparatus For Reducing Transmitted Energy In Power-Controlled Systems Based On Early Decoding	28.12.2004
Ozarow 9-33-7 (LH)	ALU	05257738.4	EP1677433	GB	Method And Apparatus For Reducing Transmitted Energy In Power-Controlled Systems Based On Early Decoding	15.12.2005
Ozarow 9-33-7 (LH)	ALU	05257738.4	EP1677433	FR	Method And Apparatus For Reducing Transmitted Energy In Power-Controlled Systems Based On Early Decoding	15.12.2005
Ozarow 9-33-7 (LH)	ALU	05257738.4	EP1677433	DE	Method And Apparatus For Reducing Transmitted Energy In Power-Controlled Systems Based On Early Decoding	15.12.2005
Pfleging 11-16-1 (GW)	ALU	11/207679	US8160220	US	Ring Tone Selected By Calling Party Or Third Party Played To Called Party	18.08.2005
Pfleging 11-16-1 (GW)	ALU	11/087442	US7792264	US	Ring Tone Selected By Calling Party Or Third Party Played To Called Party	23.03.2005
Patel 13-1 (S)	ALU	09/175178	US7174013	US	Efficient Universal Hashing Method	20.10.1998
Patel 13-1 (S)	ALU	19990045522	KR662934	KR	Efficient Universal Hashing Method	20.10.1999
Patel 13-1 (S)	ALU	99308032.4	EP0996092	FR	Efficient Universal Hashing Method	12.10.1999
Patel 13-1 (S)	ALU	99308032.4	EP0996092	DE	Efficient Universal Hashing Method	12.10.1999
Patel 13-1 (S)	ALU	99308032.4	EP0996092	GB	Efficient Universal Hashing Method	12.10.1999
Philips 1	ALU	09/083220	US6163828	US	Methods and Apparatus for Providing Multi-Processor Access to Shared Memory	22.05.1998
Philips 3	ALU	09/099251	US6272327	US	High Power Wireless Telephone With Over-Voltage Protection	18.06.1998
Norr 1 (WM)	ALU	09/364432	US7085377	US	Information Delivery In A Multi-Stream Digital Broadcasting System	30.07.1999
Picha 2-1 (M)	ALU	10/444002	US7181219	US	Wireless Handover Model Using Anchor Termination	22.05.2003
Nuzman 12-13 (CJ)	ALU	2009-530378	JP4829348	JP	Admission Control Of Sessions With Preference Lists	21.09.2007

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PATENT
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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Nuzman 12-13 (CJ)	ALU	11/541276	US7751320	US	Admission Control Of Sessions With Preference Lists	30.09.2006
Nuzman 12-13 (CJ)	ALU	200780036420.3	ZL200780036420.3	CN	Admission Control Of Sessions With Preference Lists	21.09.2007
Nuzman 12-13 (CJ)	ALU	20097006503	KR101054175	KR	Admission Control Of Sessions With Preference Lists	21.09.2007
Nuzman 18 (CJ)	ALU	12/230081	US7801017	US	Communciation System For Improved Crosstalk Estimation And Method Thereof	22.08.2008
Peelen 2-1 (BF)	ALU	10/133781	US7177273	US	Communication System With A Shared Medium	26.04.2002
Pfeiffer 26 (LN)	ALU	11/355360	US7619257	US	Devices Including Graphene Layers Epitaxially Grown On Single Crystal Substrates	16.02.2006
Pfeiffer 26 (LN)	ALU	07750499.1		EP	Devices Including Graphene Layers Epitaxially Grown On Single Crystal Substrates	13.02.2007
Pfeiffer 26 (LN)	ALU	2008555294	JP5265385	JP	Devices Including Graphene Layers Epitaxially Grown On Single Crystal Substrates	13.02.2007
Pfeiffer 26 (LN)	ALU	20087019823	KR101351691	KR	Devices Including Graphene Layers Epitaxially Grown On Single Crystal Substrates	13.02.2007
Pfeiffer 26 (LN)	ALU	200780005630.6	ZL200780005630.6	CN	Devices Including Graphene Layers Epitaxially Grown On Single Crystal Substrates	13.02.2007
Pelletier 2 (LE)	ALU	10/231558	US6908357	US	System For Frame Selector Migration In 3G Cellular Networks	30.08.2002
Presby 77 (HM)	ALU	09/852199	US6534741	US	Extended Optical Fiber And Method	09.05.2001
Prasanna 5 (GS)	ALU	09/063919	US6219390	US	Adaptive Interference Canceller Using Digital Control Techniques	21.04.1998
Posthuma 5-10 (CR)	ALU	99309849.0	EP1014658	DE	Method To Pre-Qualify Copper Loops For ADSL Service	07.12.1999
Posthuma 5-10 (CR)	ALU	363590/1999	JP3649979	JP	Method To Pre-Qualify Copper Loops For ADSL Service	22.12.1999
Raddatz 2 (L)	ALU	10/851582	US7072029	US	Method And Apparatus For Testing Optical Fiber Cables	21.05.2004
Raddatz 3 (L)	ALU	11/027847	US7542678	US	Method And Apparatus For A Supervisory Channel In A WDM Fiber-Optic Communication System	30.12.2004
Posthuma 15 (CR)	ALU	09/364154	US6456694	US	Method For Prequalifying Subscriber Lines For High Speed Data Service	30.07.1999
Posthuma 21 (CR)	ALU	09/565145	US6459773	US	System To Pre-Qualify Copper Subscriber Loops For High Bandwidth Access Service Using Subscriber Or Network Generated Tones	05.05.2000
Posthuma 26 (CR)	ALU	2001287726	JP3905733	JP	Metallic Testing Of A Subscriber Loop That Provides Both Voice And Digital Subscriber Line Services	20.09.2001
Posthuma 26 (CR)	ALU	01303329.5	EP1193958	GB	Metallic Testing Of A Subscriber Loop That Provides Both Voice And Digital Subscriber Line Services	09.04.2001
Posthuma 26 (CR)	ALU	01303329.5	EP1193958	FR	Metallic Testing Of A Subscriber Loop That Provides Both Voice And Digital Subscriber Line Services	09.04.2001
Posthuma 26 (CR)	ALU	01303329.5	EP1193958	DE	Metallic Testing Of A Subscriber Loop That Provides Both Voice And Digital Subscriber Line Services	09.04.2001
Posthuma 26 (CR)	ALU	01140934.7	ZL01140934.7	CN	Metallic Testing Of A Subscriber Loop That Provides Both Voice And Digital Subscriber Line Services	27.09.2001
Posthuma 26 (CR)	ALU	2357565	CA2357565	CA	Metallic Testing Of A Subscriber Loop That Provides Both Voice And Digital Subscriber Line Services	17.09.2001
Posthuma 26 (CR)	ALU	09/675884	US6496566	US	Metallic Testing Of A Subscriber Loop That Provides Both Voice And Digital Subscriber Line Services	29.09.2000
Pingali 3 (SV)	ALU	09/012393	US6005610	US	Audio-Visual ObjectLocalization And Tracking System And Method Thereof	23.01.1998
Posthuma 30 (CR)	ALU	02254379.7	EP1283655	FR	Maximizing DSL Throughput	24.06.2002
Posthuma 30 (CR)	ALU	02254379.7	EP1283655	DE	Maximizing DSL Throughput	24.06.2002
Posthuma 30 (CR)	ALU	02254379.7	EP1283655	GB	Maximizing DSL Throughput	24.06.2002
Posthuma 39 (CR)	ALU	10/957297	US7676031	US	A Method And Apparatus For Selectively Terminating Current In A Subscriber Line (DSL) Modem	30.09.2004
Posthuma 5-10 (CR)	ALU	09/218970	US6349130	US	Method To Pre-Qualify Copper Loops For ADSL Service	22.12.1998
Posthuma 5-10 (CR)	ALU	19990057809	KR629096	KR	Method To Pre-Qualify Copper Loops For ADSL Service	15.12.1999
Posthuma 5-10 (CR)	ALU	99309849.0	EP1014658	GB	Method To Pre-Qualify Copper Loops For ADSL Service	07.12.1999
Posthuma 5-10 (CR)	ALU	99309849.0	EP1014658	FR	Method To Pre-Qualify Copper Loops For ADSL Service	07.12.1999
Rahman 3 (MA)	ALU	09/393300	US7171199	US	Method And system For Directing A Data Message In A Wireless Communications Network Including Multiple Wireless Systems	10.09.1999
Rahman 3 (MA)	ALU	20000052722	KR656108	KR	Method And system For Directing A Data Message In A Wireless Communications Network Including Multiple Wireless Systems	06.09.2000

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Ranka 2-9 (JK)	ALU	09/313006	US6097870	US	Article Utilizing Optical Waveguides With Anomalous Dispersion At Vis-Nir Wavelengths	17.05.1999
Pullela 1 (R)	ALU	10/033525	US7009438	US	Single State Voltage Controlled Ring Oscillator	28.12.2001
Rao 28 (AM)	ALU	11/973025	US9510360	US	A Method And Apparatus For A Coordinated Scheduling Method To Avoid Multiplexing Of Control And Data For Power Limited Users In The LTE Reverse Link	06.10.2007
Rao 28 (AM)	ALU	20107007334	KR101421429	KR	A Method And Apparatus For A Coordinated Scheduling Method To Avoid Multiplexing Of Control And Data For Power Limited Users In The LTE Reverse Link	24.09.2008
Rao 28 (AM)	ALU	1804/CHENP/2010	IN282540	IN	A Method And Apparatus For A Coordinated Scheduling Method To Avoid Multiplexing Of Control And Data For Power Limited Users In The LTE Reverse Link	24.09.2008
Rao 28 (AM)	ALU	200880110026.4	ZL200880110026.4	CN	A Method And Apparatus For A Coordinated Scheduling Method To Avoid Multiplexing Of Control And Data For Power Limited Users In The LTE Reverse Link	24.09.2008
Rao 28 (AM)	ALU	2010527949	JP5368456	JP	A Method And Apparatus For A Coordinated Scheduling Method To Avoid Multiplexing Of Control And Data For Power Limited Users In The LTE Reverse Link	24.09.2008
Rao 4-34 (SA)	ALU	2011502933	JP5147988	JP	Method For Routing Via Access Terminals	18.03.2009
Rao 4-34 (SA)	ALU	200980112128.4	ZL200980112128.4	CN	Method For Routing Via Access Terminals	18.03.2009
Ramakrishna 7-39 (S)	ALU	11/070437	US7869416	US	Method For Enabling Use Of Secondary Pilot Signals Across A Forward Link Of A CDMA Network Employing A Slotted Transmission Scheme And Time Multiplexed Pilot Channel	02.03.2005
Patel 2 (NC)	ALU	11215759	JP3396185	JP	Apparatus For Protecting Connectors On Circuit Packs	29.07.1999
Patel 2 (NC)	ALU	09/127244	US5999411	US	Apparatus For Protecting Connectors On Circuit Packs	31.07.1998
Rao 4-34 (SA)	ALU	6547/CHENP/2010		IN	Method For Routing Via Access Terminals	18.03.2009
Rao 4-34 (SA)	ALU	20107024348	KR101302631	KR	Method For Routing Via Access Terminals	18.03.2009
Rao 4-34 (SA)	ALU	12/286417	US8520559	US	Method For Routing Via Access Terminals	30.09.2008
Patfield 3 (KM)	ALU	10/714201	US7123286	US	Presence Detection For IP Telephony	14.11.2003
Pattabhiraman 2-26 17 (RV)	ALU	11/823671	US7990900	US	Event Notification Control Based On Data About A User's Communication Device Stored In A User Notification Profile	28.06.2007
Rashid-Farrokhi 2-12 (F)	ALU	09/188021	US6304750	US	Space-Time Diversity Receiver For Wireless Systems	06.11.1998
Rashid-Farrokhi 2-12 (F)	ALU	99308679.2	EP0999652	GB	Space-Time Diversity Receiver For Wireless Systems	02.11.1999
Rashid-Farrokhi 2-12 (F)	ALU	314758/1999	JP3634696	JP	Space-Time Diversity Receiver For Wireless Systems	05.11.1999
Rajan 4-25 (GN)	ALU	09/882119	US7170893	US	Technique For Selecting The Number Of Packets To Be Concatenated	15.06.2001
Rahman 7 (MA)	ALU	09/324177	US6434390	US	Macrodiversity Control System Having Macrodiversity Mode Based On Operating Category Of Wireless Unit	03.06.1999
Qiu 5 (RC)	ALU	09/640316	US6785351	US	Method And System For Doppler Frequency Estimation	16.08.2000
Radic 3 (S)	ALU	10/127189	US6781749	US	Interleaving Combiner For A Bidirectional Wavelength-Division Multiplexing System	22.04.2002
Rajan 8 (GN)	ALU	6759/CHENP/2008		IN	Modulation Of A Carrier Radio Signal By A Mobile Terminal In A Wireless Telecommunications Network	08.06.2007
Rajan 8 (GN)	ALU	200780022282.3	ZL200780022282.3	CN	Modulation Of A Carrier Radio Signal By A Mobile Terminal In A Wireless Telecommunications Network	08.06.2007
Rajan 8 (GN)	ALU	11/454081	US7787875	US	Modulation Of A Carrier Radio Signal By A Mobile Terminal In A Wireless Telecommunications Network	15.06.2006
Rajan 8 (GN)	ALU	07795947.6		EP	Modulation Of A Carrier Radio Signal By A Mobile Terminal In A Wireless Telecommunications Network	08.06.2007
Qutub 1-1 (SS)	ALU	05254999.5	EP1628448	GB	Spam Filtering For Mobile Communication Devices	11.08.2005
Qutub 1-1 (SS)	ALU	05254999.5	EP1628448	FR	Spam Filtering For Mobile Communication Devices	11.08.2005
Qutub 1-1 (SS)	ALU	05254999.5	EP1628448	DE	Spam Filtering For Mobile Communication Devices	11.08.2005
Qutub 1-1 (SS)	ALU	10/920005	US8190686	US	Spam Filtering For Mobile Communication Devices	17.08.2004
Qutub 1-1 (SS)	ALU	2005235588	JP4917776	JP	Spam Filtering For Mobile Communication Devices	16.08.2005
Rahman 7 (MA)	ALU	20000030388	KR696899	KR	Macrodiversity Control System Having Macrodiversity Mode Based On Operating Category Of Wireless Unit	02.06.2000
Rahman 7 (MA)	ALU	2000166159	JP3954284	JP	Macrodiversity Control System Having Macrodiversity Mode Based On Operating Category Of Wireless Unit	02.06.2000
Rai 3-1 (V)	ALU	10/671235	US7068993	US	Method And Apparatus For Packetized Supplemental Wireless Distress Signaling	25.09.2003
Raghavan 4-5-8 (N)	ALU	11/343647	US7167299	US	Method And Apparatus For Controlling Pump Powers Of Broadband Raman Amplifiers In Optical Transmission Systems Incorporating Virtual Channels To Reduce Noise	31.01.2006
Rajkumar 5 (A)	ALU	09/315621	US8042034	US	Database With Linked Audio File	20.05.1999
Reddy 1 (AK)	ALU	09/874876	US7065145	US	Digital Carrierless Amplitude And Phase Modulation (CAP) Transmitter Using Vector Arithmetic Structure (VAS)	05.06.2001

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0329

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Rauh 1-1 (MJ)	ALU	10/448148	US7197086	US	Wide-Bandwidth, High-Dynamic-Range Linear Amplifier For A CDMA Transmitter In A Wireless Base Station	29.05.2003
Reents 11-1 (WD)	ALU	10/251352	US6784423	US	Characterization Of Individual Particle Atomic Composition By Aerosol Mass Spectrometry	20.09.2002
Rhazi 4-12-4 (H)	ALU	10/763595	US7359312	US	Method And Apparatus For Identifying An Orthogonal Frequency Division Multiplexing (OFDM) Terrestrial Repeater Using Inactive Sub-Carriers	23.01.2004
Rhazi 4-12-4 (H)	ALU	2000279016	JP4105374	JP	Method And Apparatus For Identifying An Orthogonal Frequency Division Multiplexing (OFDM) Terrestrial Repeater Using Inactive Sub-Carriers	14.09.2000
Rhazi 4-12-4 (H)	ALU	2317973	CA2317973	CA	Method And Apparatus For Identifying An Orthogonal Frequency Division Multiplexing (OFDM) Terrestrial Repeater Using Inactive Sub-Carriers	08.09.2000
Reith 1-8 (LA)	ALU	12/250374	US8811789	US	Optical Transmission Fiber With Thermal Management For High Power Applications	13.10.2008
Reith 1-8 (LA)	ALU	10/379147	US7010204	US	Optical Transmission Fiber With Thermal Management For High Power Applications	04.03.2003
Reith 1-8 (LA)	ALU	11/249995	US7551823	US	Optical Transmission Fiber With Thermal Management For High Power Applications	13.10.2005
Richton 2-27 (RE)	ALU	09/544415	US6281837	US	An Auxiliary System For Assisting A Wireless Terminal In Determining Its Position From Signals Transmitted From A Navigation Satellite	06.04.2000
Richton 2-27 (RE)	ALU	98306991.5	EP0902554	DE	An Auxiliary System For Assisting A Wireless Terminal In Determining Its Position From Signals Transmitted From A Navigation Satellite	01.09.1998
Richton 2-27 (RE)	ALU	98306991.5	EP0902554	GB	An Auxiliary System For Assisting A Wireless Terminal In Determining Its Position From Signals Transmitted From A Navigation Satellite	01.09.1998
Richton 2-27 (RE)	ALU	98306991.5	EP0902554	FR	An Auxiliary System For Assisting A Wireless Terminal In Determining Its Position From Signals Transmitted From A Navigation Satellite	01.09.1998
Rege 8 (KM)	ALU	09/052696	US6434124	US	Adaptive Symbol Error Count Based Technique For CDMA Reverse Link Outer Loop Power Control	31.03.1998
Richton 2-27 (RE)	ALU	9837524	KR0323156	KR	An Auxiliary System For Assisting A Wireless Terminal In Determining Its Position From Signals Transmitted From A Navigation Satellite	11.09.1998
Richton 2-27 (RE)	ALU	10252833	JP3294202	JP	An Auxiliary System For Assisting A Wireless Terminal In Determining Its Position From Signals Transmitted From A Navigation Satellite	07.09.1998
Richton 2-27 (RE)	ALU	2245798	CA2245798	CA	An Auxiliary System For Assisting A Wireless Terminal In Determining Its Position From Signals Transmitted From A Navigation Satellite	25.08.1998
Richton 2-27 (RE)	ALU	08/927434	US6114991	US	An Auxiliary System For Assisting A Wireless Terminal In Determining Its Position From Signals Transmitted From A Navigation Satellite	11.09.1997
Rowe 1 (WJ)	ALU	09/660027	US7088733	US	Cable Modem Termination System For Upstream Frequency Band	12.09.2000
Riverstone 32 (i)	ALU	10/321924	US7366174	US	Adaptive Classification Of Network Traffic	17.12.2002
Riverstone 32 (i)	ALU	03796592.8	EP1573966	FR	Adaptive Classification Of Network Traffic	03.12.2003
Riverstone 32 (i)	ALU	03796592.8	EP1573966	DE	Adaptive Classification Of Network Traffic	03.12.2003
Riverstone 32 (i)	ALU	03796592.8	EP1573966	GB	Adaptive Classification Of Network Traffic	03.12.2003
Riverstone 73 (i)	ALU	10/340083	US7280472	US	Protection Switching At A Network Node	10.01.2003
Roy 1 (A)	ALU	10/762022	US7706353	US	Congestion Control In Connection-Oriented Packet-Switching Networks	21.01.2004
Roy 156-26 (PK)	ALU	09/597907	US6521496	US	Non-Volatile Memory Semiconductor Device Including a Graded, Grown, High Quality Control Gate Oxide Layer And Associated Methods	20.06.2000
Robbins 1 (CF)	ALU	09/174365	US6104784	US	Arrangement For Communicating Between Public Safety Answering Points And An Automatic Location Identifier Database	15.10.1998
Rollender 2 (DH)	ALU	99301784.7	EP0944276	SE	A Method For Porting A Mobile Directory Number From One Wireless Service Provider To Another	09.03.1999
Rollender 2 (DH)	ALU	99301784.7	EP0944276	FI	A Method For Porting A Mobile Directory Number From One Wireless Service Provider To Another	09.03.1999
Rollender 2 (DH)	ALU	99301784.7	EP0944276	FR	A Method For Porting A Mobile Directory Number From One Wireless Service Provider To Another	09.03.1999
Rollender 2 (DH)	ALU	88102848	TWNI-125650	TW	A Method For Porting A Mobile Directory Number From One Wireless Service Provider To Another	25.02.1999
Rollender 2 (DH)	ALU	19990008596	KR574572	KR	A Method For Porting A Mobile Directory Number From One Wireless Service Provider To Another	15.03.1999

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PATENT
REEL: 043877 FRAME: 0330

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Roy 158-28 (PK)	ALU	09/597286	US6509230	US	Non-Volatile Memory Semiconductor Device Including A Graded, Grown, High Quality Oxide Layer And Associated Methods	20.06.2000
Roy 2 (A)	ALU	11/027297	US7535843	US	Method, Apparatus And System For Granular Policing Based On Multiple Arrival Curves	30.12.2004
Roe 2 (BC)	ALU	10/951420	US6979964	US	Apparatus For Applying DC Power To An Inductive Load	28.09.2004
Riverstone 34 (I)	ALU	10/056159	US7023856	US	Method and System For Providing Differentiated Service on a Per-VC Basis	24.01.2002
Riverstone 43 (I)	ALU	10/453975	US7525917	US	Flow Control In A Distributed Scalable Shared Memory Switching Fabric System	04.06.2003
Posthuma 15 (CR)	ALU	2000228344		JP	Method For Prequalifying Subscriber Lines For High Speed Data Service	28.07.2000
Posthuma 15 (CR)	ALU	20000044196	KR758832	KR	Method For Prequalifying Subscriber Lines For High Speed Data Service	31.07.2000
Rollender 27 (DH)	ALU	11/073700	US7565131	US	Emergency Call Back Through Intersystem Paging	08.03.2005
Riverstone 80 (I)	ALU	10/369432	US7450507	US	Hierarchical Rate-Limiting At A Network Node That Utilizes An Infinity Rate-Limit Check	19.02.2003
Riverstone 83 (I)	ALU	10/925624	US7701936	US	Obtaining Path Information Related to a Bridged Network	25.08.2004
Riverstone 89 (I)	ALU	11/036909	US7443856	US	Managing Processing Utilization In A Network Node	14.01.2005
Riverstone 32 (I)	ALU	200380106500.3	ZL200380106500.3	CN	Adaptive Classification Of Network Traffic	03.12.2003
Riverstone 47 (I)	ALU	10/439681	US7474668	US	Flexible Multilevel Output Traffic Control	16.05.2003
Riverstone 48 (I)	ALU	10/370670	US7349336	US	Random Early Drop With Per Hop Behavior Biasing	18.02.2003
Riverstone 50 (I)	ALU	10/443505	US7609693	US	Multi-Cast Packet Queuing	22.05.2003
Riverstone 53 (I)	ALU	10/314680	US7941558	US	Loop Elimination in a Communications Network	09.12.2002
Riverstone 56 (I)	ALU	10/439684	US7548541	US	Managing VLAN Traffic In A Multiport Network Node Using Customer-Specific Identifiers	16.05.2003
Riverstone 16 (I)	ALU	08/975331	US6069872	US	Explicit Rate Congestion Control System and Method	20.11.1997
Riverstone 91 (I)	ALU	11/090594	US7222214	US	Device-Level Address Translation Within A Programmable Non-Volatile Memory Device	25.03.2005
Rockow 1-1 (BC)	ALU	09/348616	US6153947	US	Dual Feed Hot Swap Battery Plant Controller For Power	06.07.1999
Riverstone 69 (I)	ALU	10/623784	US7411904	US	Multiprotocol Label Switching (MPLS) Edge Service Extraction	21.07.2003
Riverstone 23 (I)	ALU	09/865035	US6728220	US	Method and System For Preventing Transmission Loops in a Label Switching Domain	24.05.2001
Riverstone 28 (I)	ALU	10/021754	US7088679	US	Method And System For Providing Failure Protection In A Ring Network That Utilizes Label Switching	12.12.2001
Riverstone 28 (I)	ALU	2003551554	JP4130806	JP	Method And System For Providing Failure Protection In A Ring Network That Utilizes Label Switching	11.12.2002
Riverstone 28 (I)	ALU	02827962.X	ZL02827962.X	CN	Method And System For Providing Failure Protection In A Ring Network That Utilizes Label Switching	11.12.2002
Riverstone 28 (I)	ALU	11/412337	US7451241	US	Method And System For Providing Failure Protection In A Ring Network That Utilizes Label Switching	26.04.2006
Riverstone 28 (I)	ALU	20047009113	KR100912684	KR	Method And System For Providing Failure Protection In A Ring Network That Utilizes Label Switching	11.12.2002
Rollender 2 (DH)	ALU	09/042602	US6192242	US	A Method For Porting A Mobile Directory Number From One Wireless Service Provider To Another	16.03.1998
Rollender 2 (DH)	ALU	99301784.7	EP0944276	DE	A Method For Porting A Mobile Directory Number From One Wireless Service Provider To Another	09.03.1999
Rollender 2 (DH)	ALU	99301784.7	EP0944276	GB	A Method For Porting A Mobile Directory Number From One Wireless Service Provider To Another	09.03.1999
Samaras 7-5-7-19 (K)	ALU	00909517.5	EP1183796	DE	Time-Slot Partitioning In A TDMA System	14.03.2000
Samaras 7-5-7-19 (K)	ALU	00909517.5	EP1183796	GB	Time-Slot Partitioning In A TDMA System	14.03.2000
Samaras 7-5-7-19 (K)	ALU	00909517.5	EP1183796	FR	Time-Slot Partitioning In A TDMA System	14.03.2000
Samaras 7-5-7-19 (K)	ALU	09/980287	US7362734	US	Time-Slot Partitioning In A TDMA System	14.03.2000
Samaras 8-8 (K)	ALU	09/980288	US7206326	US	Unequal Error Protection For Packet Switched Networks	20.04.2000
Samaras 8-8 (K)	ALU	00922795.0	EP1183811	FR	Unequal Error Protection For Packet Switched Networks	20.04.2000
Samaras 8-8 (K)	ALU	00922795.0	EP1183811	DE	Unequal Error Protection For Packet Switched Networks	20.04.2000
Samaras 8-8 (K)	ALU	00922795.0	EP1183811	GB	Unequal Error Protection For Packet Switched Networks	20.04.2000
Sawyer 8 (AJ)	ALU	99118851.9	ZL99118851.9	CN	Time Synchronization Of Packetized Radio Signals To Base Stations	15.09.1999
Sawyer 8 (AJ)	ALU	262890/1999	JP3476720	JP	Time Synchronization Of Packetized Radio Signals To Base Stations	17.09.1999
Sawyer 8 (AJ)	ALU	09/154885	US6539004	US	Time Synchronization Of Packetized Radio Signals To Base Stations	17.09.1998
Rucki 2-16-2 (JS)	ALU	08/979478	US6006112	US	Transceiver With RF Loopback And Downlink Frequency Scanning	26.11.1997
Rupp 14 (M)	ALU	696/MAS/01	IN222515	IN	Training Sequence For Low Latency LMS Implementation	24.08.2001

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PATENT
REEL: 043877 FRAME: 0331

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Rupp 14 (M)	ALU	09/648983	US8165246	US	Training Sequence For Low Latency LMS Implementation	28.08.2000
Rupp 14 (M)	ALU	2001258491	JP5078206	JP	Training Sequence For Low Latency LMS Implementation	28.08.2001
Rupp 14 (M)	ALU	2351100	CA2351100	CA	Training Sequence For Low Latency LMS Implementation	20.06.2001
Sanjee 17 (I)	ALU	12/143353	US8537835	US	Methods And Apparatus For Self-Organized Caching In A Content Delivery Network	20.06.2008
Sanjee 17 (I)	ALU	20117001552	KR101228230	KR	Methods And Apparatus For Self-Organized Caching In A Content Delivery Network	04.05.2009
Sanjee 17 (I)	ALU	2011514582	JP5718225	JP	Methods And Apparatus For Self-Organized Caching In A Content Delivery Network	04.05.2009
Sanjee 17 (I)	ALU	09766981.6		EP	Methods And Apparatus For Self-Organized Caching In A Content Delivery Network	04.05.2009
Sanjee 17 (I)	ALU	200980123207.5	ZL200980123207.5	CN	Methods And Apparatus For Self-Organized Caching In A Content Delivery Network	04.05.2009
Sanjee 17 (I)	ALU	8236/CHENP/2010		IN	Methods And Apparatus For Self-Organized Caching In A Content Delivery Network	04.05.2009
Sarraf 17-8 (M)	ALU	09/371902	US6747948	US	Interleaver Scheme In An OFDM System With Multiple-Stream Data Sources	11.08.1999
Sarraf 19-11 (M)	ALU	10/636161	US7974255	US	Method And Apparatus For Multi-Stream Transmission With Time And Frequency Diversity In An Orthogonal Frequency Division Multiplexing (OFDM) Communication System	07.08.2003
Sarraf 20-12 (M)	ALU	09/396055	US6987752	US	Method And Apparatus For Frequency Offset Estimation And Interleaver Synchronization Using Periodic Signature Sequences	15.09.1999
Sarraf 31-18 (M)	ALU	10/342704	US8699746	US	Watermarking Scheme For Digital Video	15.01.2003
Sarraf 32-19 (M)	ALU	10/345029	US8666108	US	Watermarking Scheme For Digital Video	15.01.2003
Sajadieh 1-13-7 (M)	ALU	09/304830	US6928046	US	Frame Synchronization Of An OFDM Signal	05.05.1999
Savage 1 (SES)	ALU	09/168997	US5978237	US	Power Recovery System	09.10.1998
Rupp 14 (M)	ALU	20010051650	KR841851	KR	Training Sequence For Low Latency LMS Implementation	27.08.2001
Sackinger 8 (E)	ALU	09/498559	US6958668	US	Active Inductor	04.02.2000
Sackinger 8 (E)	ALU	01300507.9		EP	Active Inductor	22.01.2001
Sackinger 8 (E)	ALU	2001025399	JP4865136	JP	Active Inductor	01.02.2001
Schlenk 2-1 (R)	ALU	10/963270	US7233399	US	Feedback Control Of An Interferometer	12.10.2004
Schlenk 4 (R)	ALU	12/079341	US8295282	US	Method And Apparatus For Mac Address Learning	26.03.2008
Schlenk 4 (R)	ALU	200810090930.5	ZL200810090930.5	CN	Method And Apparatus For Mac Address Learning	28.03.2008
Schmid 3 (J)	ALU	01301472.5	EP1233276	GB	Boundary Scan Delay Chain For Cross-Chip Delay Measurement	19.02.2001
Schmid 3 (J)	ALU	01301472.5	EP1233276	FR	Boundary Scan Delay Chain For Cross-Chip Delay Measurement	19.02.2001
Schmid 3 (J)	ALU	01301472.5	EP1233276	DE	Boundary Scan Delay Chain For Cross-Chip Delay Measurement	19.02.2001
Schmid 3 (J)	ALU	2002037675	JP4152639	JP	Boundary Scan Delay Chain For Cross-Chip Delay Measurement	15.02.2002
Sherif 5-14-9-1-26 (MR)	ALU	11/951367	US8401331	US	Video Quality Analysis Using A Linear Approximation Technique	06.12.2007
Sharp 9 (RL)	ALU	12/569017	US8854314	US	Universal Interface Device With Housing Sensor Array Adapted For Detection Of Distributed Touch Input	29.09.2009
Sheehan 1 (MJ)	ALU	200549886	JP4602791	JP	Data Transfer To Nodes Of A Communication Network Using Self-Replicating Code	25.02.2005
Sheehan 1 (MJ)	ALU	20050013490	KR101110584	KR	Data Transfer To Nodes Of A Communication Network Using Self-Replicating Code	18.02.2005
Sheehan 1 (MJ)	ALU	200510050948.9	ZL200510050948.9	CN	Data Transfer To Nodes Of A Communication Network Using Self-Replicating Code	24.02.2005
Sheehan 1 (MJ)	ALU	10/786911	US7474656	US	Data Transfer To Nodes Of A Communication Network Using Self-Replicating Code	25.02.2004
Sheehan 1 (MJ)	ALU	05250873.6	EP1569113	FR	Data Transfer To Nodes Of A Communication Network Using Self-Replicating Code	15.02.2005
Sheehan 1 (MJ)	ALU	05250873.6	EP1569113	DE	Data Transfer To Nodes Of A Communication Network Using Self-Replicating Code	15.02.2005
Sheehan 1 (MJ)	ALU	05250873.6	EP1569113	GB	Data Transfer To Nodes Of A Communication Network Using Self-Replicating Code	15.02.2005
Shamlian 6-6 (JH)	ALU	7550/CHENP/2009		IN	Method And Apparatus For Providing Protocol Translation In Support Of IMS Services	18.06.2008
Shamlian 6-6 (JH)	ALU	08768568.1		EP	Method And Apparatus For Providing Protocol Translation In Support Of IMS Services	18.06.2008
Seymour 7-4 (JP)	ALU	09/133052	US6411613	US	A Method For Formatting And Conveying Information In A Wireless Telecommunication System	12.08.1998
Seymour 7-4 (JP)	ALU	99117527.1	ZL99117527.1	CN	A Method For Formatting And Conveying Information In A Wireless Telecommunication System	10.08.1999
Sharma 7 (R)	ALU	11/066082	US7548614	US	Audible Announcement Played To Calling Party Before Establishment Of Two Party Stable Call	25.02.2005
Sharma 1-13 (R)	ALU	09/328082	US6259728	US	Data Communication System And Method	08.06.1999
Sharma 22 (A)	ALU	11/521645	US8306529	US	A Method And Apparatus For Concurrent Registration Of Voice And Data Subscribers	15.09.2006

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0332

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Sharma 22 (A)	ALU	07837741.3	EP2064854	EP	A Method And Apparatus For Concurrent Registration Of Voice And Data Subscribers	05.09.2007
Sharma 22 (A)	ALU	2009527392	JP4892062	JP	A Method And Apparatus For Concurrent Registration Of Voice And Data Subscribers	05.09.2007
Sharma 22 (A)	ALU	1347CHENP/2009		IN	A Method And Apparatus For Concurrent Registration Of Voice And Data Subscribers	05.09.2007
Sharma 22 (A)	ALU	200780033652.3	ZL200780033652.3	CN	A Method And Apparatus For Concurrent Registration Of Voice And Data Subscribers	05.09.2007
Sharma 22 (A)	ALU	20097004764	KR101132158	KR	A Method And Apparatus For Concurrent Registration Of Voice And Data Subscribers	05.09.2007
Shah 11 (NJ)	ALU	09/082044	US7171463	US	System And Method For Denoting And Communicating With Computer Network Mobile Sites	20.05.1998
Smolik 7 (KF)	ALU	09/173349	US6381455	US	System And Method For Warning Of And Providing Greater Immunity From An Impending Call Drop In A Digital Wireless System	15.10.1998
Smolik 8-3 (KF)	ALU	09/272130	US6501736	US	System For Increasing The Call Capacity Of A Wireless Communication System	19.03.1999
Stuart 11 (HR)	ALU	10/640958	US7058259	US	Optical Device Having A Waveguide Lens With Multimode Interference	14.08.2003
Soljanin 8-1-12 (E)	ALU	11/418158	US7669103	US	Encoded Transmission	03.05.2006
Stichter 3 (AW)	ALU	2001056621	JP4856319	JP	Base Station Transceiver To Radio Network Controller Synchronization Filtering Function	01.03.2001
Stichter 3 (AW)	ALU	09/516195	US7068746	US	Base Station Transceiver To Radio Network Controller Synchronization Filtering Function	01.03.2000
Stichter 3 (AW)	ALU	20010010845	KR852608	KR	Base Station Transceiver To Radio Network Controller Synchronization Filtering Function	02.03.2001
Sneed 7-1 (EL)	ALU	99305353.7	EP0980055	GB	Wireless Parking Meter	06.07.1999
Sneed 7-1 (EL)	ALU	99305353.7	EP0980055	FR	Wireless Parking Meter	06.07.1999
Sneed 7-1 (EL)	ALU	99305353.7	EP0980055	DE	Wireless Parking Meter	06.07.1999
Srivastava 16 (A)	ALU	11/399726	US8046810	US	Method And Apparatus For Delivering Subscription Service Content To Roaming Users	07.04.2006
Srivastava 16 (A)	ALU	2009504236	JP5235862	JP	Method And Apparatus For Delivering Subscription Service Content To Roaming Users	30.03.2007
Srivastava 16 (A)	ALU	20087024363	KR100985626	KR	Method And Apparatus For Delivering Subscription Service Content To Roaming Users	30.03.2007
Srivastava 16 (A)	ALU	200780012510.9	ZL200780012510.9	CN	Method And Apparatus For Delivering Subscription Service Content To Roaming Users	30.03.2007
Stoll 2-2 (D)	ALU	10/945511	US7706272	US	Method And Apparatus For Computing Virtual Concatenation Group Bandwidth Data	20.09.2004
Silverman 51 (DP)	ALU	09/221920	US6363248	US	Intelligent Call Cellular Forwarding System Wherein Active Cell Information Is Utilized To Determine The Call Forwarding Number	28.12.1998
Slusky 8 (RD)	ALU	08/911689	US6009138	US	Lap Counting	15.08.1997
Simsarian 1-2 (JE)	ALU	10/323495	US6950450	US	Control Circuit For A Tunable Laser	18.12.2002
Sliva 6 (VP)	ALU	11/145392	US7949363	US	Methods And Systems For Efficient Conveyance Of Bandclass Information In Wireless Networks	03.06.2005
Sinsky 1 (JH)	ALU	09/311493	US6208222	US	Electromechanical Phase Shifter For A Microstrip Microwave Transmission Line	13.05.1999
Slusky 13 (RD)	ALU	09/815784	US6373229	US	Battery Charging System For Portable Electronic Devices	23.03.2001
Terrible 1 (MA)	ALU	09/850301	US7653787	US	Technique For Analyzing Internet Traffic To Select Hot Sites	07.05.2001
Towle 7 (TT)	ALU	11/098254	US7376081	US	Establishment Of QoS By Applications In Cellular Networks Using Service Based Policy Control Mechanisms	04.04.2005
Towle 8 (TT)	ALU	11/098162	US7414970	US	Provision Of Static QoS Control Using Dynamic Service Based Policy Mechanisms	04.04.2005
Taylor-Smith 15 (RE)	ALU	2005206286	JP5107511	JP	Solid State Proton Conductor System Derived From Hybrid Composite Inorganic-Organic Multicomponent Material	15.07.2005
Taylor-Smith 15 (RE)	ALU	20050064246	KR101216832	KR	Solid State Proton Conductor System Derived From Hybrid Composite Inorganic-Organic Multicomponent Material	15.07.2005
Taylor-Smith 15 (RE)	ALU	10/892979	US7563828	US	Solid State Proton Conductor System Derived From Hybrid Composite Inorganic-Organic Multicomponent Material	16.07.2004
Tao 2-14 (H)	ALU	20117007445	KR101207226	KR	Femto Cell Base Station And Method	02.09.2009
Tao 2-14 (H)	ALU	12/553178	US8315669	US	Femto Cell Base Station And Method	03.09.2009
Stuart 3 (HR)	ALU	09/584585	US6836494	US	Structure And Method For Processing Optical Energy	31.05.2000
Sydorenko 8-8 (O)	ALU	11/423555	US8164087	US	Organic Semiconductor Compositions With Nanoparticles	12.06.2006
Sydorenko 8-8 (O)	ALU	2009515430	JP5665315	JP	Organic Semiconductor Compositions With Nanoparticles	08.06.2007
Su 5-9 (H)	ALU	10/198597	US7239610	US	Methods And Devices For Partial Upper Layer Frame Loss Detection Based Retransmission	18.07.2002
Su 7-10 (H)	ALU	10/198591	US7764624	US	Methods And Devices For Preventing Protocol Stalling	18.07.2002

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Sydorenko 8-8 (O)	ALU	200780021685.6	ZL200780021685.6	CN	Organic Semiconductor Compositions With Nanoparticles	08.06.2007
Sydorenko 8-8 (O)	ALU	20087030133	KR101050617	KR	Organic Semiconductor Compositions With Nanoparticles	08.06.2007
Sydorenko 9-7 (O)	ALU	11/616968	US8106386	US	Organic Semiconductor Compositions Including Plasticizers	28.12.2006
Tao 2-14 (H)	ALU	2011525469	JPS184702	JP	Femto Cell Base Station And Method	02.09.2009
Tao 2-14 (H)	ALU	1533/CHENP/2011		IN	Femto Cell Base Station And Method	02.09.2009
Tao 2-14 (H)	ALU	200910205707.5	ZL200910205707.5	CN	Femto Cell Base Station And Method	04.09.2009
Sung 2 (P)	ALU	09/841487	US7035315	US	Doppler Corrected Communications Receiver And Method Of Removing Doppler Frequency Shift	24.04.2001
Viswanathan 1 (H)	ALU	09/152112	US6389040	US	Apparatus And Method For Generating A Frequency Offset Estimate For Communication Systems Having Frequency Selective Fading Channels	11.09.1998
Vuppula 1-1 (SB)	ALU	11/711012	US8077720	US	Methods And Devices For Generating And Forwarding Translated Mac Addresses	27.02.2007
Vuppula 1-1 (SB)	ALU	08725413.2	EP2119195	EP	Methods And Devices For Generating And Forwarding Translated Mac Addresses	11.02.2008
Viswanathan 16 (H)	ALU	09/955368	US7227905	US	Open-Loop Diversity Technique For Systems Employing Multi-Transmitter Antennas	18.09.2001
Viswanathan 16 (H)	ALU	11/737535	US7929653	US	Open-Loop Diversity Technique For Systems Employing Multi-Transmitter Antennas	19.04.2007
Vasudevan 11-9 (S)	ALU	05255350.0	EP1638361	DE	Method Of Conducting Rate Control, Scheduling And Acknowledgement In Wireless Communication System	01.09.2005
Vasudevan 11-9 (S)	ALU	05255350.0	EP1638361	GB	Method Of Conducting Rate Control, Scheduling And Acknowledgement In Wireless Communication System	01.09.2005
Venkatesan 4 (SK)	ALU	11/763046	US7885689	US	Suppressing Interference Using Beamforming Of Uplink Signals Received At Multiple Base Stations	14.06.2007
Vasudevan 11-9 (S)	ALU	10/941266	US8380195	US	Method Of Conducting Rate Control, Scheduling And Acknowledgement In Wireless Communication System	15.09.2004
Vasudevan 11-9 (S)	ALU	200510104074.0	ZL200510104074.0	CN	Method Of Conducting Rate Control, Scheduling And Acknowledgement In Wireless Communication System	15.09.2005
Vasudevan 11-9 (S)	ALU	20050085804	KR101164681	KR	Method Of Conducting Rate Control, Scheduling And Acknowledgement In Wireless Communication System	14.09.2005
Vasudevan 11-9 (S)	ALU	2005266140	JP5051992	JP	Method Of Conducting Rate Control, Scheduling And Acknowledgement In Wireless Communication System	14.09.2005
Werner 13-22 (D)	ALU	12/411436	US8254787	US	PMDC Feedback Arrangement For APOL-DPSK	26.03.2009
Vasudevan 11-9 (S)	ALU	05255350.0	EP1638361	FR	Method Of Conducting Rate Control, Scheduling And Acknowledgement In Wireless Communication System	01.09.2005
van der Gaast 10 (T)	ALU	2857/CHENP/2010		IN	Downloadable Ringtones For Usage In Emergency Situations	13.10.2008
van der Gaast 10 (T)	ALU	12/274003	US8483377	US	Downloadable Ringtones For Usage In Emergency Situations	19.11.2008
van der Gaast 10 (T)	ALU	07121112.2	EP2063620	EP	Downloadable Ringtones For Usage In Emergency Situations	20.11.2007
van der Gaast 10 (T)	ALU	2010534379	JP5829398	JP	Downloadable Ringtones For Usage In Emergency Situations	13.10.2008
van der Gaast 10 (T)	ALU	20107010606	KR10-1488231	KR	Downloadable Ringtones For Usage In Emergency Situations	13.10.2008
Vella-Coleiro 13 (GP)	ALU	09/042478	US6721298	US	Technique For Effectively Utilizing Bandwidth Of A Cable Network For Wireless Communications	16.03.1998
Vannucci 24 (G)	ALU	2241377	CA2241377	CA	Mobile Location Estimation In A Wireless System Using Designated Time Intervals Of Suspended Communication	22.06.1998
White 13 (CA)	ALU	12/195559	US8645801	US	Delivery Method For Internet Protocol Television (IPTV)	21.08.2008
Willigenburg 3 (Wv)	ALU	11/554062	US9154844	US	Method And Apparatus For Reducing Delays Due To Channel Changes	30.10.2006
Willigenburg 3 (Wv)	ALU	2212/CHENP/2009	IN285040	IN	Method And Apparatus For Reducing Delays Due To Channel Changes	10.10.2007
Willigenburg 3 (Wv)	ALU	20097008936	KR101036413	KR	Method And Apparatus For Reducing Delays Due To Channel Changes	10.10.2007
Willigenburg 3 (Wv)	ALU	200780040505.9	ZL200780040505.9	CN	Method And Apparatus For Reducing Delays Due To Channel Changes	10.10.2007
Winzer 1 (PJ)	ALU	10/134091	US7133622	US	Return-To-Zero (RZ) Optical Data Modulator	26.04.2002
Winzer 6 (PJ)	ALU	10/464318	US7450863	US	Optical Receiver For Wavelength-Division-Multiplexed Signals	18.06.2003
Werner 48-8 (J)	ALU	09/109364	US6252903	US	Blind Start-Up Of A Dual Mode CAP-QAM Receiver	02.07.1998
Walter 1-1 (HM)	ALU	09/034664	US6418151	US	Automatic Primary Reference Clock Switching For Synchronous Networks	03.03.1998
Wang 7-34-28 (X)	ALU	11/428958	US8000242	US	Reducing Packet Loss For A Packet Data Service During Congestion In A Transport Network	06.07.2006

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Wang 7-34-28 (X)	ALU	07809976.9		EP	Reducing Packet Loss For A Packet Data Service During Congestion In A Transport Network	26.06.2007
Wang 7-34-28 (X)	ALU	2/CHENP/2009	IN278093	IN	Reducing Packet Loss For A Packet Data Service During Congestion In A Transport Network	26.06.2007
Wang 2 (J)	ALU	09/295198	US6449625	US	Use Of A Two-Way Stack Approach To Optimize FLASH Memory Management For Embedded Database Systems	20.04.1999
Weaver 48 (CF)	ALU	7047/CHENP/2010		IN	Frequency Mapping For A Wireless Communication System	24.04.2009
Weaver 48 (CF)	ALU	200980116287.1	ZL200980116287.1	CN	Frequency Mapping For A Wireless Communication System	24.04.2009
Weaver 48 (CF)	ALU	09742990.6		EP	Frequency Mapping For A Wireless Communication System	24.04.2009
Weaver 48 (CF)	ALU	12/149602	US8054790	US	Frequency Mapping For A Wireless Communication System	05.05.2008
Weaver 48 (CF)	ALU	20107024914	KR101195406	KR	Frequency Mapping For A Wireless Communication System	24.04.2009
Weaver 48 (CF)	ALU	2011508482	JP5795530	JP	Frequency Mapping For A Wireless Communication System	24.04.2009
Werner 47-7 (J)	ALU	09/066189	US6314134	US	Blind Equalization Algorithm with Joint Use of the Constant Modulus Algorithm and the MultiModulus Algorithm	24.04.1998
Woo 19 (TY)	ALU	11011397	JP3393219	JP	Method And System For Half-Duplex Wireless Communication	20.01.1999
Woo 19 (TY)	ALU	99300171.8	EP0932276	DE	Method And System For Half-Duplex Wireless Communication	12.01.1999
Woo 19 (TY)	ALU	99300171.8	EP0932276	GB	Method And System For Half-Duplex Wireless Communication	12.01.1999
Woo 19 (TY)	ALU	99300171.8	EP0932276	FR	Method And System For Half-Duplex Wireless Communication	12.01.1999
Woo 19 (TY)	ALU	09/010076	US6370123	US	Method And System For Half-Duplex Wireless Communication	21.01.1998
Wang 8-35-29 (X)	ALU	20097000216	KR101097648	KR	Maintaining Quality Of Service For Multi-Media Packet Data Services In A Transport Network	29.06.2007
Wang 8-35-29 (X)	ALU	07810075.7		EP	Maintaining Quality Of Service For Multi-Media Packet Data Services In A Transport Network	29.06.2007
Wang 8-35-29 (X)	ALU	2009518305	JP4987974	JP	Maintaining Quality Of Service For Multi-Media Packet Data Services In A Transport Network	29.06.2007
Wang 8-35-29 (X)	ALU	11/428964	US9306853	US	Maintaining Quality Of Service For Multi-Media Packet Data Services In A Transport Network	06.07.2006
White 3 (CA)	ALU	09/693429	US6594429	US	Microstructured Multimode Fiber	20.10.2000
White 3 (CA)	ALU	01304120.7	EP1199581	GB	Microstructured Multimode Fiber	08.05.2001
White 3 (CA)	ALU	01304120.7	EP1199581	IT	Microstructured Multimode Fiber	08.05.2001
White 3 (CA)	ALU	01304120.7	EP1199581	FR	Microstructured Multimode Fiber	08.05.2001
White 3 (CA)	ALU	01304120.7	EP1199581	DE	Microstructured Multimode Fiber	08.05.2001
Wang 13 (J)	ALU	2010-102139	RU2461988	RU	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wang 13 (J)	ALU	MX/a/2009/013460	MX282946	MX	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wang 13 (J)	ALU	200880020339.0	ZL200880020339.0	CN	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wang 13 (J)	ALU	2010514813	JP5094971	JP	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wirstiuk 2 (BR)	ALU	10/434160	US7610063	US	System For Determining Information For Circuit Packs Connected By A Single Line Bus	09.05.2003
Wang 13 (J)	ALU	PI0812931-2		BR	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wang 13 (J)	ALU	20097026973	KR101100639	KR	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wang 13 (J)	ALU	202928	IL202928	IL	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wang 13 (J)	ALU	7457/CHENP/2009		IN	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wang 13 (J)	ALU	097123347	TW449358	TW	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	23.06.2008
Wang 13 (J)	ALU	11/769981	US7792082	US	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	28.06.2007
Watson 11 (GP)	ALU	11/968399	US8138495	US	Film Stress Management For MEMS Through Selective Relaxation	02.01.2008
Yang 7 (W)	ALU	20087020427	KR101353891	KR	Receiver Scheme For Synchronous Digital Transmission	22.02.2007
Yang 7 (W)	ALU	07751604.5		EP	Receiver Scheme For Synchronous Digital Transmission	22.02.2007
Yang 7 (W)	ALU	2008557317	JP5026441	JP	Receiver Scheme For Synchronous Digital Transmission	22.02.2007
Yang 7 (W)	ALU	200780007459.2	ZL200780007459.2	CN	Receiver Scheme For Synchronous Digital Transmission	22.02.2007
Yang 7 (W)	ALU	11/365254	US7577221	US	Receiver Scheme For Synchronous Digital Transmission	01.03.2006
Yen 3 (W)	ALU	09/425644	US6944141	US	Systems And Method For Phase Multiplexing In Assigning Frequency Channels For A Wireless Communication Network	22.10.1999
Yen 3 (W)	ALU	2000320252	JP3929691	JP	Systems And Method For Phase Multiplexing In Assigning Frequency Channels For A Wireless Communication Network	20.10.2000
Zhou 2 (Y)	ALU	11/145030	US7953415	US	Method And System For Wireless Number Portability	03.06.2005
Yang 9-3 (Z)	ALU	10/397659	US7330462	US	Managing Wireless Packet Service Resources	26.03.2003
Wysocki 18 (PF)	ALU	11/369364	US8744224	US	Tapered Fiber Bundle Apparatus With Monitoring Capability	07.03.2006

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Yun 2 (PM)	ALU	104450	JP3207148	JP	Silent Echo Generator For Mobile Position Search In A Wireless Communication System	13.01.1998
Xie 11 (C)	ALU	11/018458	US7376353	US	Method And Apparatus For Dispersion Management In Optical Mesh Networks	21.12.2004
Xie 19 (C)	ALU	407/DELNP/2011	IN282309	IN	PMDC Feedback Signal For Alternate Polarization DPSK System	17.07.2009
Xie 19 (C)	ALU	2011522048	JP5068390	JP	PMDC Feedback Signal For Alternate Polarization DPSK System	17.07.2009
Yang 12-14-9 (Y)	ALU	11/107010	US8885474	US	Method For Reverse Link Congestion Overload Control In Wireless High Speed Data Applications	15.04.2005
Yang 12-14-9 (Y)	ALU	200680012000.7	ZL80012000.7	CN	Method For Reverse Link Congestion Overload Control In Wireless High Speed Data Applications	28.03.2006
Yang 12-14-9 (Y)	ALU	20077023429	KR101208938	KR	Method For Reverse Link Congestion Overload Control In Wireless High Speed Data Applications	28.03.2006
Yang 12-14-9 (Y)	ALU	2008506484	JP5319274	JP	Method For Reverse Link Congestion Overload Control In Wireless High Speed Data Applications	28.03.2006
Yang 16-8 (Z)	ALU	10/369159	US7020260	US	Enhanced Flexible Alerting	19.02.2003
Yang 20-11 (Z)	ALU	10/624015	US7031697	US	Correlation Of Call Data For Calling And Called Parties In Wireless Telecommunication Networks	21.07.2003
Zarrabizadeh 22 (MH)	ALU	10/673892	US8861922	US	Watermarking Scheme For Digital Video	29.09.2003
Zarrabizadeh 22 (MH)	ALU	2004214560	AU2004214560	AU	Watermarking Scheme For Digital Video	24.09.2004
Zarrabizadeh 22 (MH)	ALU	20040077302	KR101110084	KR	Watermarking Scheme For Digital Video	24.09.2004
Zarrabizadeh 22 (MH)	ALU	200410082619.8	ZL10082619.8	CN	Watermarking Scheme For Digital Video	24.09.2004
Zarrabizadeh 23 (MH)	ALU	10/673894	US7646881	US	Watermarking Scheme For Digital Video	29.09.2003
Zhang 3 (Z)	ALU	10/141207	US6784731	US	System And Method For Reducing Amplifier Distortion Using Distortion Feedback	08.05.2002
Zhang 8 (B)	ALU	10/424690	US7251492	US	Frequency Reuse Scheme For Downlink Power Channels In A Sectorized Network	29.05.2003
Yang 5 (W)	ALU	10/835448	US7286731	US	Monolithically Integrated Optical Coupler With Substantially No Splitting Loss	29.04.2004
Zarrabizadeh 23 (MH)	ALU	200410082617.9	ZL10082617.9	CN	Watermarking Scheme For Digital Video	24.09.2004
Zarrabizadeh 23 (MH)	ALU	2477515	CA2477515	CA	Watermarking Scheme For Digital Video	16.08.2004
Zarrabizadeh 23 (MH)	ALU	2004214556	AU2004214556	AU	Watermarking Scheme For Digital Video	24.09.2004
Zarrabizadeh 23 (MH)	ALU	20040076856	KR101110083	KR	Watermarking Scheme For Digital Video	24.09.2004
131299	ALU	12/381970	US8040878	US	OUTPUT DRIVEN MEMORY BASED SWITCH FOR TDM AND PACKET DATA CROSSCONNECTION	18.03.2009
803720	ALU	12/571263	US8289037	US	Method And Apparatus To Measure Current In Power Switchers	30.09.2009
801623	ALU	07291341.1	EP2059077	FR	Digital RF Combining Device for Indoor Wireless Systems	08.11.2007
801623	ALU	07291341.1	EP2059077	DE	Digital RF Combining Device for Indoor Wireless Systems	08.11.2007
801623	ALU	07291341.1	EP2059077	GB	Digital RF Combining Device for Indoor Wireless Systems	08.11.2007
803521	ALU	12/652615	US8713597	US	Authenticating And Off-Loading IPTV Operations From Mobile Devices To Fixed Rendering Viewing Devices	05.01.2010
805120	ALU	12/426227	US8266506	US	Method And Apparatus For Multiset Membership Testing Using Combinatorial Bloom Filters	18.04.2009
804656	ALU	0902855	FR2946826	FR	Intelligent notification and rewarding engine in the Parental Control system	11.06.2009
805067	ALU	12/611187	US8532441	US	Optical Device For Wavelength Locking	03.11.2009
804613	ALU	12/423600	US8837287	US	Application-Specific Management Of High-Bandwidth Transfers	14.04.2009
804501	ALU	09290683.3	EP2293493	EP	Core Network Native Multicast (CNNM)	08.09.2009
803514	ALU	12/422281	US9042216	US	Loop Prevention Mechanism for the ITU Standard ITU-T G.8032 Ethernet Ring Protection	12.04.2009
804342	ALU	09290280.8	EP2242215	EP	Dataplane solution to prevent Black Holing of customer frames in Ethernet switched networks	16.04.2009
121336	ALU	20097005708	KR101355878	KR	SINGLE COIL MULTIPLE ORDER DSL SPLITTER BASED ON COIL ENHANCEMENT.	21.09.2007
803141	ALU	09161643.3		EP	Proxy-based SIP third party call control	02.06.2009
803141	ALU	2009172622	JP5761901	JP	Proxy-based SIP third party call control	24.07.2009
803141	ALU	12/457365	US9294517	US	Proxy-based SIP third party call control	09.06.2009
802793	ALU	200910149190.2	ZL200910149190.2	CN	Multisuser receiver scheme for RDMA (Radial Space Division Multiple Access)	26.06.2009
802793	ALU	12/492562	US8396095	US	Multisuser receiver scheme for RDMA (Radial Space Division Multiple Access)	26.06.2009
804617	ALU	10290170.9		EP	Dispersion Monitoring Algorithm for Optical Dual Polarization Coherent Transmission Systems	31.03.2010

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
805009	ALU	12/435492	US8243578	US	Frequency Signatures For Crosstalk Source Identification	05.05.2009
801841	ALU	12/433424	US8605883	US	Dynamic preemption	30.04.2009
Gabara 71-9 (TJ)	ALU	01304255.1	EP1158824	FR	Control Technique For A Communication System	14.05.2001
Gabara 71-9 (TJ)	ALU	01304255.1	EP1158824	DE	Control Technique For A Communication System	14.05.2001
Gabara 71-9 (TJ)	ALU	01304255.1	EP1158824	GB	Control Technique For A Communication System	14.05.2001
106311	ALU	200780035194.7	ZL200780035194.7	CN	DBR LASER WITH COMPRESSIVELY STRAINED MATERIAL PROVIDING ENHANCED TUNABILITY	19.09.2007
805071	ALU	12/495391	US8018972	US	Improved Timing Over Packet Performance	30.06.2009
					Centralized Node Clock Auto Reconfiguration	
805072	ALU	12/492882	US8149881	US		26.06.2009
804293	ALU	12/387401	US7990871	US	Per Flow Packet Flooding Control at Egress PE on MPLS Domain	01.05.2009
121037	ALU	04292971.1	EP1669880	FR	INCREASED NUMBER OF POSSIBILITIES WHILE USING FEW PINS.	13.12.2004
121037	ALU	04292971.1	EP1669880	DE	INCREASED NUMBER OF POSSIBILITIES WHILE USING FEW PINS.	13.12.2004
121037	ALU	04292971.1	EP1669880	GB	INCREASED NUMBER OF POSSIBILITIES WHILE USING FEW PINS.	13.12.2004
805141	ALU	12/387339	US8433056	US	Configurable Signal Suspension And Validated Resumption In DSL Systems	02.05.2009
804449	ALU	12/427513	US8352600	US	A System And Method For Determining A Maximum Packet Data Unit (PDU) Payload Transmission Size For Communicating In A Managed Computer Network System	21.04.2009
804416	ALU	12/432524	US8000264	US	Configuration Management Of IP/MPLS Router Rings	29.04.2009
804428	ALU	12/386279	US7944924	US	Handling Of Received Implicit Null Packets	16.04.2009
805099	ALU	09305529.1		EP	APPLICATION AWARE TRAFFIC MANAGEMENT BASED ON SOURCE IDENTIFICATION	10.06.2009
803894	ALU	12/387241	US8213326	US	Method and Apparatus for the Classification of Ports On a Data Communications Network Node	30.04.2009
803588	ALU	09290249.3		EP	Multi-Speaker Communication Environment	02.04.2009
805108	ALU	12/387301	US7956788	US	Interleaved Photonic Analog-To-Digital Converter	30.04.2009
Guo 10-6-34-11 (KH)	ALU	12/478130	US7801957	US	Apparatus And Method For Fair Message Exchanges In Distributed Multi-Player Games	04.06.2009
137945	ALU	06300980.7	EP1768321	FR	Interworking Circuit Emulation Service Over Packet (CESoP) and IP/MPLS Packet Processing	26.09.2006
137945	ALU	06300980.7	EP1768321	DE	Interworking Circuit Emulation Service Over Packet (CESoP) and IP/MPLS Packet Processing	26.09.2006
137945	ALU	06300980.7	EP1768321	GB	Interworking Circuit Emulation Service Over Packet (CESoP) and IP/MPLS Packet Processing	26.09.2006
804418	ALU	12/437191	US8238265	US	Auto-Binding SDP RSVP LSP Tunnel	07.05.2009
804107	ALU	09290242.8		EP	Terminal Equipment for Multi-Speaker Communication	31.03.2009
803348	ALU	12/455708	US8031596	US	Trusted plane for routing equipment embedding a tamper resistant device	05.06.2009
121347	ALU	2844/CHENP/2009	IN272621	IN	NETWORK PRESENCE AWARE IPTV SERVICES	12.12.2007
121347	ALU	2009541852	JP5302210	JP	NETWORK PRESENCE AWARE IPTV SERVICES	12.12.2007
121347	ALU	20097012635	KR101386953	KR	NETWORK PRESENCE AWARE IPTV SERVICES	12.12.2007
137741	ALU	05300067.5	EP1562326	FR	Intelligent Access Control and Warning System for Network Operators	28.01.2005
137741	ALU	05300067.5	EP1562326	DE	Intelligent Access Control and Warning System for Network Operators	28.01.2005
137741	ALU	05300067.5	EP1562326	GB	Intelligent Access Control and Warning System for Network Operators	28.01.2005
150311	ALU	200880003567.7	ZL200880003567.7	CN	Redundant Far-End Pseudo-Wire Connectivity	29.01.2008
131302	ALU	05291018.9	EP1722495	FR	METHOD FOR TRANSMISSION OF OPTICAL CHANNELS AT HIGH BIT-RATE OVER DISPERSIVE OPTICAL FIBRES THROUGH SELECTION OF SUITABLE WAVELENGTH RANGES	11.05.2005
131302	ALU	05291018.9	EP1722495	DE	METHOD FOR TRANSMISSION OF OPTICAL CHANNELS AT HIGH BIT-RATE OVER DISPERSIVE OPTICAL FIBRES THROUGH SELECTION OF SUITABLE WAVELENGTH RANGES	11.05.2005
131302	ALU	05291018.9	EP1722495	HU	METHOD FOR TRANSMISSION OF OPTICAL CHANNELS AT HIGH BIT-RATE OVER DISPERSIVE OPTICAL FIBRES THROUGH SELECTION OF SUITABLE WAVELENGTH RANGES	11.05.2005
131302	ALU	05291018.9	EP1722495	IT	METHOD FOR TRANSMISSION OF OPTICAL CHANNELS AT HIGH BIT-RATE OVER DISPERSIVE OPTICAL FIBRES THROUGH SELECTION OF SUITABLE WAVELENGTH RANGES	11.05.2005
131302	ALU	05291018.9	EP1722495	PL	METHOD FOR TRANSMISSION OF OPTICAL CHANNELS AT HIGH BIT-RATE OVER DISPERSIVE OPTICAL FIBRES THROUGH SELECTION OF SUITABLE WAVELENGTH RANGES	11.05.2005

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
131302	ALU	05291018.9	EP1722495	ES	METHOD FOR TRANSMISSION OF OPTICAL CHANNELS AT HIGH BIT-RATE OVER DISPERSIVE OPTICAL FIBRES THROUGH SELECTION OF SUITABLE WAVELENGTH RANGES	11.05.2005
131302	ALU	05291018.9	EP1722495	TR	METHOD FOR TRANSMISSION OF OPTICAL CHANNELS AT HIGH BIT-RATE OVER DISPERSIVE OPTICAL FIBRES THROUGH SELECTION OF SUITABLE WAVELENGTH RANGES	11.05.2005
131302	ALU	05291018.9	EP1722495	GB	METHOD FOR TRANSMISSION OF OPTICAL CHANNELS AT HIGH BIT-RATE OVER DISPERSIVE OPTICAL FIBRES THROUGH SELECTION OF SUITABLE WAVELENGTH RANGES	11.05.2005
Acharya 28-12-15 (S)	ALU	07754614.1	EP2005745	FR	Delivery Of Subscription Services To Roaming Users Through Head End Equipment	30.03.2007
Acharya 28-12-15 (S)	ALU	07754614.1	EP2005745	DE	Delivery Of Subscription Services To Roaming Users Through Head End Equipment	30.03.2007
Acharya 28-12-15 (S)	ALU	07754614.1	EP2005745	GB	Delivery Of Subscription Services To Roaming Users Through Head End Equipment	30.03.2007
802718	ALU	12/453975	US9351335	US	Broadcast services and DSL backhauled Femto Base Stations	28.05.2009
803465	ALU	09161035.2		EP	Communication Hyperlink System	25.05.2009
137986	ALU	06795277.0	EP1889422	FR	Packet Classification Acceleration Using Spectral Analysis	24.05.2006
137986	ALU	06795277.0	EP1889422	DE	Packet Classification Acceleration Using Spectral Analysis	24.05.2006
137986	ALU	06795277.0	EP1889422	GB	Packet Classification Acceleration Using Spectral Analysis	24.05.2006
803437	ALU	200910205742.7	ZL200910205742.7	CN	Lower WSS-consuming OXC architecture optimized for high connectivity	30.06.2009
803437	ALU	12/459300	US8457496	US	Lower WSS-consuming OXC architecture optimized for high connectivity	30.06.2009
Vannucci 24 (G)	ALU	98305579.9	EP0893930	DE	Mobile Location Estimation In A Wireless System Using Designated Time Intervals Of Suspended Communication	14.07.1998
Vannucci 24 (G)	ALU	98305579.9	EP0893930	GB	Mobile Location Estimation In A Wireless System Using Designated Time Intervals Of Suspended Communication	14.07.1998
804824	ALU	12/545680	US8369332	US	Server-Side Load Balancing Using Parent-Child Link Aggregation Groups	21.08.2009
805161	ALU	12/472879	US8737953	US	A Fault-Resilient Method Of Generating Complete Correlated IMS Charging Data Records	27.05.2009
805311	ALU	12/495331	US8351964	US	Message Delivery Over LTE Networks	30.06.2009
804425	ALU	12/478572	US8040822	US	Configuring Communication Services Using Policy Groups	04.06.2009
801461	ALU	200910147531.2	ZL200910147531.2	CN	Fabrication of polarization insensitive quantum dots based devices for optical fiber communications	18.06.2009
801461	ALU	2009146068	JP5384217	JP	Fabrication of polarization insensitive quantum dots based devices for optical fiber communications	19.06.2009
801461	ALU	12/457463	US7968863	US	Fabrication of polarization insensitive quantum dots based devices for optical fiber communications	11.06.2009
801079	ALU	2010501408	JP5030315	JP	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	17.03.2008
805075	ALU	12/635373	US8345570	US	Network Impairment Metrics For Timing Over Packet	10.12.2009
800790	ALU	2009545141	JP5050252	JP	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	09.01.2008
800790	ALU	20097014404	KR101407457	KR	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	09.01.2008
805181	ALU	12/640975	US8270523	US	Crosstalk Control Method And Apparatus Using A Bandwidth-Adaptive Precoder Interface	17.12.2009
804716	ALU	09290441.6		EP	Variable concentrator for flexible bitrate transponders	12.06.2009
804414	ALU	12/485549	US9118502	US	Auto VPN Troubleshooting	16.06.2009
805296	ALU	12/498702	US8699836	US	An Optical Coupler	07.07.2009
Abys 43-7-3-1-2 (JA)	ALU	00307856.5	EP1087648	DE	Multi-Purpose Finish For Printed Wiring Boards And Method Of Manufacture Of Such Boards	11.09.2000
Abys 43-7-3-1-2 (JA)	ALU	00307856.5	EP1087648	GB	Multi-Purpose Finish For Printed Wiring Boards And Method Of Manufacture Of Such Boards	11.09.2000
803457	ALU	12/459247	US8321369	US	Introducing collaborative methods for telecommunication management network security	29.06.2009
803457	ALU	200910151715.6	ZL200910151715.6	CN	Introducing collaborative methods for telecommunication management network security	06.07.2009
803457	ALU	2011515420	JP5307238	JP	Introducing collaborative methods for telecommunication management network security	30.06.2009
803457	ALU	1020107029497	KR101202212	KR	Introducing collaborative methods for telecommunication management network security	30.06.2009
Mueckenheim 24-13 (J)	ALU	05257703.8	EP1677563	FR	Channel Assignment Based On Service Type And Wireless Communication Environment	15.12.2005
Mueckenheim 24-13 (J)	ALU	05257703.8	EP1677563	DE	Channel Assignment Based On Service Type And Wireless Communication Environment	15.12.2005
Mueckenheim 24-13 (J)	ALU	05257703.8	EP1677563	GB	Channel Assignment Based On Service Type And Wireless Communication Environment	15.12.2005
802836	ALU	200910151766.9	ZL200910151766.9	CN	Polarization insensitive injection locked laser diodes for access applications	13.07.2009
802836	ALU	2009168333	JP5950490	JP	Polarization insensitive injection locked laser diodes for access applications	17.07.2009

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
802836	ALU	20090065430	KR101084851	KR	Polarization insensitive injection locked laser diodes for access applications	17.07.2009
802836	ALU	12/458504	US8130801	US	Polarization insensitive injection locked laser diodes for access applications	14.07.2009
805484	ALU	12/534397		US	Dynamic Ad Scheduling Method For Improving Utility In Interactive TV Environment	03.08.2009
800817	ALU	08763073.7	EP2140626	EP	Mechanism To Dynamically Optimize Pseudowires Based On The Collected End-to-End Cost	22.02.2008
802939	ALU	200910173304.7	ZL200910173304.7	CN	Communication release interactive task creation	23.06.2009
802939	ALU	12/489784	US8571196	US	Communication release interactive task creation	23.06.2009
803458	ALU	200910151714.1	ZL101621408A	CN	Methods for real-time data streaming in a network management system	06.07.2009
803458	ALU	12/459260	US8700762	US	Methods for real-time data streaming in a network management system	29.06.2009
803458	ALU	7569/CHENP/2010		IN	Methods for real-time data streaming in a network management system	30.06.2009
803458	ALU	2011515419	JP5079917	JP	Methods for real-time data streaming in a network management system	30.06.2009
803458	ALU	1020117000023	KR101230944	KR	Methods for real-time data streaming in a network management system	30.06.2009
805250	ALU	12/635814	US8223947	US	Method And System For Remote Call Forwarding Set-Up And Modification	11.12.2009
802700	ALU	200910151782.8	ZL200910151782.8	CN	Adaptive non-linearity compensation in coherent receiver	15.07.2009
802700	ALU	7570/CHENP/2010		IN	Adaptive non-linearity compensation in coherent receiver	10.07.2009
802700	ALU	2011-517881	JP5238881	JP	Adaptive non-linearity compensation in coherent receiver	10.07.2009
802700	ALU	1020117001597	KR101213416	KR	Adaptive non-linearity compensation in coherent receiver	10.07.2009
802939	ALU	09163521.9		EP	Communication release interactive task creation	23.06.2009
805512	ALU	12/492391	US8355638	US	Receiver For Optical Transverse-Mode-Multiplexed Signals	26.06.2009
805508	ALU	12/585977	US9106572	US	Immobilization Module For Security On A Communication System	30.09.2009
805344	ALU	12/569227	US8337220	US	Interior Network Ground	29.09.2009
805006	ALU	10-2011-7030825	KR101251897	KR	Crosstalk Cancellation On Lines Terminated At Multiple Line Termination Cards	10.06.2010
801530	ALU	07291056.5	EP2031807	FR	Significance Aware Multi Rate Multi Color Policer without Remarking for use with significance differentiated services in a network	31.08.2007
801530	ALU	07291056.5	EP2031807	DE	Significance Aware Multi Rate Multi Color Policer without Remarking for use with significance differentiated services in a network	31.08.2007
801530	ALU	07291056.5	EP2031807	IT	Significance Aware Multi Rate Multi Color Policer without Remarking for use with significance differentiated services in a network	31.08.2007
801530	ALU	07291056.5	EP2031807	GB	Significance Aware Multi Rate Multi Color Policer without Remarking for use with significance differentiated services in a network	31.08.2007
805420	ALU	1055356	FR2962231	FR	Optical fiber coupling by bonding with optoelectronic components	02.07.2010
805204	ALU	12/495779	US8218979	US	High Spectral-Efficiency Coherent Optical OFDM With Large Dispersion Tolerance	30.06.2009
804417	ALU	12/495346	US8326976	US	Configuring Application Management Reporting In A Communication Network	30.06.2009
803045	ALU	09164229.8		EP	Added-value label manager implementation for RSVP-TE in WDM networks	30.06.2009
103453	ALU	02716891.3	EP1371250	DE	DRX PARAMETERS CONFIGURATION BY A DTE FOR GPRS APPLICATION DO NOT DROP SEE LINK	14.03.2002
103453	ALU	02716891.3	EP1371250	GB	DRX PARAMETERS CONFIGURATION BY A DTE FOR GPRS APPLICATION DO NOT DROP SEE LINK	14.03.2002
103453	ALU	02716891.3	EP1371250	FR	DRX PARAMETERS CONFIGURATION BY A DTE FOR GPRS APPLICATION DO NOT DROP SEE LINK	14.03.2002
805182	ALU	13/194347	US9036999	US	Frame/Symbol Synchronization In Coherent Optical OFDM	29.07.2011
803005	ALU	12/495345	US8166352	US	Alarm Correlation With Rules And Model	30.06.2009
805354	ALU	09290785.6		EP	N+N activated shared protection	15.10.2009
804050	ALU	12/459349	US8102760	US	Sub 50ms Reconvergence in a Dual Homing Topology	30.06.2009
De Lind Van Wijngaarden 26-3-17-2 (AJ)	ALU	2011512456	JP5450605	JP	Signal Suspension And Resumption In DSL Systems	28.05.2009

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PATENT
REEL: 043877 FRAME: 0339

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
801330	ALU	07291276.9	EP2051456	FR	A global hierarchical scheduling device for packet switch matrix	18.10.2007
801330	ALU	07291276.9	EP2051456	DE	A global hierarchical scheduling device for packet switch matrix	18.10.2007
801330	ALU	07291276.9	EP2051456	GB	A global hierarchical scheduling device for packet switch matrix	18.10.2007
805073	ALU	12/635312	US8339995	US	Network Sync Planning And Failure Simulations	10.12.2009
805074	ALU	12/635341	US8203969	US	Network Timing Topology VIA Network Manager	10.12.2009
131340	ALU	07290455.0	EP1981216	FR	1:1 Protection Schemes for Dual Node Interconnection	13.04.2007
131340	ALU	07290455.0	EP1981216	DE	1:1 Protection Schemes for Dual Node Interconnection	13.04.2007
131340	ALU	07290455.0	EP1981216	GB	1:1 Protection Schemes for Dual Node Interconnection	13.04.2007
Mooney 12-31-39 (CF)	ALU	12/460202	US8285289	US	Inter-RAT Idle Handoff Triggering Messages	15.07.2009
139422	ALU	06010797.6	EP1734690	FR	PERFORMANCE MONITORING OF FRAME TRANSMISSION IN DATA NETWORK OAM PROTOCOLS	26.05.2006
139422	ALU	06010797.6	EP1734690	DE	PERFORMANCE MONITORING OF FRAME TRANSMISSION IN DATA NETWORK OAM PROTOCOLS	26.05.2006
139422	ALU	06010797.6	EP1734690	GB	PERFORMANCE MONITORING OF FRAME TRANSMISSION IN DATA NETWORK OAM PROTOCOLS	26.05.2006
803993	ALU	09176827.5		EP	Application to select dynamically the best Wireless Network Interface in a dual-mode handset	24.11.2009
Balachandran 18-10 25-3-51 (K)	ALU	01306134.6	EP1179910	FR	Radio Link Control With Limited Retransmissions For Streaming Services	17.07.2001
Balachandran 18-10 25-3-51 (K)	ALU	01306134.6	EP1179910	DE	Radio Link Control With Limited Retransmissions For Streaming Services	17.07.2001
Balachandran 18-10 25-3-51 (K)	ALU	01306134.6	EP1179910	IT	Radio Link Control With Limited Retransmissions For Streaming Services	17.07.2001
Balachandran 18-10 25-3-51 (K)	ALU	01306134.6	EP1179910	ES	Radio Link Control With Limited Retransmissions For Streaming Services	17.07.2001
Balachandran 18-10 25-3-51 (K)	ALU	01306134.6	EP1179910	GB	Radio Link Control With Limited Retransmissions For Streaming Services	17.07.2001
105979	ALU	07109027.8	EP1863202	FR	AUTOMATIC LEVEL CONTROLLED CHANNEL MANAGEMENT FOR WDM TRANSMISSION WITH FILTERING FUNCTIONS	28.05.2007
105979	ALU	07109027.8	EP1863202	DE	AUTOMATIC LEVEL CONTROLLED CHANNEL MANAGEMENT FOR WDM TRANSMISSION WITH FILTERING FUNCTIONS	28.05.2007
105979	ALU	07109027.8	EP1863202	GB	AUTOMATIC LEVEL CONTROLLED CHANNEL MANAGEMENT FOR WDM TRANSMISSION WITH FILTERING FUNCTIONS	28.05.2007
804913	ALU	09290748.4		EP	MRU - Maximizing Resources Utilization to plan the optical busses establishment and dimensioning	30.09.2009
800008	ALU	2009551157	JP5330273	JP	Multi-band Low Noise Amplifier RF IC Module including electronic for digital control, for diversity antenna systems	08.02.2008
114850	ALU	06301069.8	EP1914911	FR	Electro-optical system for CDMA and UMTS	20.10.2006
114850	ALU	06301069.8	EP1914911	DE	Electro-optical system for CDMA and UMTS	20.10.2006
114850	ALU	06301069.8	EP1914911	GB	Electro-optical system for CDMA and UMTS	20.10.2006
801905	ALU	07425539.9	EP2031799	FR	Method for supervising an autonomic network	29.08.2007
801905	ALU	07425539.9	EP2031799	DE	Method for supervising an autonomic network	29.08.2007
801905	ALU	07425539.9	EP2031799	GB	Method for supervising an autonomic network	29.08.2007
131300	ALU	05291106.2	EP1727316	FR	EXTENSION TO RSVP-TE FOR SUPPORTING OAM CONFIGURATION	23.05.2005
131300	ALU	05291106.2	EP1727316	DE	EXTENSION TO RSVP-TE FOR SUPPORTING OAM CONFIGURATION	23.05.2005
131300	ALU	05291106.2	EP1727316	IT	EXTENSION TO RSVP-TE FOR SUPPORTING OAM CONFIGURATION	23.05.2005
131300	ALU	05291106.2	EP1727316	NL	EXTENSION TO RSVP-TE FOR SUPPORTING OAM CONFIGURATION	23.05.2005
131300	ALU	05291106.2	EP1727316	ES	EXTENSION TO RSVP-TE FOR SUPPORTING OAM CONFIGURATION	23.05.2005
131300	ALU	05291106.2	EP1727316	GB	EXTENSION TO RSVP-TE FOR SUPPORTING OAM CONFIGURATION	23.05.2005
805239	ALU	12/462443	US8285148	US	Achievable Spectral Efficiency estimation in coherent receivers	04.08.2009
114634	ALU	06290921.3	EP1855399	FR	Adaptive Pre/Post compensation rules for Intelligent transponder applied to systems migration to higher bit rates than 10Gb/s.	08.05.2006
114634	ALU	06290921.3	EP1855399	DE	Adaptive Pre/Post compensation rules for Intelligent transponder applied to systems migration to higher bit rates than 10Gb/s.	08.05.2006
114634	ALU	06290921.3	EP1855399	GB	Adaptive Pre/Post compensation rules for Intelligent transponder applied to systems migration to higher bit rates than 10Gb/s.	08.05.2006
803279	ALU	09167168.5		EP	iSL - Identifying Service Level Specification at the Network layer	04.08.2009
Khan 44 (FU)	ALU	05252723.1	EP1601224	FR	Method Of Reducing Overhead In Data Packet Communication	29.04.2005
Khan 44 (FU)	ALU	05252723.1	EP1601224	DE	Method Of Reducing Overhead In Data Packet Communication	29.04.2005
Khan 44 (FU)	ALU	05252723.1	EP1601224	GB	Method Of Reducing Overhead In Data Packet Communication	29.04.2005
106116	ALU	06776165.0	EP2030379	FR	EXTENDED SIGNALLING PROCEDURES FOR ENHANCED SERVICES	07.06.2006

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
106116	ALU	06776165.0	EP2030379	DE	EXTENDED SIGNALLING PROCEDURES FOR ENHANCED SERVICES	07.06.2006
106116	ALU	06776165.0	EP2030379	GB	EXTENDED SIGNALLING PROCEDURES FOR ENHANCED SERVICES	07.06.2006
803780	ALU	12/461841	US8373242	US	Photonic Power Switch And Method Of Controlling Current Flow In The Photonic Power Switch And Use Of Such Photonic Power Switch	26.08.2009
114731	ALU	05291661.6	EP1750380	FR	Decision feedback equalizer with analog feedback and eye monitor for automatic coefficient and threshold adaptation	02.08.2005
114731	ALU	05291661.6	EP1750380	DE	Decision feedback equalizer with analog feedback and eye monitor for automatic coefficient and threshold adaptation	02.08.2005
114731	ALU	05291661.6	EP1750380	GB	Decision feedback equalizer with analog feedback and eye monitor for automatic coefficient and threshold adaptation	02.08.2005
115006	ALU	06291267.0	EP1884758	GB	Control loop for an integrated measurement procedure	03.08.2006
105952	ALU	05300944.5	EP1788833	FR	FLEXIBLE NODE ARCHITECTURE (R-OADM AND n-BRANCH NODE) WITH FULL PROTECTION (EXPRESS AND ADDED TRAFFIC)	18.11.2005
105952	ALU	05300944.5	EP1788833	DE	FLEXIBLE NODE ARCHITECTURE (R-OADM AND n-BRANCH NODE) WITH FULL PROTECTION (EXPRESS AND ADDED TRAFFIC)	18.11.2005
105952	ALU	05300944.5	EP1788833	IT	FLEXIBLE NODE ARCHITECTURE (R-OADM AND n-BRANCH NODE) WITH FULL PROTECTION (EXPRESS AND ADDED TRAFFIC)	18.11.2005
105952	ALU	05300944.5	EP1788833	ES	FLEXIBLE NODE ARCHITECTURE (R-OADM AND n-BRANCH NODE) WITH FULL PROTECTION (EXPRESS AND ADDED TRAFFIC)	18.11.2005
105952	ALU	05300944.5	EP1788833	GB	FLEXIBLE NODE ARCHITECTURE (R-OADM AND n-BRANCH NODE) WITH FULL PROTECTION (EXPRESS AND ADDED TRAFFIC)	18.11.2005
105952	ALU	05300944.5	EP1788833	NL	FLEXIBLE NODE ARCHITECTURE (R-OADM AND n-BRANCH NODE) WITH FULL PROTECTION (EXPRESS AND ADDED TRAFFIC)	18.11.2005
150238	ALU	200880017276.3	ZL200880017276.3	CN	Detection Of Spam/Telemarketing Phone Campaigns With Impersonated Caller Identities In Converged Networks	15.05.2008
Bhatia 13-15-27 (RS)	ALU	200880010894.5	ZL200880010894.5	CN	Method and Apparatus For Providing Interactive Services To Users Using Unicast And Broadcast Wireless Networks	13.03.2008
802122	ALU	07291421.1	EP2066044	FR	Method to increase the span length in optical OFDM systems	29.11.2007
802122	ALU	07291421.1	EP2066044	DE	Method to increase the span length in optical OFDM systems	29.11.2007
802122	ALU	07291421.1	EP2066044	GB	Method to increase the span length in optical OFDM systems	29.11.2007
805955	ALU	12/635265	US8576698	US	CFM Timeout Interval Control To Support Hitless Software Upgrades	10.12.2009
114061	ALU	06020659.6	EP1737148	FR	Optical Data Packet source	30.09.2006
114061	ALU	06020659.6	EP1737148	DE	Optical Data Packet source	30.09.2006
114061	ALU	06020659.6	EP1737148	GB	Optical Data Packet source	30.09.2006
104564	ALU	04290499.5	EP1455451	FR	RTD-BASED RZ DECISION CIRCUIT	25.02.2004
104564	ALU	04290499.5	EP1455451	DE	RTD-BASED RZ DECISION CIRCUIT	25.02.2004
104564	ALU	04290499.5	EP1455451	GB	RTD-BASED RZ DECISION CIRCUIT	25.02.2004
114622	ALU	05292483.4	EP1788730	FR	constant gain EDFA with fixed tilt loss compensation	21.11.2005
114622	ALU	05292483.4	EP1788730	DE	constant gain EDFA with fixed tilt loss compensation	21.11.2005
114622	ALU	05292483.4	EP1788730	GB	constant gain EDFA with fixed tilt loss compensation	21.11.2005
120721	ALU	12/564502	US8457132	US	Per adapter routing table	22.09.2009
Doerr 131-31 (CR)	ALU	12/586639	US7929813	US	Compact 16 QAM Optical Modulator	25.09.2009
806008	ALU	12/565600	US8180227	US	Digital Coherent Detection Of Multi-Carrier Optical Signal	23.09.2009
Dimeo 1-19-4-9 (RW)	ALU	01301959.1	EP1182788	FR	Band Edge Amplitude Reduction System And Method	05.03.2001
Dimeo 1-19-4-9 (RW)	ALU	01301959.1	EP1182788	DE	Band Edge Amplitude Reduction System And Method	05.03.2001
Dimeo 1-19-4-9 (RW)	ALU	01301959.1	EP1182788	GB	Band Edge Amplitude Reduction System And Method	05.03.2001
805370	ALU	0959335	FR2954547	FR	Hosted and managed security service for non-technical people using network behavior techniques	21.12.2009
800830	ALU	08103384.7	EP1998513	FR	Adaptive jitter buffer for asynchronous connection support	04.04.2008
800830	ALU	08103384.7	EP1998513	DE	Adaptive jitter buffer for asynchronous connection support	04.04.2008
800830	ALU	08103384.7	EP1998513	GB	Adaptive jitter buffer for asynchronous connection support	04.04.2008
805174	ALU	0956727	FR2950765	FR	"void" regeneration for multiplexing of multi-modulation rates optical packets	29.09.2009
Pfeiffer 26 (LN)	ALU	12/587058	US7927978	US	Devices Including Graphene Layers Epitaxially Grown On Single Crystal Substrates	01.10.2009
805656	ALU	12/627571	US8325744	US	Privacy Mechanism for Processing In Shared IPTV Environment	30.11.2009
805839	ALU	12/685895	US8643929	US	High Speed Nested Mach-Zehnder Modulator With Asymmetric Carrier Dynamics	12.01.2010
805842	ALU	12/639525	US8326109	US	Low-Cost Fast Variable Optical Attenuator For Optical Wavelength Tracking	16.12.2009
805937	ALU	12/641601	US8238017	US	Photonic Match Filter	18.12.2009
805557	ALU	12/642762	US8526831	US	Receiver Algorithms For Coherent Detection Of Polarization-Multiplexed Optical Signals	18.12.2009

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
805986	ALU	1000182	FR2955435	FR	Coherent receiver optimization through enhanced digital spectral analysis	18.01.2010
805762	ALU	0906197	FR2954637	FR	Efficient scheme for protection in systems based on coherent detection	21.12.2009
806009	ALU	12/685470	US8483575	US	Apparatus And Method For Generating Frequency-Locked Optical Comb Sources	11.01.2010
800503	ALU	200880014785.0	ZL80014785.0	CN	New Mechanisms for Commerical Insertion	30.04.2008
800503	ALU	08747142.1	EP2153650	EP	New Mechanisms for Commerical Insertion	30.04.2008
105610	ALU	05766719.8	EP1757073	FR	NEAREST SERVER DETECTION	31.05.2005
105610	ALU	05766719.8	EP1757073	DE	NEAREST SERVER DETECTION	31.05.2005
105610	ALU	05766719.8	EP1757073	GB	NEAREST SERVER DETECTION	31.05.2005
800161	ALU	07290769.4	EP2007082	FR	LOGIC FOR DETECTING NETWORK CONGESTION	20.06.2007
800161	ALU	07290769.4	EP2007082	DE	LOGIC FOR DETECTING NETWORK CONGESTION	20.06.2007
800161	ALU	07290769.4	EP2007082	GB	LOGIC FOR DETECTING NETWORK CONGESTION	20.06.2007
Liu 67-26 (X)	ALU	12/712247	US8611751	US	System, Apparatus And Method For Communication Data VIA Polarization Multiplexing	25.02.2010
804336	ALU	12/488507	US7869709	US	Channel Identification in Communications Networks	19.06.2009
805424	ALU	12/615439	US8295712	US	An Optical Device And Method For Linear Optical Frequency Modulation To Optical Amplitude Modulation Conversion	10.11.2009
Duttweiler 29 (DL)	ALU	00307592.6	EP1094616	FR	Quadrature Filter Augmentation Of Echo Canceler Basis Functions	04.09.2000
Duttweiler 29 (DL)	ALU	00307592.6	EP1094616	DE	Quadrature Filter Augmentation Of Echo Canceler Basis Functions	04.09.2000
Duttweiler 29 (DL)	ALU	00307592.6	EP1094616	GB	Quadrature Filter Augmentation Of Echo Canceler Basis Functions	04.09.2000
Balachandran 12-39 15 (K)	ALU	06023311.1	EP1758277	FR	Burst Based Access And Assignment Method For Providing Real-Time Services	27.11.2000
Balachandran 12-39 15 (K)	ALU	06023311.1	EP1758277	DE	Burst Based Access And Assignment Method For Providing Real-Time Services	27.11.2000
Balachandran 12-39 15 (K)	ALU	06023311.1	EP1758277	GB	Burst Based Access And Assignment Method For Providing Real-Time Services	27.11.2000
806150	ALU	12/640997	US8270524	US	Method And Apparatus For Interference Post-Compensation Using A Bandwidth-Adaptive Postcoder Interface	17.12.2009
801369	ALU	200880015974.X	ZL200880015974.X	CN	Dual OSS Management of an Ethernet Access Network	14.05.2008
801369	ALU	6637/CHENP/2009		IN	Dual OSS Management of an Ethernet Access Network	14.05.2008
801369	ALU	2010508554	JP5142233	JP	Dual OSS Management of an Ethernet Access Network	14.05.2008
801369	ALU	20097023739	KR101160402	KR	Dual OSS Management of an Ethernet Access Network	14.05.2008
121089	ALU	04293061.0	EP1672809	FR	LINE MEASUREMENT IN RT TO DERIVE TRANSMIT PSD AT THE RT.	20.12.2004
121089	ALU	04293061.0	EP1672809	DE	LINE MEASUREMENT IN RT TO DERIVE TRANSMIT PSD AT THE RT.	20.12.2004
121089	ALU	04293061.0	EP1672809	GB	LINE MEASUREMENT IN RT TO DERIVE TRANSMIT PSD AT THE RT.	20.12.2004
801942	ALU	08290213.1	EP2099240	FR	Location Service for Indoor WiMAX Systems	04.03.2008
801942	ALU	08290213.1	EP2099240	DE	Location Service for Indoor WiMAX Systems	04.03.2008
801942	ALU	08290213.1	EP2099240	GB	Location Service for Indoor WiMAX Systems	04.03.2008
804999	ALU	09306275.0	EP2337251	EP	Synchronization Interface in a small form factor pluggable module (SFFPM)	18.12.2009
800319	ALU	200880100791.8	ZL200880100791.8	CN	A Method And Tool For XML Policy Matching	17.07.2008
801048	ALU	629/CHENP/2010	IN278225	IN	CROSSTALK CHANNEL ESTIMATION BEFORE MODEM INITIALIZATION	25.07.2008
801048	ALU	20107002868	KR10-1449975	KR	CROSSTALK CHANNEL ESTIMATION BEFORE MODEM INITIALIZATION	25.07.2008
Espindola 12-10-15 (RP)	ALU	99307259.4	EP0989422	FR	Tapered Optical Fiber Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	14.09.1999
Espindola 12-10-15 (RP)	ALU	99307259.4	EP0989422	DE	Tapered Optical Fiber Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	14.09.1999
Espindola 12-10-15 (RP)	ALU	99307259.4	EP0989422	IT	Tapered Optical Fiber Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	14.09.1999
Espindola 12-10-15 (RP)	ALU	99307259.4	EP0989422	GB	Tapered Optical Fiber Devices With Variable Index Coatings For Modifying Guide Properties Of The Fundamental Mode	14.09.1999
121185	ALU	7017/CHENP/2009		IN	REAL-TIME REMOTE CONTROL ADAPTATION TO IPTV SERVICE OPTIONSD AND PROFILE	15.05.2008

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PATENT
REEL: 043877 FRAME: 0342

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
121185	ALU	2010509709	JP5728227	JP	REAL-TIME REMOTE CONTROL ADAPTATION TO IPTV SERVICE OPTIONSD AND PROFILE	15.05.2008
Feder 20-6 (PM)	ALU	07762540.8	EP1977624	FR	QoS-Aware Paging In A Wireless Communication System	11.01.2007
Feder 20-6 (PM)	ALU	07762540.8	EP1977624	DE	QoS-Aware Paging In A Wireless Communication System	11.01.2007
Feder 20-6 (PM)	ALU	07762540.8	EP1977624	GB	QoS-Aware Paging In A Wireless Communication System	11.01.2007
803070	ALU	09174715.4	EP2182677	EP	Security Assurance and Control at Network Management Layer	30.10.2009
806349	ALU	09290859.9	EP2323216	EP	Antenna Apparatus and Antenna Selection Method	12.11.2009
114739	ALU	04026902.9	EP1657839	FR	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	DE	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	IT	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	ES	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	GB	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
803786	ALU	200980150412.0	ZL200980150412.0	CN	ADAPTIVE PCN LEVELS	30.11.2009
803786	ALU	13/129907	US8688855	US	ADAPTIVE PCN LEVELS	30.11.2009
139455	ALU	06024691.5	EP1806903	FR	CUSTOM PRESENCE ICONS	29.11.2006
139455	ALU	06024691.5	EP1806903	DE	CUSTOM PRESENCE ICONS	29.11.2006
139455	ALU	06024691.5	EP1806903	GB	CUSTOM PRESENCE ICONS	29.11.2006
Millen 1-1 (SL)	ALU	12/655884	US7953388	US	Retrieving Jurisdiction Information From Home Location Register	07.01.2010
Namjoshi 5-18 (KS)	ALU	12/610825	US8683590	US	Method And Apparatus For Pattern Matching For Intrusion Detection/Prevention Systems	02.11.2009
803277	ALU	13/130005	US8824265	US	PREJOINING: ANTICIPATING THE ACTIVATION OF A DSL LINE	01.12.2009
806254	ALU	12/696642	US8493870	US	Method And Apparatus For Tracing Mobile Sessions	29.01.2010
806271	ALU	12/696425	US8542576	US	Method And Apparatus For Auditing 4G Mobility Networks	29.01.2010
Kulkarni 3-122 (NA)	ALU	12/657386	US7929945	US	Measurement Data Record Method For Detecting Hybrid Mobile Tune Away	20.01.2010
Bijwaard 7-17-5 (DJ)	ALU	07852782.7	EP2076998	FR	Method And Apparatus For Establishing Multicast Groups	16.10.2007
Bijwaard 7-17-5 (DJ)	ALU	07852782.7	EP2076998	DE	Method And Apparatus For Establishing Multicast Groups	16.10.2007
Bijwaard 7-17-5 (DJ)	ALU	07852782.7	EP2076998	GB	Method And Apparatus For Establishing Multicast Groups	16.10.2007
150023	ALU	06300057.4	EP1705967	FR	Off-grid Decoupling of BGA Devices	23.01.2006
150023	ALU	06300057.4	EP1705967	DE	Off-grid Decoupling of BGA Devices	23.01.2006
150023	ALU	06300057.4	EP1705967	GB	Off-grid Decoupling of BGA Devices	23.01.2006
121022	ALU	04290905.1	EP1585253	FR	HOME IP PLUG CONTROLLER.	05.04.2004
121022	ALU	04290905.1	EP1585253	DE	HOME IP PLUG CONTROLLER.	05.04.2004
121022	ALU	04290905.1	EP1585253	IT	HOME IP PLUG CONTROLLER.	05.04.2004
121022	ALU	04290905.1	EP1585253	NL	HOME IP PLUG CONTROLLER.	05.04.2004
121022	ALU	04290905.1	EP1585253	PL	HOME IP PLUG CONTROLLER.	05.04.2004
121022	ALU	04290905.1	EP1585253	ES	HOME IP PLUG CONTROLLER.	05.04.2004
121022	ALU	04290905.1	EP1585253	TR	HOME IP PLUG CONTROLLER.	05.04.2004
121022	ALU	04290905.1	EP1585253	GB	HOME IP PLUG CONTROLLER.	05.04.2004
806290	ALU	12/696520	US8868029	US	Method And Apparatus For Managing Mobile Resource Usage	29.01.2010
806101	ALU	10305246.0		EP	Cross-layer Design for Partial Interference Cancellation	12.03.2010
139343	ALU	06007636.1	EP1718030	FR	A MECHANISM FOR CONTROLLING GROUP BEHAVIOR IN RICH PRESENCE SERVICE	12.04.2006
139343	ALU	06007636.1	EP1718030	DE	A MECHANISM FOR CONTROLLING GROUP BEHAVIOR IN RICH PRESENCE SERVICE	12.04.2006
139343	ALU	06007636.1	EP1718030	GB	A MECHANISM FOR CONTROLLING GROUP BEHAVIOR IN RICH PRESENCE SERVICE	12.04.2006
806165	ALU	10305312.0		EP	Transform Virtual Objects into Physical Objects	26.03.2010
806261	ALU	10305311.2		EP	System and Method for Transforming Web from 2D into 3D	26.03.2010
805976	ALU	12/657195	US8379522	US	Link Aggregation Flood Control	15.01.2010
804444	ALU	12/787981	US8625458	US	Dynamic Route Cost Adjustment Of VRRP Enabled Subnets For Routing Protocols	26.05.2010
806190	ALU	10290213.7	EP2381597	EP	Low-Cost HW Fading Simulator using RRH	21.04.2010
805850	ALU	12/801014	US8314654	US	Multi-Band High-Efficiency Doherty Amplifier	17.05.2010
806550	ALU	12/826397	US8644337	US	Authorizing QoS Per QCI	29.06.2010
805935	ALU	12/883315	US8655881	US	Method And Apparatus For Automatically Tagging Content	16.09.2010
806412	ALU	12/801049	US8433327	US	Methods Of Determining Coverage Areas	19.05.2010
805557	ALU	12/642764	US8571423	US	Receiver Algorithms For Coherent Detection Of Polarization-Multiplexed Optical Signals	18.12.2009
805557	ALU	12/642765	US8295714	US	Receiver Algorithms For Coherent Detection Of Polarization-Multiplexed Optical Signals	18.12.2009

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
800705	ALU	200780053621.4	ZL200780053621.4	CN	Earthing kit with partly sealed locking tabs	02.07.2007
800705	ALU	12/667350	US8052490	US	Earthing kit with partly sealed locking tabs	02.07.2007
801920	ALU	200880102014.7	ZL200880102014.7	CN	HYBRID APPLICATION IDENTIFICATION USING STATISTICALLY GENERATED RULES FOR ENCRYPTED TRAFFIC	06.08.2008
801920	ALU	2010519464	JP4955107	JP	HYBRID APPLICATION IDENTIFICATION USING STATISTICALLY GENERATED RULES FOR ENCRYPTED TRAFFIC	06.08.2008
801920	ALU	20107002924	KR1110956	KR	HYBRID APPLICATION IDENTIFICATION USING STATISTICALLY GENERATED RULES FOR ENCRYPTED TRAFFIC	06.08.2008
Li 13-33-55 (L)	ALU	200880023618.2	ZL200880023618.2	CN	Routing Protocol For A Network Employing Multi-User Wireless Channels	26.06.2008
Li 13-33-55 (L)	ALU	601/CHENP/2010		IN	Routing Protocol For A Network Employing Multi-User Wireless Channels	26.06.2008
Li 13-33-55 (L)	ALU	2010516025	JP5204225	JP	Routing Protocol For A Network Employing Multi-User Wireless Channels	26.06.2008
Li 13-33-55 (L)	ALU	20097027404	KR101528788	KR	Routing Protocol For A Network Employing Multi-User Wireless Channels	26.06.2008
804594	ALU	201010118247.5	ZL201010118247.5	CN	Software architecture to merge telephony services over heterogeneous network	23.02.2010
804594	ALU	230/CHE/2010		IN	Software architecture to merge telephony services over heterogeneous network	29.01.2010
804594	ALU	12/712318	US8369270	US	Software architecture to merge telephony services over heterogeneous network	25.02.2010
806285	ALU	12/760165	US8244128	US	Optical Waveguide Multiplexer	14.04.2010
806350	ALU	12/640385	US8526985	US	Geo Concentrated Video Detection	17.12.2009
134150	ALU	04018514.2	EP1509009	FR	ADAPTIVE ECMP TO A DESTINATION NETWORK BASED ON REVERSE TRAFFIC	05.08.2004
134150	ALU	04018514.2	EP1509009	DE	ADAPTIVE ECMP TO A DESTINATION NETWORK BASED ON REVERSE TRAFFIC	05.08.2004
134150	ALU	04018514.2	EP1509009	GB	ADAPTIVE ECMP TO A DESTINATION NETWORK BASED ON REVERSE TRAFFIC	05.08.2004
806566	ALU	12/718019	US8301037	US	Iterative Carrier-Phase Estimation And Data Recovery for Coherent Optical Receivers	05.03.2010
806541	ALU	1004335	FR2967319	FR	PDM 3PSK modulation format for increase tolerance to non linear effects	04.11.2010
806543	ALU	1001076	FR2957735	FR	Dynamic Narrow Optical TX Filtering For Ultra High Density Optical Network	18.03.2010
806699	ALU	12/828017	US8675663	US	Method for QoS Authorization	30.06.2010
Nandagopal 20-56 (I)	ALU	12/646274	US8385206	US	Improvements To Single And Dual Rate Three Color Marker Systems	23.12.2009
801521	ALU	08851372.6		EP	Methods for Simplifying Prepaid Calling Card Procedures in VoIP and IMS Networks	22.10.2008
801521	ALU	2305/CHENP/2010		IN	Methods for Simplifying Prepaid Calling Card Procedures in VoIP and IMS Networks	22.10.2008
801521	ALU	20107008855	KR101460393	KR	Methods for Simplifying Prepaid Calling Card Procedures in VoIP and IMS Networks	22.10.2008
805938	ALU	12/826955	US8954515	US	Method And Apparatus For Reducing Application Update Traffic In Cellular Networks	30.06.2010
806405	ALU	13/025908	US8612386	US	Method And Apparatus For Peer-To-Peer Database Synchronization In Dynamic Networks	11.02.2011
806659	ALU	12/713664	US8589571	US	Method And Apparatus For Screening Request To Establish SIP Session	26.02.2010
803447	ALU	10150114.6		EP	Method And System For Triggering Enriched Presence	05.01.2010
Cheng 22-15-12 (F)	ALU	12/684250	US7903605	US	Coordinating Transmission Scheduling Among Multiple Base Stations	08.01.2010
Balachandran 31-16 28-4-1 (K)	ALU	04251888.6	EP1469641	FR	Scheduler And Method For Scheduling Transmissions In A Communication Network	30.03.2004
Balachandran 31-16 28-4-1 (K)	ALU	04251888.6	EP1469641	DE	Scheduler And Method For Scheduling Transmissions In A Communication Network	30.03.2004
Balachandran 31-16 28-4-1 (K)	ALU	04251888.6	EP1469641	GB	Scheduler And Method For Scheduling Transmissions In A Communication Network	30.03.2004
801248	ALU	07291354.4	EP2058993	FR	Method of efficiency improvement for switch mode power amplifiers by input signal interleaving	12.11.2007
801248	ALU	07291354.4	EP2058993	DE	Method of efficiency improvement for switch mode power amplifiers by input signal interleaving	12.11.2007
801248	ALU	07291354.4	EP2058993	GB	Method of efficiency improvement for switch mode power amplifiers by input signal interleaving	12.11.2007
150203	ALU	12/719967	US8259731	US	Fast Adaptive TCAM Sorting Algorithm For IPv4 And IPv6 Longest Prefix Matching	09.03.2010
140571	ALU	06012215.7	EP1734688	FR	A solution to perfect IGMP zapping performance using intelligent user tracking table algorithm	14.06.2006

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
140571	ALU	06012215.7	EP1734688	DE	A solution to perfect IGMP zapping performance using intelligent user tracking table algorithm	14.06.2006
140571	ALU	06012215.7	EP1734688	GB	A solution to perfect IGMP zapping performance using intelligent user tracking table algorithm	14.06.2006
131283	ALU	05290643.5	EP1705831	FR	DEADLOCK DETECTION IN AN ASON NETWORK	23.03.2005
131283	ALU	05290643.5	EP1705831	DE	DEADLOCK DETECTION IN AN ASON NETWORK	23.03.2005
131283	ALU	05290643.5	EP1705831	GB	DEADLOCK DETECTION IN AN ASON NETWORK	23.03.2005
801322	ALU	07291379.1	EP2063583	FR	Steering data traffic in client data cards for dual data trunk implementation	20.11.2007
801322	ALU	07291379.1	EP2063583	DE	Steering data traffic in client data cards for dual data trunk implementation	20.11.2007
801322	ALU	07291379.1	EP2063583	GB	Steering data traffic in client data cards for dual data trunk implementation	20.11.2007
114739	ALU	04026902.9	EP1657839	PL	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	AT	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	FI	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	GR	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	IE	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	NL	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	SE	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	CH	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
114739	ALU	04026902.9	EP1657839	TR	New transport entity "ODU0" for the Optical Transport Hierarchy (OTH)	12.11.2004
806814	ALU	12/724542	US8463908	US	Hierarchical Resource Management in Network Management System	16.03.2010
121130	ALU	05290496.8	EP1699172	FR	LOCALISING HOME NETWORK FAULT.	04.03.2005
121130	ALU	05290496.8	EP1699172	DE	LOCALISING HOME NETWORK FAULT.	04.03.2005
121130	ALU	05290496.8	EP1699172	GB	LOCALISING HOME NETWORK FAULT.	04.03.2005
102077	ALU	00402020.2	EP1076470	FR	Space and spectrum selector.	13.07.2000
102077	ALU	00402020.2	EP1076470	DE	Space and spectrum selector.	13.07.2000
102077	ALU	00402020.2	EP1076470	GB	Space and spectrum selector.	13.07.2000
Eckl 8-20-3 (WF)	ALU	02254974.5	EP1383234	DE	Varactor With Extended Tuning Range	16.07.2002
Eckl 8-20-3 (WF)	ALU	02254974.5	EP1383234	GB	Varactor With Extended Tuning Range	16.07.2002
806876	ALU	12/659032		US	Source Based Queue Selection Mechanism In The Routing Environment	23.02.2010
106043	ALU	07731751.9	EP1999933	FR	INTERACTIVE USER PROFILE COMMUNITY	16.03.2007
106043	ALU	07731751.9	EP1999933	DE	INTERACTIVE USER PROFILE COMMUNITY	16.03.2007
106043	ALU	07731751.9	EP1999933	GB	INTERACTIVE USER PROFILE COMMUNITY	16.03.2007
800383	ALU	07290927.8	EP2019511	FR	Peering Monitor for Equivalent Access Bandwidth	24.07.2007
800383	ALU	07290927.8	EP2019511	DE	Peering Monitor for Equivalent Access Bandwidth	24.07.2007
800383	ALU	07290927.8	EP2019511	IT	Peering Monitor for Equivalent Access Bandwidth	24.07.2007
800383	ALU	07290927.8	EP2019511	ES	Peering Monitor for Equivalent Access Bandwidth	24.07.2007
800383	ALU	07290927.8	EP2019511	GB	Peering Monitor for Equivalent Access Bandwidth	24.07.2007
800304	ALU	200880104130.2	ZL200880104130.2	CN	RSVP-TE Enhancements For MPLS/FRR Bandwidth Optimization	31.07.2008
800304	ALU	1534/CHENP/2010		IN	RSVP-TE Enhancements For MPLS/FRR Bandwidth Optimization	31.07.2008
800304	ALU	2010525489	JP5420547	JP	RSVP-TE Enhancements For MPLS/FRR Bandwidth Optimization	31.07.2008
800304	ALU	20107006015	KR101468763	KR	RSVP-TE Enhancements For MPLS/FRR Bandwidth Optimization	31.07.2008
Ma 27-1 (Z)	ALU	PI0904328-4		BR	Method Of Reconfiguring Sector Coverage In In-Building Communications System	27.02.2009
Ma 27-1 (Z)	ALU	1102/CHENP/2010		IN	Method Of Reconfiguring Sector Coverage In In-Building Communications System	27.02.2009
Ma 27-1 (Z)	ALU	2011552008	JP5362042	JP	Method Of Reconfiguring Sector Coverage In In-Building Communications System	27.02.2009
Ma 27-1 (Z)	ALU	20107021377	KR101562523	KR	Method Of Reconfiguring Sector Coverage In In-Building Communications System	27.02.2009
806935	ALU	12/658910	US8537831	US	Method And System For Common Group Action Filtering In Telecom Network Environments	17.02.2010
Johnson 6-1-17 (RE)	ALU	00307643.7	EP1085668	FI	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	04.09.2000
Johnson 6-1-17 (RE)	ALU	00307643.7	EP1085668	FR	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	04.09.2000

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Johnson 6-1-17 (RE)	ALU	00307643.7	EP1085668	DE	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	04.09.2000
Johnson 6-1-17 (RE)	ALU	00307643.7	EP1085668	SE	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	04.09.2000
Johnson 6-1-17 (RE)	ALU	00307643.7	EP1085668	GB	Method And Apparatus For Reducing Adjacent Channel Power In Wireless Communication Systems	04.09.2000
121127	ALU	05292346.3	EP1783996	FR	ADVANCED ADSL SPLITTER.	04.11.2005
121127	ALU	05292346.3	EP1783996	DE	ADVANCED ADSL SPLITTER.	04.11.2005
121127	ALU	05292346.3	EP1783996	GB	ADVANCED ADSL SPLITTER.	04.11.2005
105749	ALU	05112672.0	EP1677179	FR	SYMBOLOLOGY-BASED ORIGINAL CARTOGRAPHIC ZOOMING	21.12.2005
105749	ALU	05112672.0	EP1677179	DE	SYMBOLOLOGY-BASED ORIGINAL CARTOGRAPHIC ZOOMING	21.12.2005
105749	ALU	05112672.0	EP1677179	GB	SYMBOLOLOGY-BASED ORIGINAL CARTOGRAPHIC ZOOMING	21.12.2005
806442	ALU	12/751534	US8913496	US	System And Method For Dynamically Policing Network Traffic Based On Egress Queue Status	31.03.2010
106015	ALU	05850404.4	EP1964331	FR	LOGICAL PORT DEFINITION TO SUPPORT UNIDIRECTIONAL ETHERNET PORTS	13.12.2005
106015	ALU	05850404.4	EP1964331	DE	LOGICAL PORT DEFINITION TO SUPPORT UNIDIRECTIONAL ETHERNET PORTS	13.12.2005
106015	ALU	05850404.4	EP1964331	GB	LOGICAL PORT DEFINITION TO SUPPORT UNIDIRECTIONAL ETHERNET PORTS	13.12.2005
801274	ALU	200880112832.5	ZL200880112832.5	CN	Receiver Architecture for scalable video streams over TDMA/TDMA-OFDM/OFDMA communication system providing multimedia broadcast and multicast services	20.10.2008
801274	ALU	08842276.1		EP	Receiver Architecture for scalable video streams over TDMA/TDMA-OFDM/OFDMA communication system providing multimedia broadcast and multicast services	20.10.2008
801274	ALU	12/739198	US8934469	US	Receiver Architecture for scalable video streams over TDMA/TDMA-OFDM/OFDMA communication system providing multimedia broadcast and multicast services	20.10.2008
804683	ALU	201080029204.8	ZL201080029204.8	CN	Linking Inner and Outer MPLS Labels	22.06.2010
804683	ALU	2012518549	JP5426024	JP	Linking Inner and Outer MPLS Labels	22.06.2010
804110	ALU	201080019606.X	ZL201080019606	CN	A Method For Controlling Admission Of Undeclared Traffic Flows In Data Communication Systems	22.04.2010
804110	ALU	8109/CHENP/2011		IN	A Method For Controlling Admission Of Undeclared Traffic Flows In Data Communication Systems	22.04.2010
804110	ALU	2012507688	JP5245007	JP	A Method For Controlling Admission Of Undeclared Traffic Flows In Data Communication Systems	22.04.2010
802007	ALU	08290016.8	EP2079196	FR	Method for protecting a network configurarion set up by a spanning tree protocol	08.01.2008
802007	ALU	08290016.8	EP2079196	DE	Method for protecting a network configurarion set up by a spanning tree protocol	08.01.2008
802007	ALU	08290016.8	EP2079196	GB	Method for protecting a network configurarion set up by a spanning tree protocol	08.01.2008
801623	ALU	2628/CHENP/2010		IN	Digital RF Combining Device for Indoor Wireless Systems	19.09.2008
801623	ALU	2010-532524	JP4955814	JP	Digital RF Combining Device for Indoor Wireless Systems	19.09.2008
801623	ALU	10-2010-7010091	KR10-1188121	KR	Digital RF Combining Device for Indoor Wireless Systems	19.09.2008
121339	ALU	07291509.3	EP2071815	FR	DSL OVERVOLTAGE PROTECTION	12.12.2007
121339	ALU	07291509.3	EP2071815	DE	DSL OVERVOLTAGE PROTECTION	12.12.2007
121339	ALU	07291509.3	EP2071815	GB	DSL OVERVOLTAGE PROTECTION	12.12.2007
801248	ALU	2693/CHENP/2010		IN	Method of efficiency improvement for switch mode power amplifiers by input signal interleaving	29.10.2008
801248	ALU	2010-533532	JP4960508	JP	Method of efficiency improvement for switch mode power amplifiers by input signal interleaving	29.10.2008
801248	ALU	10-2010-7010322	KR101112459	KR	Method of efficiency improvement for switch mode power amplifiers by input signal interleaving	29.10.2008
802700	ALU	08290696.7	EP2146448	FR	Adaptive non-linearity compensation in coherent receiver	16.07.2008
802700	ALU	08290696.7	EP2146448	DE	Adaptive non-linearity compensation in coherent receiver	16.07.2008
802700	ALU	08290696.7	EP2146448	GB	Adaptive non-linearity compensation in coherent receiver	16.07.2008
800833	ALU	08305284.5	EP2007049	FR	ROADM architecture for multi-bit-rates operation	19.06.2008
800833	ALU	08305284.5	EP2007049	DE	ROADM architecture for multi-bit-rates operation	19.06.2008
800833	ALU	08305284.5	EP2007049	GB	ROADM architecture for multi-bit-rates operation	19.06.2008
806837	ALU	12/877367	US8463672	US	Method And Apparatus For Facilitating Interim Billing For IMS Session Using Time-Based Interim Accounting Message To Determine Interim Processing Trigger	08.09.2010
806507	ALU	1001933	FR2959898	FR	On The Fly Data Sharing Conference based on email diffusion	05.05.2010
800834	ALU	08103607.1	EP1986361	FR	New WSS-based OXC architecture including XPM-mitigation	18.04.2008
800834	ALU	08103607.1	EP1986361	DE	New WSS-based OXC architecture including XPM-mitigation	18.04.2008
800834	ALU	08103607.1	EP1986361	GB	New WSS-based OXC architecture including XPM-mitigation	18.04.2008
806614	ALU	1052956	FR2959077	FR	Single stage, Low Noise Figure, voltage variable gain amplifier with constant input linearity.	19.04.2010

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
106292	ALU	07820111.8	EP2074714	FR	REPETEUR MULTI ENTREE POUR SYSTEME HYBRIDE SATELLITE/TERRESTRE	11.09.2007
106292	ALU	07820111.8	EP2074714	DE	REPETEUR MULTI ENTREE POUR SYSTEME HYBRIDE SATELLITE/TERRESTRE	11.09.2007
106292	ALU	07820111.8	EP2074714	GB	REPETEUR MULTI ENTREE POUR SYSTEME HYBRIDE SATELLITE/TERRESTRE	11.09.2007
807116	ALU	12/724578	US8589936	US	Borrower Prioritization And Pre-emption Process In Hierarchical Resource Management	16.03.2010
801321	ALU	07301656.0	EP2071755	FR	Mini Reconfigurable Optical Add Drop Multiplexer (ROADM) Ring	11.12.2007
801321	ALU	07301656.0	EP2071755	DE	Mini Reconfigurable Optical Add Drop Multiplexer (ROADM) Ring	11.12.2007
801321	ALU	07301656.0	EP2071755	GB	Mini Reconfigurable Optical Add Drop Multiplexer (ROADM) Ring	11.12.2007
801926	ALU	3735/CHENP/2010		IN	DYNAMIC TRACKING OF A MOBILE GROUP COHESION	03.11.2008
801926	ALU	2010538853	JP5038506	JP	DYNAMIC TRACKING OF A MOBILE GROUP COHESION	03.11.2008
801926	ALU	20107015928	KR101148652	KR	DYNAMIC TRACKING OF A MOBILE GROUP COHESION	03.11.2008
802030	ALU	4162/CHENP/2010		IN	Automatic Ads Correlation	23.12.2008
802030	ALU	20107017483	KR101164750	KR	Automatic Ads Correlation	23.12.2008
806564	ALU	12/858050	US8619546	US	Method And Apparatus For Coping With Link Failures In Central Control Plane Architectures	17.08.2010
801532	ALU	07123593.1	EP2073382	FR	Free wheeling Diodes for Current Switched Class-S Circuit topology	19.12.2007
801532	ALU	07123593.1	EP2073382	DE	Free wheeling Diodes for Current Switched Class-S Circuit topology	19.12.2007
801532	ALU	07123593.1	EP2073382	GB	Free wheeling Diodes for Current Switched Class-S Circuit topology	19.12.2007
806857	ALU	1055004	FR2961933	FR	Well-being and health indicators via TV usage monitoring	23.06.2010
806797	ALU	12/816439	US8479290	US	Treatment Of Malicious Devices In A Mobile-Communication Network	16.06.2010
801595	ALU	08805051.3	EP2213110	EP	Users counter in Multicast Broadcast Services Zones	03.10.2008
806919	ALU	1002753	FR2962282	FR	Ethernet Synchronization Messaging Channel Tunnelling (ESMC-T)	30.06.2010
131320	ALU	06291071.6	EP1873967	FR	Method for improving SNMP error management	27.06.2006
131320	ALU	06291071.6	EP1873967	DE	Method for improving SNMP error management	27.06.2006
131320	ALU	06291071.6	EP1873967	GB	Method for improving SNMP error management	27.06.2006
801994	ALU	07291468.2	EP2093916	FR	OTH Gateway Interface	06.12.2007
801994	ALU	07291468.2	EP2093916	DE	OTH Gateway Interface	06.12.2007
801994	ALU	07291468.2	EP2093916	GB	OTH Gateway Interface	06.12.2007
803000	ALU	08155314.1	EP2079204	FR	Packet transport with reduced header processing	28.04.2008
803000	ALU	08155314.1	EP2079204	DE	Packet transport with reduced header processing	28.04.2008
803000	ALU	08155314.1	EP2079204	GB	Packet transport with reduced header processing	28.04.2008
802407	ALU	08006267.2	EP2107724	FR	Selective Address Learning in a Network Switch based on Backward Traffic Estimation	31.03.2008
802407	ALU	08006267.2	EP2107724	DE	Selective Address Learning in a Network Switch based on Backward Traffic Estimation	31.03.2008
802407	ALU	08006267.2	EP2107724	GB	Selective Address Learning in a Network Switch based on Backward Traffic Estimation	31.03.2008
134096	ALU	02024819.1	EP1311103	FR	Distributed integration of legacy PBX systems with SIP networks.	07.11.2002
134096	ALU	02024819.1	EP1311103	DE	Distributed integration of legacy PBX systems with SIP networks.	07.11.2002
134096	ALU	02024819.1	EP1311103	GB	Distributed integration of legacy PBX systems with SIP networks.	07.11.2002
807027	ALU	10290171.7	EP2372962	EP	Dynamically configurable parallel architecture for energy efficient packet aggregation and transport	31.03.2010
806820	ALU	1052385	FR2958399	FR	Non-coherent OTDR using Golay sequences in Multi-channel environment	31.03.2010
807141	ALU	10290395.2	EP2408128	EP	PTP-Network InterWorking Function (PN-IWF)	15.07.2010
807097	ALU	10305318.7		EP	Frequency-Comb-Based Photonic Integrated Transmitter	29.03.2010
802622	ALU	07301661.0	EP2071711	FR	Differenzgetriebe als Absolutwertgeber	11.12.2007
802622	ALU	07301661.0	EP2071711	DE	Differenzgetriebe als Absolutwertgeber	11.12.2007
802622	ALU	07301661.0	EP2071711	IT	Differenzgetriebe als Absolutwertgeber	11.12.2007
806074	ALU	10305335.1		EP	Athermal Optical Filters In Silicon-On-Insulator Waveguides	31.03.2010
806968	ALU	12/828443	US8959251	US	Implementation Of Switches In A Communication Network	01.07.2010
802923	ALU	2009211932	AU2009211932	AU	Method to retrieve SVC RTP packets decoding order when using RTP sessions multiplexing	12.01.2009
802923	ALU	4767/CHENP/2010		IN	Method to retrieve SVC RTP packets decoding order when using RTP sessions multiplexing	12.01.2009
802923	ALU	2010136977	RU2518383	RU	Method to retrieve SVC RTP packets decoding order when using RTP sessions multiplexing	12.01.2009

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
801124	ALU	08290555.5	EP2009871	FR	Media Session Keeper	13.06.2008
801124	ALU	08290555.5	EP2009871	DE	Media Session Keeper	13.06.2008
801124	ALU	08290555.5	EP2009871	GB	Media Session Keeper	13.06.2008
137794	ALU	12/800101	US8626883	US	Injecting Addresses Into a Virtual Private Network Forwarding Database To Enable Operational, Administrative, and Management Functions	06.05.2010
807129	ALU	12/847250	US8451717	US	Method And Apparatus For Rapid Switchover From Primary To Standby Multicast Trees	30.07.2010
Lin 5-1 (W)	ALU	12/757192	US7970428	US	Monitoring And Adjusting Transmit Power Level(s) In A Communications System	09.04.2010
131337	ALU	06292055.8	EP1936849	FR	Data mapper/demapper for VCONC LCAS protocol	22.12.2006
131337	ALU	06292055.8	EP1936849	DE	Data mapper/demapper for VCONC LCAS protocol	22.12.2006
131337	ALU	06292055.8	EP1936849	GB	Data mapper/demapper for VCONC LCAS protocol	22.12.2006
Cai 47-1-2-1-6 (Y)	ALU	06773854.2	EP1894345	FR	IMS Gateway Systems And Methods That Validate Routing To Online Charging Systems	23.06.2006
Cai 47-1-2-1-6 (Y)	ALU	06773854.2	EP1894345	DE	IMS Gateway Systems And Methods That Validate Routing To Online Charging Systems	23.06.2006
Cai 47-1-2-1-6 (Y)	ALU	06773854.2	EP1894345	NL	IMS Gateway Systems And Methods That Validate Routing To Online Charging Systems	23.06.2006
Cai 47-1-2-1-6 (Y)	ALU	06773854.2	EP1894345	GB	IMS Gateway Systems And Methods That Validate Routing To Online Charging Systems	23.06.2006
807337	ALU	12/843492	US8468258	US	Bringing Up IPv6CP Between IP Pseudowire Service Access Point And Customer Equipment (CE) Service Access Point	26.07.2010
807361	ALU	12/779448	US8023834	US	Adaptive Polarization Tracking And Equalization In Coherent Optical Receivers	13.05.2010
114274	ALU	04291696.5	EP1612992	FR	Method for efficiently handling downlink multicast traffic in discontinuous networks	02.07.2004
114274	ALU	04291696.5	EP1612992	DE	Method for efficiently handling downlink multicast traffic in discontinuous networks	02.07.2004
114274	ALU	04291696.5	EP1612992	GB	Method for efficiently handling downlink multicast traffic in discontinuous networks	02.07.2004
807047	ALU	10290357.2		EP	Targeted Ad insertion for IGMP Join after a time interval/for a particular channel/any new channel	30.06.2010
802475	ALU	200880121721.0	ZL200880121721.0	CN	Resilient PPP/ML-PPP Services Over Multi-Chassis APS Protected Routers	16.12.2008
802475	ALU	3733/CHENP/2010		IN	Resilient PPP/ML-PPP Services Over Multi-Chassis APS Protected Routers	16.12.2008
802475	ALU	2010539037	JP5356404	JP	Resilient PPP/ML-PPP Services Over Multi-Chassis APS Protected Routers	16.12.2008
807367	ALU	13/093878		US	Event Based Social Networking Application	26.04.2011
804288	ALU	12/718992	US8625627	US	An Apparatus and Method for Controlling Data Transmission	07.03.2010
800504	ALU	200880115112.4	ZL200880115112.4	CN	S-band EDFA	07.11.2008
800504	ALU	2010532644	JP5751833	JP	S-band EDFA	07.11.2008
800504	ALU	12/734472	US8787721	US	S-band EDFA	07.11.2008
801470	ALU	200980101945.X	ZL200980101945.X	CN	MAC ADDRESS FLOODING DEFENCE	08.01.2009
801470	ALU	4007/CHENP/2010		IN	MAC ADDRESS FLOODING DEFENCE	08.01.2009
801470	ALU	2010541881	JP5111618	JP	MAC ADDRESS FLOODING DEFENCE	08.01.2009
801470	ALU	20107015258	KR101171545	KR	MAC ADDRESS FLOODING DEFENCE	08.01.2009
Heer 19 (AJ)	ALU	07867874.5	EP2100406	FR	Method And Apparatus For Improved Multicast Routing	19.12.2007
Heer 19 (AJ)	ALU	07867874.5	EP2100406	DE	Method And Apparatus For Improved Multicast Routing	19.12.2007
Heer 19 (AJ)	ALU	07867874.5	EP2100406	GB	Method And Apparatus For Improved Multicast Routing	19.12.2007
807268	ALU	1002755	FR2962279	FR	Synchronous Ethernet ESMC and SDH/SONET Time Inter-Working Function (EST-IWF)	30.06.2010
803000	ALU	2986/CHENP/2010		IN	Packet transport with reduced header processing	11.12.2008
803000	ALU	2010538597	JP5148716	JP	Packet transport with reduced header processing	11.12.2008
803000	ALU	1020107013276	KR101130098	KR	Packet transport with reduced header processing	11.12.2008
804620	ALU	10162090.4		EP	Payment protector system for memory deficient relatives	06.05.2010
802007	ALU	3092/CHENP/2010		IN	Method for protecting a network configuration set up by a spanning tree protocol	19.12.2008
802007	ALU	2010541739	JP4938135	JP	Method for protecting a network configuration set up by a spanning tree protocol	19.12.2008
802007	ALU	20107015139	KR101143767	KR	Method for protecting a network configuration set up by a spanning tree protocol	19.12.2008
802935	ALU	2010547199	JP5114576	JP	interaction between handsets and urban furnitures	25.02.2009
802935	ALU	20107021139	KR101207730	KR	interaction between handsets and urban furnitures	25.02.2009
802013	ALU	08300108.1	EP2094022	FR	Multi-mode Fabric Access method and architecture w/ centralized control and error-free EPS	22.02.2008
802013	ALU	08300108.1	EP2094022	DE	Multi-mode Fabric Access method and architecture w/ centralized control and error-free EPS	22.02.2008

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802013	ALU	08300108.1	EP2094022	GB	Multi-mode Fabric Access method and architecture w/ centralized control and error-free EPS	22.02.2008
807165	ALU	12/794268	US8295180	US	QoS-Aware Rate Throttling For Energy Efficient Delay Tolerant Data Transfer	04.06.2010
134175	ALU	05018975.2	EP1635519	FR	ROUTING FORWARDING DATABASE LARGER THAN THE BCM 56XX FAMILY OF ASICS CAN SUPPORT IN HARDWARE TABLES	01.09.2005
134175	ALU	05018975.2	EP1635519	DE	ROUTING FORWARDING DATABASE LARGER THAN THE BCM 56XX FAMILY OF ASICS CAN SUPPORT IN HARDWARE TABLES	01.09.2005
134175	ALU	05018975.2	EP1635519	GB	ROUTING FORWARDING DATABASE LARGER THAN THE BCM 56XX FAMILY OF ASICS CAN SUPPORT IN HARDWARE TABLES	01.09.2005
807565	ALU	1054235	FR2960663	FR	A framework based on multiple directed graphs to use and manage the objects to the Web	01.06.2010
Rahman 7 (MA)	ALU	00304338.7	EP1058408	FR	Macrodiversity Control System Having Macrodiversity Mode Based On Operating Category Of Wireless Unit	23.05.2000
Rahman 7 (MA)	ALU	00304338.7	EP1058408	DE	Macrodiversity Control System Having Macrodiversity Mode Based On Operating Category Of Wireless Unit	23.05.2000
Rahman 7 (MA)	ALU	00304338.7	EP1058408	GB	Macrodiversity Control System Having Macrodiversity Mode Based On Operating Category Of Wireless Unit	23.05.2000
Cai 86-5-12-10-2 (Y)	ALU	07839696.7	EP2078373	FR	Third Party Charging For SIP Sessions	19.10.2007
Cai 86-5-12-10-2 (Y)	ALU	07839696.7	EP2078373	DE	Third Party Charging For SIP Sessions	19.10.2007
Cai 86-5-12-10-2 (Y)	ALU	07839696.7	EP2078373	GB	Third Party Charging For SIP Sessions	19.10.2007
803079	ALU	201010203959.7		CN	Manual attachment on customer's Femto cell.	12.06.2010
121295	ALU	06291989.9	EP1936931	FR	BINDER IDENTIFICATION THROUGH SINGLE ENDED LINE TESTING	19.12.2006
121295	ALU	06291989.9	EP1936931	DE	BINDER IDENTIFICATION THROUGH SINGLE ENDED LINE TESTING	19.12.2006
121295	ALU	06291989.9	EP1936931	GB	BINDER IDENTIFICATION THROUGH SINGLE ENDED LINE TESTING	19.12.2006
807438	ALU	12/987572	US8681605	US	Method And Apparatus For Using G.8031 Extensions To Enable Coexistence Of G.8031-Based Protection And Lag-Like Loadsharing For Ethernet Paths	10.01.2011
807439	ALU	12/966299	US9077645	US	Method And Apparatus For Controlling Multiple Registration Protocol (MRP) Scope Using MRP Policies	13.12.2010
807162	ALU	12/917852	US8693506	US	Transparent Clock Media Converter	02.11.2010
803167	ALU	2011513024	JP5226124	JP	Scalable And Highly-Available Session Handling In IMS Clustered Applications	11.05.2009
803167	ALU	20107027747	KR101507197	KR	Scalable And Highly-Available Session Handling In IMS Clustered Applications	11.05.2009
Cai 127-43 (Y)	ALU	200980103575.3	ZL200980103575.3	CN	A Method And Apparatus For Virtual WiFi Service With Authentication And Accounting Control	16.01.2009
Cai 127-43 (Y)	ALU	4378/CHENP/2010		IN	A Method And Apparatus For Virtual WiFi Service With Authentication And Accounting Control	16.01.2009
Cai 127-43 (Y)	ALU	2010544997	JP5307836	JP	A Method And Apparatus For Virtual WiFi Service With Authentication And Accounting Control	16.01.2009
Cai 127-43 (Y)	ALU	20107017225	KR101240021	KR	A Method And Apparatus For Virtual WiFi Service With Authentication And Accounting Control	16.01.2009
807602	ALU	10360030.0	EP2403277	EP	"Mobile Touch" - A Cellular Short Range Mobile Phone Sensor System	01.07.2010
801849	ALU	3776/CHENP/2010		IN	Diversity bROADBAND rADIATING eLEMENT	17.12.2008
801849	ALU	2010538697	JP5143911	JP	Diversity bROADBAND rADIATING eLEMENT	17.12.2008
801849	ALU	20107015988	KR101196250	KR	Diversity bROADBAND rADIATING eLEMENT	17.12.2008
Alfano 2-9-6 (FM)	ALU	06748781.9	EP1867202	FR	Telecommunication Network Support For Service Based Policy In Roaming Configurations	28.03.2006
Alfano 2-9-6 (FM)	ALU	06748781.9	EP1867202	DE	Telecommunication Network Support For Service Based Policy In Roaming Configurations	28.03.2006
Alfano 2-9-6 (FM)	ALU	06748781.9	EP1867202	GB	Telecommunication Network Support For Service Based Policy In Roaming Configurations	28.03.2006
106185	ALU	05301084.9	EP1802006	FR	AUTOMATIC CHROMATIC DISPERSION TUNING FOR FLEXIBLE SYSTEMS USING RAMAN DISTRIBUTED CO-PUMPING	20.12.2005
106185	ALU	05301084.9	EP1802006	DE	AUTOMATIC CHROMATIC DISPERSION TUNING FOR FLEXIBLE SYSTEMS USING RAMAN DISTRIBUTED CO-PUMPING	20.12.2005
106185	ALU	05301084.9	EP1802006	GB	AUTOMATIC CHROMATIC DISPERSION TUNING FOR FLEXIBLE SYSTEMS USING RAMAN DISTRIBUTED CO-PUMPING	20.12.2005
807320	ALU	1055877	FR2963197	FR	Wireless Internet Connection Green, Secure and Without Potential Health Impact	20.07.2010
Graybeal 4-17 (JM)	ALU	206543	IL206543	IL	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
807258	ALU	12/986468	US8582933	US	Scalable Waveguide-Mode Coupler For An Optical Receiver Or Transmitter	07.01.2011
807382	ALU	12/961677	US8913899	US	WDM Power Source	07.12.2010
801664	ALU	200980102920.1	ZL200980102920.1	CN	Circuit Emulation Over An IP Interworking VLL	12.01.2009
801664	ALU	4556/CHENP/2010		IN	Circuit Emulation Over An IP Interworking VLL	12.01.2009
801664	ALU	2010543621	JP5242702	JP	Circuit Emulation Over An IP Interworking VLL	12.01.2009
801664	ALU	20107016681	KR1140453	KR	Circuit Emulation Over An IP Interworking VLL	12.01.2009
805311	ALU	099121113	TWI436680	TW	Message Delivery Over LTE Networks	28.06.2010
807314	ALU	12/897494	US8516585	US	System And Method For Detection Of Domain-Flux Botnets And The Like	04.10.2010
803027	ALU	200980106832.9	ZL200980106832.9	CN	Application Aware MPLS Tunnel Selection	17.02.2009
803027	ALU	09715466.0		EP	Application Aware MPLS Tunnel Selection	17.02.2009
802921	ALU	200980106767.X	ZL200980106767.X	CN	Bridgeport Private MAC Address Discovery Mechanism In Ethernet Access Networks	17.02.2009
801213	ALU	2010546439	JP5567501	JP	CUSTOMER PVR TO NETWORK DVR SYNCHRONIZATION	04.02.2009
807618	ALU	12/850788	US9608898	US	Method And Apparatus For Performing Multicast Traces In MPLS Networks	05.08.2010
807262	ALU	13/155818	US9397879	US	System, Apparatus And Method For Address Management In A Distributed Mobile Core Network	08.06.2011
137595	ALU	03300251.0	EP1429489	FR	IGMP Expedited Leave Triggered By MAC Address	09.12.2003
137595	ALU	03300251.0	EP1429489	DE	IGMP Expedited Leave Triggered By MAC Address	09.12.2003
137595	ALU	03300251.0	EP1429489	GB	IGMP Expedited Leave Triggered By MAC Address	09.12.2003
807058	ALU	12/892647	US9179103	US	System And Method For Controllably Viewing Digital Video Streams Captured By Surveillance Cameras	28.09.2010
807593	ALU	10306459.8		EP	Automatic Video Image Annotation	20.12.2010
807599	ALU	12/986728	US8731292	US	Efficient Video Duplication Detection	07.01.2011
807216	ALU	12/915743	US9667450	US	Detection And Correction Of Impulse Noise In Communication Channel Crosstalk Estimates	29.10.2010
807437	ALU	12/915829	US8514687	US	Efficient Generation Of Compensated Signals For Crosstalk Control In A Communication System	29.10.2010
807586	ALU	12/890167		US	System And Method For Anonymous Web Calling Charging Advice	25.09.2010
800744	ALU	07300845.0	EP1968248	FR	Squelching optimization for packet ring protection	05.03.2007
800744	ALU	07300845.0	EP1968248	DE	Squelching optimization for packet ring protection	05.03.2007
800744	ALU	07300845.0	EP1968248	GB	Squelching optimization for packet ring protection	05.03.2007
807301	ALU	12/916028	US9425894	US	In-Band Optical Signal-To-Noise Ratio Measurement	29.10.2010
807263	ALU	10306141.2		EP	Optical node architecture optimized for optical grooming	19.10.2010
807461	ALU	10306135.4		EP	Challenge based hosted access control and filtering for Internet contents	18.10.2010
802096	ALU	08748457.2	EP2278782	EP	Query waiting queue position by using SIP SUBSCRIBE/NOTIFY message	05.05.2008
802096	ALU	7618/CHENP/2010		IN	Query waiting queue position by using SIP SUBSCRIBE/NOTIFY message	05.05.2008
802096	ALU	20107027081	KR101508911	KR	Query waiting queue position by using SIP SUBSCRIBE/NOTIFY message	05.05.2008
802096	ALU	200880125305.8	ZL200880125305.8	CN	Query waiting queue position by using SIP SUBSCRIBE/NOTIFY message	05.05.2008
802257	ALU	4404/CHENP/2010		IN	A new sub-reflector dielectric support shape for low profile dual reflectors antenna application	14.01.2009
802257	ALU	2010542620	JP5679820	JP	A new sub-reflector dielectric support shape for low profile dual reflectors antenna application	14.01.2009
802257	ALU	20107018231	KR101468889	KR	A new sub-reflector dielectric support shape for low profile dual reflectors antenna application	14.01.2009
807917	ALU	12/838683	US8163634	US	Devices With Graphene Layers	19.07.2010
803613	ALU	2011537904	JP5367087	JP	Money transfer from one mobile subscriber to another mobile subscriber - instantaneously.	08.09.2009
803613	ALU	13/128317	US8775304	US	Money transfer from one mobile subscriber to another mobile subscriber - instantaneously.	08.09.2009
Riverstone 23 ()	ALU	02737154.1	EP1413092	FR	Method and System For Preventing Transmission Loops in a Label Switching Domain	23.05.2002
Riverstone 23 ()	ALU	02737154.1	EP1413092	DE	Method and System For Preventing Transmission Loops in a Label Switching Domain	23.05.2002
Riverstone 23 ()	ALU	02737154.1	EP1413092	GB	Method and System For Preventing Transmission Loops in a Label Switching Domain	23.05.2002
802722	ALU	4574/CHENP/2010		IN	Sequencing line tuning through RSVP	28.01.2009
802722	ALU	2010544686	JP5192554	JP	Sequencing line tuning through RSVP	28.01.2009
802722	ALU	20107018947	KR1224865	KR	Sequencing line tuning through RSVP	28.01.2009

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
106140	ALU	07111708.9	EP1879308	FR	OPTICAL TIME-TO-LIVE	04.07.2007
106140	ALU	07111708.9	EP1879308	DE	OPTICAL TIME-TO-LIVE	04.07.2007
106140	ALU	07111708.9	EP1879308	IT	OPTICAL TIME-TO-LIVE	04.07.2007
106140	ALU	07111708.9	EP1879308	PL	OPTICAL TIME-TO-LIVE	04.07.2007
106140	ALU	07111708.9	EP1879308	ES	OPTICAL TIME-TO-LIVE	04.07.2007
106140	ALU	07111708.9	EP1879308	GB	OPTICAL TIME-TO-LIVE	04.07.2007
802216	ALU	12735732	US8406154	US	A Novel Topology Aggregation Algorithm for ASON Routing	10.04.2008
106001	ALU	06290213.5	EP1806870	FR	Asynchronous, dynamic pseudo-multicast transmission for multimedia content	06.01.2006
106001	ALU	06290213.5	EP1806870	DE	Asynchronous, dynamic pseudo-multicast transmission for multimedia content	06.01.2006
106001	ALU	06290213.5	EP1806870	GB	Asynchronous, dynamic pseudo-multicast transmission for multimedia content	06.01.2006
807780	ALU	10290496.8		EP	Control Of Femtocell Sleep-Modes Through Radio Transmissions Of Underlay Macrocell Base Stations	21.09.2010
807934	ALU	12/944939	US8639070	US	Optical Assembly For A WDM Receiver Or Transmitter	12.11.2010
807931	ALU	12/944917	US8798409	US	Optical Transmitter With Flip-Chip Mounted Laser Or Integrated Arrayed Waveguide Grating Wavelength Division Multiplexer	12.11.2010
802578	ALU	200980108440.6	ZL200980108440.6	CN	10G XFP Compliant PCB	02.03.2009
802578	ALU	09719200.9		EP	10G XFP Compliant PCB	02.03.2009
802578	ALU	2010550324	JP5232878	JP	10G XFP Compliant PCB	02.03.2009
802578	ALU	20107020111	KR101167793	KR	10G XFP Compliant PCB	02.03.2009
801433	ALU	5800/CHENP/2010		IN	MPLS LSP Automation Engine For Ring Topologies	12.03.2009
807511	ALU	12/915261	US8630652	US	Method For Optimizing The Location Of Heterogeneous Underlaid Evolved Node-Bs	29.10.2010
114905	ALU	06301068.0	EP1914903	FR	RF system for CDMA and UMTS	20.10.2006
114905	ALU	06301068.0	EP1914903	DE	RF system for CDMA and UMTS	20.10.2006
114905	ALU	06301068.0	EP1914903	GB	RF system for CDMA and UMTS	20.10.2006
802152	ALU	200980106026.1	ZL200980106026.1	CN	SIM-less device access for security services	04.02.2009
802152	ALU	09712236.0	EP2260640	EP	SIM-less device access for security services	04.02.2009
802152	ALU	12/867017	US8539084	US	SIM-less device access for security services	04.02.2009
800752	ALU	4879/CHENP/2010		IN	Intelligent directory	24.02.2009
800752	ALU	2011502310	JP5520285	JP	Intelligent directory	24.02.2009
800752	ALU	20107022086	KR101516035	KR	Intelligent directory	24.02.2009
801597	ALU	2011502331	JP5647101	JP	Mobile and Wired Phone convergence in residential WiFi coverage	20.03.2009
801597	ALU	20107022028	KR101469575	KR	Mobile and Wired Phone convergence in residential WiFi coverage	20.03.2009
806994	ALU	12/925862	US8588088	US	Content Based VLAN Classification And Framework For Ethernet Network To Support Content Based Bridging	01.11.2010
802741	ALU	200980106453.X	ZL200980106453.X	CN	Compressed IP Flow Recognition For In-Line, Integrated Mobile DPI	17.02.2009
802741	ALU	5355/CHENP/2010		IN	Compressed IP Flow Recognition For In-Line, Integrated Mobile DPI	17.02.2009
802741	ALU	2010548241	JP5600602	JP	Compressed IP Flow Recognition For In-Line, Integrated Mobile DPI	17.02.2009
802741	ALU	20107018971	KR1124721	KR	Compressed IP Flow Recognition For In-Line, Integrated Mobile DPI	17.02.2009
803003	ALU	200980106455.9	ZL200980106455.9	CN	In-Bound Mechanism That Monitors End-To-End QOE Of Services With Application Awareness	17.02.2009
803003	ALU	5359/CHENP/2010		IN	In-Bound Mechanism That Monitors End-To-End QOE Of Services With Application Awareness	17.02.2009
803003	ALU	2010548239	JP5405498	JP	In-Bound Mechanism That Monitors End-To-End QOE Of Services With Application Awareness	17.02.2009
803003	ALU	20107019138	KR1106891	KR	In-Bound Mechanism That Monitors End-To-End QOE Of Services With Application Awareness	17.02.2009
Kong 5-10-5-4 (H)	ALU	05251775.2	EP1587340	FR	Sector Switching Detection Method	23.03.2005
Kong 5-10-5-4 (H)	ALU	05251775.2	EP1587340	DE	Sector Switching Detection Method	23.03.2005
Kong 5-10-5-4 (H)	ALU	05251775.2	EP1587340	GB	Sector Switching Detection Method	23.03.2005
803004	ALU	200980106831.4	ZL200980106831.4	CN	In-Bound Mechanism That Verifies End-To-End Service Configuration With Application Awareness	17.02.2009
803004	ALU	5349/CHENP/2010		IN	In-Bound Mechanism That Verifies End-To-End Service Configuration With Application Awareness	17.02.2009
803004	ALU	2010548240	JP5053445	JP	In-Bound Mechanism That Verifies End-To-End Service Configuration With Application Awareness	17.02.2009

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
803004	ALU	20107019180	KR1106878	KR	In-Bound Mechanism That Verifies End-To-End Service Configuration With Application Awareness	17.02.2009
807069	ALU	12/896656		US	System And Method For Distributing Digital Video Streams From Remote Video Surveillance Cameras To Display Devices	01.10.2010
803280	ALU	08305758.8	EP2182685	FR	Load-balancing Packet demultiplexers for 100 Gbps switch ports	30.10.2008
803280	ALU	08305758.8	EP2182685	DE	Load-balancing Packet demultiplexers for 100 Gbps switch ports	30.10.2008
803280	ALU	08305758.8	EP2182685	GB	Load-balancing Packet demultiplexers for 100 Gbps switch ports	30.10.2008
					Content Capture Device And Methods For Automatically Tagging Content	
808126	ALU	12/883335	US8533192	US		16.09.2010
139271	ALU	05010004.9	EP1596531	FR	REMOTE ACCESS LINK FAULT INDICATION	09.05.2005
139271	ALU	05010004.9	EP1596531	DE	REMOTE ACCESS LINK FAULT INDICATION	09.05.2005
139271	ALU	05010004.9	EP1596531	GB	REMOTE ACCESS LINK FAULT INDICATION	09.05.2005
					PERFORMANCE OPTIMIZATION METHOD IN WAVEBAND SWITCHED TRANSPARENT NETWORKS	
104895	ALU	03293295.6	EP1453227	FR		23.12.2003
104895	ALU	03293295.6	EP1453227	DE	PERFORMANCE OPTIMIZATION METHOD IN WAVEBAND SWITCHED TRANSPARENT NETWORKS	23.12.2003
104895	ALU	03293295.6	EP1453227	GB	PERFORMANCE OPTIMIZATION METHOD IN WAVEBAND SWITCHED TRANSPARENT NETWORKS	23.12.2003
137498	ALU	03300265.0	EP1432172	FR	IGMPv2 in PIM-SSM environment	12.12.2003
137498	ALU	03300265.0	EP1432172	DE	IGMPv2 in PIM-SSM environment	12.12.2003
137498	ALU	03300265.0	EP1432172	GB	IGMPv2 in PIM-SSM environment	12.12.2003
106355	ALU	07111720.4	EP1876806	FR	PRIORITIZING CALL DEPENDING CALLER LOCALIZATION	04.07.2007
106355	ALU	07111720.4	EP1876806	DE	PRIORITIZING CALL DEPENDING CALLER LOCALIZATION	04.07.2007
106355	ALU	07111720.4	EP1876806	GB	PRIORITIZING CALL DEPENDING CALLER LOCALIZATION	04.07.2007
Cai 135-38 (Y)	ALU	2011504998	JP5373057	JP	Online Charging For Roaming Users In A Proxy Online Charging System Of A Visited Network	26.03.2009
Cai 134-37 (Y)	ALU	200980114340.4	ZL200980114340.4	CN	Charging In LTE/EPC Communication Networks	26.03.2009
Cai 134-37 (Y)	ALU	2011506255	JP5269980	JP	Charging In LTE/EPC Communication Networks	26.03.2009
					Online Charging For Roaming Users In A Proxy Online Charging System Of A Visited Network	
Cai 135-38 (Y)	ALU	MX/a/2010/010973	MX310147	MX		26.03.2009
802939	ALU	8355/CHENP/2010		IN	Communication release interactive task creation	23.06.2009
802939	ALU	2011515360	JP5351261	JP	Communication release interactive task creation	23.06.2009
802939	ALU	20117001696	KR101331680	KR	Communication release interactive task creation	23.06.2009
808196	ALU	10305988.7		EP	Speech Enabled Virtual Assistant	15.09.2010
Bemmel 2 (Jv)	ALU	05257056.1	EP1659755	FR	Method And Apparatus For Pre-Packetized Caching For Network Servers	15.11.2005
Bemmel 2 (Jv)	ALU	05257056.1	EP1659755	DE	Method And Apparatus For Pre-Packetized Caching For Network Servers	15.11.2005
Bemmel 2 (Jv)	ALU	05257056.1	EP1659755	GB	Method And Apparatus For Pre-Packetized Caching For Network Servers	15.11.2005
807979	ALU	2013-524444	JP5607252	JP	DHT Routing Table Manipulation	16.08.2011
807979	ALU	20137007006	KR101464452	KR	DHT Routing Table Manipulation	16.08.2011
Menten 4 (LE)	ALU	200980123920.X	ZL200980123920.X	CN	Processing Of Packet Fragments	28.04.2009
Guo 10-6-34-11 (KH)	ALU	12/885814	US8597124	US	Apparatus And Method For Fair Message Exchanges In Distributed Multi-Player Games	20.09.2010
807673	ALU	13/163118	US8948728	US	Method And Apparatus For Using A Cellular Network To Facilitate Access By A Mobile Device To A Local Wireless Access Point	17.06.2011
807985	ALU	13/006142	US8441927	US	Single Early Discard for Reduced Delay in Network Buffers	13.01.2011
					Application-Originated Text Messages Delivered Over A Packet-Switched Network	
807798	ALU	12/987336	US8848604	US		10.01.2011
Cai 137-18 (Y)	ALU	20107029749	KR101296048	KR	Online Charging Architecture In LTE/EPC Communication Networks	30.05.2008
808012	ALU	13/180825	US8559336	US	Hint-Based Discovery Of LTE Path Supporting Information	12.07.2011
115044	ALU	06290635.9	EP1845641	FR	Viterbi equalizer for received signals with bit alternating modulation	12.04.2006
115044	ALU	06290635.9	EP1845641	DE	Viterbi equalizer for received signals with bit alternating modulation	12.04.2006
115044	ALU	06290635.9	EP1845641	GB	Viterbi equalizer for received signals with bit alternating modulation	12.04.2006
					System And Method For Configuration And Management Of Queue Sets	
807539	ALU	13/192676	US8531985	US		28.07.2011
804311	ALU	09290442.4	EP2161854	FR	System architecture for overlay on cellular systems for high mobility and beamforming	12.06.2009
804311	ALU	09290442.4	EP2161854	DE	System architecture for overlay on cellular systems for high mobility and beamforming	12.06.2009

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
804311	ALU	09290442.4	EP2161854	GB	System architecture for overlay on cellular systems for high mobility and beamforming	12.06.2009
807556	ALU	10306369.9		EP	Combined Single-Ended Line Test Using both Reflectometry and Metallic Line Test	07.12.2010
807558	ALU	10306341.8		EP	Domain Separation Using MELT Reference	02.12.2010
Fingerman 1-1-1 (AW)	ALU	2010191673	JP5115993	JP	Method And Apparatus For Remote Audiovisual Signal Recording Service	15.11.2000
807747	ALU	201010574810.X	ZL201010574810.X	CN	Authentication Based Multi-player On-line Video Game System	24.11.2010
803874	ALU	09290443.2	EP2161855	FR	Efficient provisioning of broadband mobile communication services inside airplanes by a cellular 2-D beamforming system	12.06.2009
803874	ALU	09290443.2	EP2161855	DE	Efficient provisioning of broadband mobile communication services inside airplanes by a cellular 2-D beamforming system	12.06.2009
803874	ALU	09290443.2	EP2161855	ES	Efficient provisioning of broadband mobile communication services inside airplanes by a cellular 2-D beamforming system	12.06.2009
803874	ALU	09290443.2	EP2161855	GB	Efficient provisioning of broadband mobile communication services inside airplanes by a cellular 2-D beamforming system	12.06.2009
808276	ALU	12/985108	US8792499	US	A Scheduling Algorithm For A Class Of Energy Efficient Optical Ring Network	05.01.2011
807888	ALU	10290634.4		EP	Tunnel Follow-Up Message For Transparent Clock (TFM4TC)	01.12.2010
800876	ALU	07291570.5	EP2073454	FR	MINIMUM AND MAXIMUM AGING TIME FOR MAC ENTRIES	19.12.2007
800876	ALU	07291570.5	EP2073454	DE	MINIMUM AND MAXIMUM AGING TIME FOR MAC ENTRIES	19.12.2007
800876	ALU	07291570.5	EP2073454	GB	MINIMUM AND MAXIMUM AGING TIME FOR MAC ENTRIES	19.12.2007
120902	ALU	03293024.0	EP1538801	FR	tone BASED TRAINING DURING SHOWTIME.	03.12.2003
120902	ALU	03293024.0	EP1538801	DE	tone BASED TRAINING DURING SHOWTIME.	03.12.2003
120902	ALU	03293024.0	EP1538801	GB	tone BASED TRAINING DURING SHOWTIME.	03.12.2003
121108	ALU	04292881.2	EP1667359	FR	MULTI-ACS REMOTE MANAGEMENT OF AN HOME NETWORK.	06.12.2004
121108	ALU	04292881.2	EP1667359	DE	MULTI-ACS REMOTE MANAGEMENT OF AN HOME NETWORK.	06.12.2004
121108	ALU	04292881.2	EP1667359	GB	MULTI-ACS REMOTE MANAGEMENT OF AN HOME NETWORK.	06.12.2004
134096	ALU	02024819.1	EP1311103	IT	Distributed integration of legacy PBX systems with SIP networks.	07.11.2002
134096	ALU	02024819.1	EP1311103	NL	Distributed integration of legacy PBX systems with SIP networks.	07.11.2002
134096	ALU	02024819.1	EP1311103	ES	Distributed integration of legacy PBX systems with SIP networks.	07.11.2002
134087	ALU	02798116.6	EP1430671	FR	Architecture for Transporting PBX Digital Telephone Messages via SIP	04.09.2002
134087	ALU	02798116.6	EP1430671	DE	Architecture for Transporting PBX Digital Telephone Messages via SIP	04.09.2002
134087	ALU	02798116.6	EP1430671	GB	Architecture for Transporting PBX Digital Telephone Messages via SIP	04.09.2002
Bejerano 20-13 (Y)	ALU	2011512424	JP5291190	JP	Method And Apparatus For Reducing Channel Change Response Times For IPTV	03.06.2008
Bejerano 20-13 (Y)	ALU	20107027336	KR101178853	KR	Method And Apparatus For Reducing Channel Change Response Times For IPTV	03.06.2008
Bejerano 20-13 (Y)	ALU	12/991698	US8605710	US	Method And Apparatus For Reducing Channel Change Response Times For IPTV	03.06.2008
114805	ALU	06290099.8	EP1808767	FR	Device selection for extensible services by using two level resource reservation	13.01.2006
114805	ALU	06290099.8	EP1808767	DE	Device selection for extensible services by using two level resource reservation	13.01.2006
114805	ALU	06290099.8	EP1808767	GB	Device selection for extensible services by using two level resource reservation	13.01.2006
808162	ALU	11290004.8	EP2475219	EP	WiFi Based Capacity Enforcement For Mobile Communication Systems	05.01.2011
808209	ALU	1059341	FR2967535	FR	Multi-link (delay) Asymmetry Monitoring (MAM)	15.11.2010
802718	ALU	6830/CHENP/2010		IN	Broadcast services and DSL backhauled Femto Base Stations	27.05.2009
802718	ALU	2011510996	JP5314131	JP	Broadcast services and DSL backhauled Femto Base Stations	27.05.2009
802718	ALU	20107029354	KR101530232	KR	Broadcast services and DSL backhauled Femto Base Stations	27.05.2009
114860	ALU	05291510.5	EP1744604	FR	Feedback Bridge for RF Amplifier	12.07.2005
114860	ALU	05291510.5	EP1744604	DE	Feedback Bridge for RF Amplifier	12.07.2005
114860	ALU	05291510.5	EP1744604	GB	Feedback Bridge for RF Amplifier	12.07.2005

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
137456	ALU	02293050.7	EP1329862	FR	VISUAL INDICATORS CONTROLLED THROUGH INDUCTION COUPLING	10.12.2002
137456	ALU	02293050.7	EP1329862	DE	VISUAL INDICATORS CONTROLLED THROUGH INDUCTION COUPLING	10.12.2002
137456	ALU	02293050.7	EP1329862	GB	VISUAL INDICATORS CONTROLLED THROUGH INDUCTION COUPLING	10.12.2002
801841	ALU	7092/CHENP/2010		IN	Dynamic preemption	23.04.2009
803348	ALU	2011515313	JP5562951	JP	Trusted plane for routing equipment embedding a tamper resistant device	17.06.2009
803348	ALU	20117001709	KR101519185	KR	Trusted plane for routing equipment embedding a tamper resistant device	17.06.2009
808498	ALU	10290665.8		EP	DSL Vectoring Stabilisation By Seamless Phase Out Of Excess Disturbers	17.12.2010
137456	ALU	02293050.7	EP1329862	IT	VISUAL INDICATORS CONTROLLED THROUGH INDUCTION COUPLING	10.12.2002
Cai 133-17 (Y)	ALU	241/CHENP/2011		IN	Online Charging For Sessions That Are Transferred Between Network Domains	30.07.2008
803669	ALU	200980127974.3	ZL200980127974.3	CN	Dynamic To Static VC Switching For TDM VLLS (Also Known As CPIPES Static To Dynamic VC-Switching)	03.07.2009
807819	ALU	10306154.5		EP	IEEE1588V2 Transparent clock DEVIation for layer violation avoidance (T-DEV)	22.10.2010
804049	ALU	09305258.7	EP2234454	FR	Class-O EER Transmitter	24.03.2009
804049	ALU	09305258.7	EP2234454	DE	Class-O EER Transmitter	24.03.2009
804049	ALU	09305258.7	EP2234454	GB	Class-O EER Transmitter	24.03.2009
121314	ALU	07290234.9	EP1962544	FR	HIGH AVAILABILITY FOR BONDED LINE SUBSCRIBER INTERFACES ON A DSL ACCESS MULTIPLEXER.	20.02.2007
121314	ALU	07290234.9	EP1962544	DE	HIGH AVAILABILITY FOR BONDED LINE SUBSCRIBER INTERFACES ON A DSL ACCESS MULTIPLEXER.	20.02.2007
121314	ALU	07290234.9	EP1962544	IT	HIGH AVAILABILITY FOR BONDED LINE SUBSCRIBER INTERFACES ON A DSL ACCESS MULTIPLEXER.	20.02.2007
121314	ALU	07290234.9	EP1962544	NL	HIGH AVAILABILITY FOR BONDED LINE SUBSCRIBER INTERFACES ON A DSL ACCESS MULTIPLEXER.	20.02.2007
121314	ALU	07290234.9	EP1962544	ES	HIGH AVAILABILITY FOR BONDED LINE SUBSCRIBER INTERFACES ON A DSL ACCESS MULTIPLEXER.	20.02.2007
121314	ALU	07290234.9	EP1962544	GB	HIGH AVAILABILITY FOR BONDED LINE SUBSCRIBER INTERFACES ON A DSL ACCESS MULTIPLEXER.	20.02.2007
Jiang 21-2-12-7 (F)	ALU	05257615.4	EP1672951	FR	Method For Detecting Reverse Link Collisions On An Air Interface	13.12.2005
Jiang 21-2-12-7 (F)	ALU	05257615.4	EP1672951	DE	Method For Detecting Reverse Link Collisions On An Air Interface	13.12.2005
Jiang 21-2-12-7 (F)	ALU	05257615.4	EP1672951	GB	Method For Detecting Reverse Link Collisions On An Air Interface	13.12.2005
807526	ALU	12/962926	US8934408	US	System And Method For Proportional Resource Allocation For Multi-Rate Random Access	08.12.2010
Feder 21-7-18-17-25 (PM)	ALU	12/900246	US8750206	US	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	07.10.2010
114458	ALU	05291736.6	EP1755348	FR	Intelligent Encapsulation and Processing Layer for Signalling Protocols	16.08.2005
114458	ALU	05291736.6	EP1755348	DE	Intelligent Encapsulation and Processing Layer for Signalling Protocols	16.08.2005
114458	ALU	05291736.6	EP1755348	GB	Intelligent Encapsulation and Processing Layer for Signalling Protocols	16.08.2005
Feder 21-7-18-17-25 (PM)	ALU	10013869.2		EP	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	06.02.2007
803512	ALU	09159090.1	EP2139212	FR	Non speech Packet Loss Enhancer (NSPLE)	29.04.2009
803512	ALU	09159090.1	EP2139212	DE	Non speech Packet Loss Enhancer (NSPLE)	29.04.2009
803512	ALU	09159090.1	EP2139212	GB	Non speech Packet Loss Enhancer (NSPLE)	29.04.2009
106311	ALU	07820360.1	EP2067221	DE	DBR LASER WITH COMPRESSIVELY STRAINED MATERIAL PROVIDING ENHANCED TUNABILITY	19.09.2007
106311	ALU	07820360.1	EP2067221	GB	DBR LASER WITH COMPRESSIVELY STRAINED MATERIAL PROVIDING ENHANCED TUNABILITY	19.09.2007
808661	ALU	12/944928	US8516152	US	Lookahead Computation Of Routing Information	12.11.2010
808521	ALU	11360006.8		EP	Cavity-Backed Patch Antennas For Compact 4G Base-Station Antenna Arrays	12.01.2011
808542	ALU	12/984491	US8928756	US	Surveillance Video Router	04.01.2011
802158	ALU	7958/CHENP/2010		IN	Call Centers : Click-To-Call and Advanced Call Routing	01.06.2009
802158	ALU	13/000713	US8867554	US	Call Centers : Click-To-Call and Advanced Call Routing	01.06.2009
104990	ALU	04291563.7	EP1501241	FR	TRANSACTION FRAMEWORK FOR NETWORK ELEMENTS PROVISIONING BASED ON POLICY MANAGEMENT	21.06.2004

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
104990	ALU	04291563.7	EP1501241	DE	TRANSACTION FRAMEWORK FOR NETWORK ELEMENTS PROVISIONING BASED ON POLICY MANAGEMENT	21.06.2004
104990	ALU	04291563.7	EP1501241	GB	TRANSACTION FRAMEWORK FOR NETWORK ELEMENTS PROVISIONING BASED ON POLICY MANAGEMENT	21.06.2004
139270	ALU	12/950715	US8699353	US	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	19.11.2010
					Collaborative Camera Services For Distributed Real-Time Object Analysis	
808200	ALU	13/053591	US9002057	US		22.03.2011
808442	ALU	12/964578	US8787882	US	Resource Profile Adjustment For Pre-Fetching Of Assets To User Equipment	09.12.2010
806850	ALU	13/011487	US9621360	US	System And Method For Analyzing Network Power Consumption	21.01.2011
802736	ALU	13/003601	US8363646	US	medical teaching via web services	10.07.2009
121081	ALU	04293136.0	EP1675368	FR	ACTIVE SELF TEST FOR IN-HOUSE WIRING PROBLEMS.	24.12.2004
121081	ALU	04293136.0	EP1675368	DE	ACTIVE SELF TEST FOR IN-HOUSE WIRING PROBLEMS.	24.12.2004
121081	ALU	04293136.0	EP1675368	GB	ACTIVE SELF TEST FOR IN-HOUSE WIRING PROBLEMS.	24.12.2004
801286	ALU	07290529.2	EP1986350	FR	Device and method for access control in optical networks	26.04.2007
801286	ALU	07290529.2	EP1986350	DE	Device and method for access control in optical networks	26.04.2007
801286	ALU	07290529.2	EP1986350	GB	Device and method for access control in optical networks	26.04.2007
800958	ALU	04290366.6	EP1450573	FR	Method of controlling a mode of reporting of measurements on a radio	11.02.2004
800958	ALU	04290366.6	EP1450573	DE	Method of controlling a mode of reporting of measurements on a radio	11.02.2004
800958	ALU	04290366.6	EP1450573	GB	Method of controlling a mode of reporting of measurements on a radio	11.02.2004
808758	ALU	11290076.6		EP	Dynamic HAS Caching Algorithms	07.02.2011
					An Audio Source Locator And Tracker, A Method Of Directing A Camera To View An Audio Source And Video Conferencing Terminal	01.03.2011
808420	ALU	13/038183	US8754925	US		
139177	ALU	05014053.2	EP1619833	FR	EFFICIENT LOAD BALANCING IN VPLS NETWORKS	29.06.2005
139177	ALU	05014053.2	EP1619833	DE	EFFICIENT LOAD BALANCING IN VPLS NETWORKS	29.06.2005
139177	ALU	05014053.2	EP1619833	GB	EFFICIENT LOAD BALANCING IN VPLS NETWORKS	29.06.2005
					Automatic Management of Precision Time Protocol IEEE 1588V2 : implementation and protocol description (AMP)	06.12.2010
805534	ALU	12/960936	US8588258	US		
103207	ALU	01401326.2	EP1193945	FR	Internet access control.	21.05.2001
103207	ALU	01401326.2	EP1193945	DE	Internet access control.	21.05.2001
103207	ALU	01401326.2	EP1193945	IT	Internet access control.	21.05.2001
103207	ALU	01401326.2	EP1193945	ES	Internet access control.	21.05.2001
103207	ALU	01401326.2	EP1193945	GB	Internet access control.	21.05.2001
Eckl 13-7 (WF)	ALU	04255952.6	EP1643636	FR	Characterizing Linearity Of Amplifiers	29.09.2004
Eckl 13-7 (WF)	ALU	04255952.6	EP1643636	DE	Characterizing Linearity Of Amplifiers	29.09.2004
Eckl 13-7 (WF)	ALU	04255952.6	EP1643636	GB	Characterizing Linearity Of Amplifiers	29.09.2004
808529	ALU	11305751.7	EP2536176	EP	Transforming Text Into Voice Messages During a Telephone Call	16.06.2011
					Architecture and Method to Maximize Consumer Utility of Recommended Content	01.06.2011
808256	ALU	11290248.1		EP		
808502	ALU	11290097.2		EP	Consulting interactive TV content for past programs	18.02.2011
					Method And Apparatus For Providing An Immersive Meeting Experience For Remote Meeting Participants	17.02.2011
808781	ALU	13/029168		US		
808258	ALU	11290071.7		EP	Automatic Capture of the network Delay Component (AC-DC)	01.02.2011
803437	ALU	9324/DELNP/2010		IN	Lower WSS-consuming OXC architecture optimized for high connectivity	30.06.2009
803437	ALU	2011515439	JP5470379	JP	Lower WSS-consuming OXC architecture optimized for high connectivity	30.06.2009
803437	ALU	20117002107	KR101434940	KR	Lower WSS-consuming OXC architecture optimized for high connectivity	30.06.2009
803874	ALU	200980125521.7	ZL200980125521.7	CN	Efficient provisioning of broadband mobile communication services inside airplanes by a cellular 2-D beamforming system	23.07.2009
803874	ALU	8497/CHENP/2010		IN	Efficient provisioning of broadband mobile communication services inside airplanes by a cellular 2-D beamforming system	23.07.2009
803874	ALU	10-2010-7029492	KR10-1174727	KR	Efficient provisioning of broadband mobile communication services inside airplanes by a cellular 2-D beamforming system	23.07.2009
803874	ALU	13/002185	US8848605	US	Efficient provisioning of broadband mobile communication services inside airplanes by a cellular 2-D beamforming system	23.07.2009
					AN APPLICATION SERVER FOR REDUCING AMBIANCE NOISE IN AN AUSCULTATION SIGNAL, AND FOR RECORDING COMMENTS WHILE AUSCULTING A PATIENT WITH AN ELECTRONIC STETHOSCOPE	10.07.2009
802957	ALU	200980126864.5	ZL200980126864.5	CN		

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
802957	ALU	2011517168	JP5541634	JP	AN APPLICATION SERVER FOR REDUCING AMBIANCE NOISE IN AN AUSCULTATION SIGNAL, AND FOR RECORDING COMMENTS WHILE AUSCULTING A PATIENT WITH AN ELECTRONIC STETHOSCOPE	10.07.2009
802957	ALU	20117003114	KR101555828	KR	AN APPLICATION SERVER FOR REDUCING AMBIANCE NOISE IN AN AUSCULTATION SIGNAL, AND FOR RECORDING COMMENTS WHILE AUSCULTING A PATIENT WITH AN ELECTRONIC STETHOSCOPE	10.07.2009
802957	ALU	13/003627	US8589158	US	AN APPLICATION SERVER FOR REDUCING AMBIANCE NOISE IN AN AUSCULTATION SIGNAL, AND FOR RECORDING COMMENTS WHILE AUSCULTING A PATIENT WITH AN ELECTRONIC STETHOSCOPE	10.07.2009
803669	ALU	2011518054	JP5209116	JP	Dynamic To Static VC Switching For TDM VLLS (Also Known As CPIPEs Static To Dynamic VC-Switching)	03.07.2009
803669	ALU	20117003736	KR101206637	KR	Dynamic To Static VC Switching For TDM VLLS (Also Known As CPIPEs Static To Dynamic VC-Switching)	03.07.2009
807485	ALU	13/167522	US8837500	US	Service Data Flow Direction/Redirection	23.06.2011
808178	ALU	13/272842	US9480045	US	Networks And Methods For Paging Message Control	13.10.2011
115185	ALU	06301016.9	EP1909413	FR	Improved PSBT system for limited optical bandwidth	05.10.2006
115185	ALU	06301016.9	EP1909413	DE	Improved PSBT system for limited optical bandwidth	05.10.2006
115185	ALU	06301016.9	EP1909413	GB	Improved PSBT system for limited optical bandwidth	05.10.2006
807569	ALU	13/087125	US8908851	US	System And Method For Reducing Power Consumption In A Telecommunications Facility	14.04.2011
808675	ALU	11290143.4		EP	Open UICC framework	22.03.2011
808959	ALU	10306498.6		EP	Integrated Video Monitoring Planning, Camera Configuration & Calibration For CCTV Deployment	23.12.2010
Cheng 19-13-9 (F)	ALU	07752740.6	EP1997342	FR	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	07752740.6	EP1997342	DE	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	07752740.6	EP1997342	IT	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	07752740.6	EP1997342	ES	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
Cheng 19-13-9 (F)	ALU	07752740.6	EP1997342	GB	Method For Coordinated Control Of Radio Resources In A Distributed Wireless System	09.03.2007
805367	ALU	100108565	TW496435	TW	Speed-up end-to-end switching time delay for wavelength connection activations (SSTD)	14.03.2011
808595	ALU	13/076652	US8559813	US	Passband Reflectometer	31.03.2011
Hertlein 3-40-2 (GH)	ALU	06836370.4	EP1941684	FR	A Method For Providing A Multicast Service Within A Wireless Communications System	16.10.2006
Hertlein 3-40-2 (GH)	ALU	06836370.4	EP1941684	DE	A Method For Providing A Multicast Service Within A Wireless Communications System	16.10.2006
Hertlein 3-40-2 (GH)	ALU	06836370.4	EP1941684	GB	A Method For Providing A Multicast Service Within A Wireless Communications System	16.10.2006
Xie 19 (C)	ALU	20117002405	KR101254939	KR	PMDC Feedback Signal For Alternate Polarization DPSK System	17.07.2009
803138	ALU	200980133382.2	ZL200980133382.2	CN	In-Band DPI Media Reservation Modifications To RFC3313	19.08.2009
803138	ALU	09787215.4		EP	In-Band DPI Media Reservation Modifications To RFC3313	19.08.2009
803524	ALU	200980133554.6	ZL200980133554.6	CN	System And Method Of Serving Gateway Having Mobile Packet Protocol Application-Aware Packet Management	20.08.2009
803524	ALU	2011524511	JP5384645	JP	System And Method Of Serving Gateway Having Mobile Packet Protocol Application-Aware Packet Management	20.08.2009
803524	ALU	20117004560	KR101211742	KR	System And Method Of Serving Gateway Having Mobile Packet Protocol Application-Aware Packet Management	20.08.2009
803524	ALU	1387/CHENP/2011		IN	System And Method Of Serving Gateway Having Mobile Packet Protocol Application-Aware Packet Management	20.08.2009
803138	ALU	1379/CHENP/2011		IN	In-Band DPI Media Reservation Modifications To RFC3313	19.08.2009
803138	ALU	2011524510	JP5312594	JP	In-Band DPI Media Reservation Modifications To RFC3313	19.08.2009
803138	ALU	20117004434	KR101259689	KR	In-Band DPI Media Reservation Modifications To RFC3313	19.08.2009
802041	ALU	07301360.9	EP2037120	FR	Wind BTS	13.09.2007
802041	ALU	07301360.9	EP2037120	DE	Wind BTS	13.09.2007
802041	ALU	07301360.9	EP2037120	GB	Wind BTS	13.09.2007
808773	ALU	11305848.1	EP2541807	EP	Skew compensation applied in Optical reflectometry	30.06.2011
804109	ALU	08877477.3		EP	MPLS Payload Encryption	20.10.2008
804109	ALU	2011531299	JP5319777	JP	MPLS Payload Encryption	20.10.2008
804109	ALU	20117011405	KR101584836	KR	MPLS Payload Encryption	20.10.2008

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Jordan 3-16 (R)	ALU	08019245.3	EP2026123	FR	Tunable All-Pass Optical Filters With Large Free Spectral Ranges	08.05.2001
Jordan 3-16 (R)	ALU	08019245.3	EP2026123	DE	Tunable All-Pass Optical Filters With Large Free Spectral Ranges	08.05.2001
Jordan 3-16 (R)	ALU	08019245.3	EP2026123	GB	Tunable All-Pass Optical Filters With Large Free Spectral Ranges	08.05.2001
Chu 9-14-9 (TP)	ALU	05255878.0	EP1643796	FR	Apparatus For Decomposing An Automatic Cross Connect System At A Remote Wiring Hub	22.09.2005
Chu 9-14-9 (TP)	ALU	05255878.0	EP1643796	DE	Apparatus For Decomposing An Automatic Cross Connect System At A Remote Wiring Hub	22.09.2005
Chu 9-14-9 (TP)	ALU	05255878.0	EP1643796	GB	Apparatus For Decomposing An Automatic Cross Connect System At A Remote Wiring Hub	22.09.2005
808933	ALU	11306025.5		EP	HTTP Adaptive Streaming With Network Hints	09.08.2011
139009	ALU	03019239.7	EP1395079	FR	STORAGE MODULE LOCATED IN DSLAM	26.08.2003
139009	ALU	03019239.7	EP1395079	DE	STORAGE MODULE LOCATED IN DSLAM	26.08.2003
139009	ALU	03019239.7	EP1395079	GB	STORAGE MODULE LOCATED IN DSLAM	26.08.2003
131343	ALU	07425048.1	EP1953960	FR	Constraint-based XML Meta-Information	31.01.2007
131343	ALU	07425048.1	EP1953960	DE	Constraint-based XML Meta-Information	31.01.2007
131343	ALU	07425048.1	EP1953960	GB	Constraint-based XML Meta-Information	31.01.2007
803837	ALU	08290846.8	EP2161832	FR	POWER AMPLIFIER LINEARIZATION USING RF FEEDBACK	09.09.2008
803837	ALU	08290846.8	EP2161832	DE	POWER AMPLIFIER LINEARIZATION USING RF FEEDBACK	09.09.2008
803837	ALU	08290846.8	EP2161832	GB	POWER AMPLIFIER LINEARIZATION USING RF FEEDBACK	09.09.2008
800705	ALU	07825256.6	EP2174383	FR	Earthing kit with partly sealed locking tabs	02.07.2007
800705	ALU	07825256.6	EP2174383	DE	Earthing kit with partly sealed locking tabs	02.07.2007
800705	ALU	07825256.6	EP2174383	GB	Earthing kit with partly sealed locking tabs	02.07.2007
803457	ALU	08425464.8	EP2141884	FR	Introducing collaborative methods for telecommunication management network security	04.07.2008
803457	ALU	08425464.8	EP2141884	DE	Introducing collaborative methods for telecommunication management network security	04.07.2008
803457	ALU	08425464.8	EP2141884	GB	Introducing collaborative methods for telecommunication management network security	04.07.2008
803167	ALU	09159875.5	EP2134033	FR	Scalable And Highly-Available Session Handling In IMS Clustered Applications	11.05.2009
803167	ALU	09159875.5	EP2134033	DE	Scalable And Highly-Available Session Handling In IMS Clustered Applications	11.05.2009
803167	ALU	09159875.5	EP2134033	IT	Scalable And Highly-Available Session Handling In IMS Clustered Applications	11.05.2009
803167	ALU	09159875.5	EP2134033	ES	Scalable And Highly-Available Session Handling In IMS Clustered Applications	11.05.2009
803167	ALU	09159875.5	EP2134033	GB	Scalable And Highly-Available Session Handling In IMS Clustered Applications	11.05.2009
808852	ALU	13/012516	US8849044	US	Detecting Duplicated Videos With Insertion/Deletion/Substitution By Sequence Matching	24.01.2011
807565	ALU	11154562.0		EP	A framework based on multiple directed graphs to use and manage the objects to the Web	15.02.2011
805986	ALU	11151215.8		EP	Coherent receiver optimization through enhanced digital spectral analysis	18.01.2011
808988	ALU	11290069.1	EP2485467	EP	An Innovative Way Of Making Your Friends Listen To The Music Via Cellphones	31.01.2011
Hoekstra 7-6 (GJ)	ALU	07810379.3	EP2050288	FR	Method Of Distributing Identical Data To Mobile Units	11.07.2007
Hoekstra 7-6 (GJ)	ALU	07810379.3	EP2050288	DE	Method Of Distributing Identical Data To Mobile Units	11.07.2007
Hoekstra 7-6 (GJ)	ALU	07810379.3	EP2050288	GB	Method Of Distributing Identical Data To Mobile Units	11.07.2007
135984	ALU	03017906.3	EP1389890	FR	MODULAR SERVICE PROVISIONING WITHIN AN ACCESS NODE	06.08.2003
135984	ALU	03017906.3	EP1389890	DE	MODULAR SERVICE PROVISIONING WITHIN AN ACCESS NODE	06.08.2003
135984	ALU	03017906.3	EP1389890	GB	MODULAR SERVICE PROVISIONING WITHIN AN ACCESS NODE	06.08.2003
Sydorenko 8-8 (O)	ALU	07809401.8	EP2033241	FR	Organic Semiconductor Compositions With Nanoparticles	08.06.2007
Sydorenko 8-8 (O)	ALU	07809401.8	EP2033241	DE	Organic Semiconductor Compositions With Nanoparticles	08.06.2007
Sydorenko 8-8 (O)	ALU	07809401.8	EP2033241	GB	Organic Semiconductor Compositions With Nanoparticles	08.06.2007
Baden 2-1-1-1 (CCE)	ALU	98308353.6	EP0935353	FR	Asymmetric Multiple Access Protocol For A Communication System	13.10.1998
Baden 2-1-1-1 (CCE)	ALU	98308353.6	EP0935353	DE	Asymmetric Multiple Access Protocol For A Communication System	13.10.1998
Baden 2-1-1-1 (CCE)	ALU	98308353.6	EP0935353	GB	Asymmetric Multiple Access Protocol For A Communication System	13.10.1998
808954	ALU	13/163838		US	Server Side Adaptive Streaming	20.06.2011
803430	ALU	200880132152.X	ZL200880132152.X	CN	APOL suitable PMDC feedback	28.11.2008
803430	ALU	12/998662	US8494373	US	APOL suitable PMDC feedback	28.11.2008
807433	ALU	201180021400.5	ZL201180021400.5	CN	Phantom-mode reflectometry	28.04.2011
807433	ALU	2013-506670	JP5643895	JP	Phantom-mode reflectometry	28.04.2011

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
807433	ALU	10-2012-7030876	KR101414072	KR	Phantom-mode reflectometry	28.04.2011
807433	ALU	13/639032	US9188621	US	Phantom-mode reflectometry	28.04.2011
806482	ALU	201180021724.9	ZL201180021724.9	CN	Virtual Binder Identification Based on Trend Analysis of Multiple Lines	26.04.2011
806482	ALU	2013-506615	JP5596221	JP	Virtual Binder Identification Based on Trend Analysis of Multiple Lines	26.04.2011
806482	ALU	20127031028	KR10-1533585	KR	Virtual Binder Identification Based on Trend Analysis of Multiple Lines	26.04.2011
806482	ALU	13/639019	US8891736	US	Virtual Binder Identification Based on Trend Analysis of Multiple Lines	26.04.2011
806481	ALU	201180021019.9	ZL201180021019.9	CN	Detection of Switching Power Supplies Impacting DSL Lines	26.04.2011
806481	ALU	2013-506619	JP5571242	JP	Detection of Switching Power Supplies Impacting DSL Lines	26.04.2011
806481	ALU	20127031021	KR10-1463728	KR	Detection of Switching Power Supplies Impacting DSL Lines	26.04.2011
806481	ALU	13/639007	US8644435	US	Detection of Switching Power Supplies Impacting DSL Lines	26.04.2011
801678	ALU	07291309.8	EP2056548	FR	FAST DSM3 BOOT BY GROUPING CROSSTALKERS	30.10.2007
801678	ALU	07291309.8	EP2056548	DE	FAST DSM3 BOOT BY GROUPING CROSSTALKERS	30.10.2007
801678	ALU	07291309.8	EP2056548	GB	FAST DSM3 BOOT BY GROUPING CROSSTALKERS	30.10.2007
808814	ALU	13/077420	US9054920	US	Managing Data File Transmission	31.03.2011
809164	ALU	13/018997	US8005331	US	Surface-Plasmon-Assisted Optical Frequency Conversion	01.02.2011
135645	ALU	01126598.0	EP1209886	FR	MASS EMERGENCY MULTI-MEDIA INFORMATION CALLING	19.11.2001
135645	ALU	01126598.0	EP1209886	DE	MASS EMERGENCY MULTI-MEDIA INFORMATION CALLING	19.11.2001
135645	ALU	01126598.0	EP1209886	GB	MASS EMERGENCY MULTI-MEDIA INFORMATION CALLING	19.11.2001
Tao 2-14 (H)	ALU	08360027.0	EP2161956	FR	Femto Cell Base Station And Method	04.09.2008
Tao 2-14 (H)	ALU	08360027.0	EP2161956	DE	Femto Cell Base Station And Method	04.09.2008
Tao 2-14 (H)	ALU	08360027.0	EP2161956	GB	Femto Cell Base Station And Method	04.09.2008
809044	ALU	11290157.4		EP	Method To Handle The Associative Behavior Of Persons Communication In A Telecommunication Environment	30.03.2011
809015	ALU	13/021481	US8775490	US	Compressive Sensing With Low Compression Complexity	04.02.2011
137200	ALU	2011102707	JP5200138	JP	Hot redundancy in Link/Topology State Routing Protocols	02.05.2011
115153	ALU	06291250.6	EP1885111	FR	Virtual conference phone	01.08.2006
115153	ALU	06291250.6	EP1885111	DE	Virtual conference phone	01.08.2006
115153	ALU	06291250.6	EP1885111	GB	Virtual conference phone	01.08.2006
Doerr 105 (CR)	ALU	06836366.2	EP1938129	FR	Rectangular-Passband Multiplexer	18.10.2006
Doerr 105 (CR)	ALU	06836366.2	EP1938129	DE	Rectangular-Passband Multiplexer	18.10.2006
Doerr 105 (CR)	ALU	06836366.2	EP1938129	GB	Rectangular-Passband Multiplexer	18.10.2006
809173	ALU	13/041364	US8682120	US	Polarization-Independent Grating Optical Coupler	05.03.2011
804428	ALU	13/026532	US8483220	US	Handling Of Received Implicit Null Packets	14.02.2011
808799	ALU	13/220199	US8682255	US	Methods And Apparatuses For Evaluating Wireless Network Performance	29.08.2011
106301	ALU	07105929.9	EP1850429	FR	WIDELY TUNABLE DBR LASER WITH DOUBLE BRAGG GRATINGS	11.04.2007
106301	ALU	07105929.9	EP1850429	DE	WIDELY TUNABLE DBR LASER WITH DOUBLE BRAGG GRATINGS	11.04.2007
106301	ALU	07105929.9	EP1850429	GB	WIDELY TUNABLE DBR LASER WITH DOUBLE BRAGG GRATINGS	11.04.2007
806400	ALU	100108574	TWI485650	TW	Camera Calibration Using Projective Geometry Constrained, Similarity Invariant Search Spaces	14.03.2011
134122	ALU	13/026885	US8537830	US	COMMUNICATION METHOD HAVING IP PHONE LOCATION ASSOCIATION	14.02.2011
803581	ALU	09290134.7	EP2224590	FR	Power amplification for fragmented transceiver systems	25.02.2009
803581	ALU	09290134.7	EP2224590	DE	Power amplification for fragmented transceiver systems	25.02.2009
803581	ALU	09290134.7	EP2224590	GB	Power amplification for fragmented transceiver systems	25.02.2009
801472	ALU	13/085026	US8321717	US	Dynamic Frequency Adjustment For Interoperability Of Differential Clock Recovery Methods	12.04.2011
115140	ALU	07290994.8	EP2023483	FR	Frequency Switch Principle for Multiband Circulators	09.08.2007
115140	ALU	07290994.8	EP2023483	DE	Frequency Switch Principle for Multiband Circulators	09.08.2007
115140	ALU	07290994.8	EP2023483	GB	Frequency Switch Principle for Multiband Circulators	09.08.2007
114066	ALU	04006647.4	EP1475974	FR	AREA INFORMATION DISTRIBUTION SYSTEM	19.03.2004
114066	ALU	04006647.4	EP1475974	DE	AREA INFORMATION DISTRIBUTION SYSTEM	19.03.2004
114066	ALU	04006647.4	EP1475974	GB	AREA INFORMATION DISTRIBUTION SYSTEM	19.03.2004
806543	ALU	100106883	TWI489811	TW	Dynamic Narrow Optical TX Filtering For Ultra High Density Optical Network	02.03.2011
803786	ALU	4942/CHENP/2011		IN	ADAPTIVE PCN LEVELS	30.11.2009
803786	ALU	2011-541154	JP5519696	JP	ADAPTIVE PCN LEVELS	30.11.2009
803786	ALU	2011-7016531	KR10-1538200	KR	ADAPTIVE PCN LEVELS	30.11.2009
801926	ALU	08168170.2	EP2073438	FR	DYNAMIC TRACKING OF A MOBILE GROUP COHESION	03.11.2008
801926	ALU	08168170.2	EP2073438	DE	DYNAMIC TRACKING OF A MOBILE GROUP COHESION	03.11.2008
801926	ALU	08168170.2	EP2073438	GB	DYNAMIC TRACKING OF A MOBILE GROUP COHESION	03.11.2008
803089	ALU	09290014.1	EP2207316	FR	Coherent optical intradyne OFDM system	08.01.2009
803089	ALU	09290014.1	EP2207316	DE	Coherent optical intradyne OFDM system	08.01.2009
803089	ALU	09290014.1	EP2207316	GB	Coherent optical intradyne OFDM system	08.01.2009

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Kramer 9-16-6 (GG)	ALU	08727240.7	EP2156632	FR	Determining A Channel Matrix By Measuring Interference	01.04.2008
Kramer 9-16-6 (GG)	ALU	08727240.7	EP2156632	DE	Determining A Channel Matrix By Measuring Interference	01.04.2008
Kramer 9-16-6 (GG)	ALU	08727240.7	EP2156632	IT	Determining A Channel Matrix By Measuring Interference	01.04.2008
Kramer 9-16-6 (GG)	ALU	08727240.7	EP2156632	PL	Determining A Channel Matrix By Measuring Interference	01.04.2008
Kramer 9-16-6 (GG)	ALU	08727240.7	EP2156632	ES	Determining A Channel Matrix By Measuring Interference	01.04.2008
Kramer 9-16-6 (GG)	ALU	08727240.7	EP2156632	GB	Determining A Channel Matrix By Measuring Interference	01.04.2008
139009	ALU	03019239.7	EP1395079	IT	STORAGE MODULE LOCATED IN DSLAM	26.08.2003
139009	ALU	03019239.7	EP1395079	ES	STORAGE MODULE LOCATED IN DSLAM	26.08.2003
803335	ALU	09806131.0		EP	IMS call control from Enterprise	10.09.2009
					Individual firewall system for protecting IMS terminals in public network	
803492	ALU	2011546565	JP5694954	JP		22.01.2009
					Individual firewall system for protecting IMS terminals in public network	
803492	ALU	20117016252	KR101520142	KR		22.01.2009
809322	ALU	13/043145	US8760752	US	A Tubable Optical Frequency Comb Generator	08.03.2011
803035	ALU	2011530420	JP5535221	JP	7TH ORDER UNIVERSAL ISDN/POTS SPLITTER	08.10.2009
803751	ALU	200980149281.4	ZL200980149281.4	CN	On-Node Frequency Support and Time distribution protocol inter-working	07.12.2009
803751	ALU	3799/CHENP/2011		IN	On-Node Frequency Support and Time distribution protocol inter-working	07.12.2009
803751	ALU	20117013016	KR101301933	KR	On-Node Frequency Support and Time distribution protocol inter-working	07.12.2009
803751	ALU	12/998738	US8964722	US	On-Node Frequency Support and Time distribution protocol inter-working	07.12.2009
Cai 132-16 (Y)	ALU	13/060657		US	Online Charging Correlation In IMS Networks	03.09.2008
Batni 7-12-14-5-4 (RP)	ALU	05257737.6	EP1677501	FR	Method And Apparatus For Providing Multimedia Ringback Services To Mobile User Devices In Pre-IMS Networks	15.12.2005
Batni 7-12-14-5-4 (RP)	ALU	05257737.6	EP1677501	DE	Method And Apparatus For Providing Multimedia Ringback Services To Mobile User Devices In Pre-IMS Networks	15.12.2005
Batni 7-12-14-5-4 (RP)	ALU	05257737.6	EP1677501	GB	Method And Apparatus For Providing Multimedia Ringback Services To Mobile User Devices In Pre-IMS Networks	15.12.2005
809088	ALU	13/066401	US8787159	US	Mechanism For Wireless Access Networks To Throttle Traffic During Congestion	14.04.2011
800797	ALU	200980143335.6	ZL200980143335.6	CN	Method And System For Classifying Data Packets	20.10.2009
800797	ALU	09748863.9		EP	Method And System For Classifying Data Packets	20.10.2009
800797	ALU	20117009984	KR101244604	KR	Method And System For Classifying Data Packets	20.10.2009
809174	ALU	13/077086	US9146349	US	Monolithic Integration Of Dielectric Waveguides And Germanium Photodetectors-Based Devices	31.03.2011
809209	ALU	13/188705	US8949329	US	Content Popularity Extraction In Distributed Hash Table Peer-To-Peer Networks	22.07.2011
809397	ALU	13/051055	US9043883	US	Secure Authentication Advertisement Protocol	18.03.2011
806820	ALU	100110109	TWI482954	TW	Non-coherent OTDR using Golay sequences in Multi-channel environment	24.03.2011
Malhotra 10 (R)	ALU	07254729.2	EP2068511	FR	Controlling Congestion In A Packet Switched Data Network	06.12.2007
Malhotra 10 (R)	ALU	07254729.2	EP2068511	DE	Controlling Congestion In A Packet Switched Data Network	06.12.2007
Malhotra 10 (R)	ALU	07254729.2	EP2068511	GB	Controlling Congestion In A Packet Switched Data Network	06.12.2007
807027	ALU	100110113	TWI499242	TW	Dynamically configurable parallel architecture for energy efficient packet aggregation and transport	24.03.2011
					Content Rate Selection For Media Servers With Proxy-Feedback-Controlled Frame Transmission	
809415	ALU	13/064288	US8626943	US		16.03.2011
808889	ALU	11290409.9		EP	Method And Aparatus To Build Highly Scalable Dynamically Elastic Systems	13.09.2011
809005	ALU	13/206243	US8635500	US	System And Method For Powering Redundant Components	09.08.2011
809004	ALU	13/206151	US8842775	US	System And Method For Power Reduction In Redundant Components	09.08.2011
102686	ALU	00403622.4	EP1111742	FR	C-band and L-band EDFA.	21.12.2000
102686	ALU	00403622.4	EP1111742	DE	C-band and L-band EDFA.	21.12.2000
102686	ALU	00403622.4	EP1111742	GB	C-band and L-band EDFA.	21.12.2000

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
809355	ALU	13/088142	US8717875	US	Condensed Core-Energy-Efficient Architecture For Wan IP Backbones	15.04.2011
806412	ALU	100117088	TW465129	TW	Methods Of Determining Coverage Areas	16.05.2011
809018	ALU	13/208465	US9113486	US	Method And Apparatus For Controlling Wireless Uplink Sessions	12.08.2011
809019	ALU	13/208478	US9119111	US	Method And Apparatus For Controlling Wireless Uplink Sessions	12.08.2011
808947	ALU	13/073109	US8798636	US	A Carrier Selection Method For Low Complexity Multicarrier Scheduling	28.03.2011
809481	ALU	13/096479	US8693489	US	Hierarchical Profiled Scheduling And Shaping	28.04.2011
801470	ALU	09703949.9	EP2260628	DE	MAC ADDRESS FLOODING DEFENCE	08.01.2009
801470	ALU	09703949.9	EP2260628	GB	MAC ADDRESS FLOODING DEFENCE	08.01.2009
809211	ALU	12305161.7		EP	Mediated Asynchronous Video Communication System	14.02.2012
					Distributed Video Mixing	
808749	ALU	13/278773	US9113038	US		21.10.2011
804311	ALU	200980143861.2	ZL200980143861.2	CN	System architecture for overlay on cellular systems for high mobility and beamforming	23.07.2009
804311	ALU	2271/CHENP/2011		IN	System architecture for overlay on cellular systems for high mobility and beamforming	23.07.2009
804311	ALU	10-2011-7007830	KR10-1263223	KR	System architecture for overlay on cellular systems for high mobility and beamforming	23.07.2009
804311	ALU	13/123464	US9350442	US	System architecture for overlay on cellular systems for high mobility and beamforming	23.07.2009
808636	ALU	13/228073	US8649744	US	Radio-Frequency Transmitter, Such As For Broadcasting And Cellular Base Stations	08.09.2011
809436	ALU	11290338.0		EP	Off-line efficient synchronization for optical burst ring network	26.07.2011
105512	ALU	04292759.0	EP1536575	FR	COMMUNICATION MANAGEMENT METHOD AND MODEM IN SLOTTED ALONA ACCESS	23.11.2004
105512	ALU	04292759.0	EP1536575	DE	COMMUNICATION MANAGEMENT METHOD AND MODEM IN SLOTTED ALONA ACCESS	23.11.2004
105512	ALU	04292759.0	EP1536575	GB	COMMUNICATION MANAGEMENT METHOD AND MODEM IN SLOTTED ALONA ACCESS	23.11.2004
139384	ALU	06011360.2	EP1750413	FR	CELLPHONE BASED ANTI-SPAM SCHEME	01.06.2006
139384	ALU	06011360.2	EP1750413	DE	CELLPHONE BASED ANTI-SPAM SCHEME	01.06.2006
139384	ALU	06011360.2	EP1750413	GB	CELLPHONE BASED ANTI-SPAM SCHEME	01.06.2006
139418	ALU	06003549.0	EP1713247	FR	TERMINATION CIRCUITRY TO MIGRATE FROM POTS TO VOIP WITHOUT TRUCK ROLL OUT	22.02.2006
139418	ALU	06003549.0	EP1713247	DE	TERMINATION CIRCUITRY TO MIGRATE FROM POTS TO VOIP WITHOUT TRUCK ROLL OUT	22.02.2006
139418	ALU	06003549.0	EP1713247	GB	TERMINATION CIRCUITRY TO MIGRATE FROM POTS TO VOIP WITHOUT TRUCK ROLL OUT	22.02.2006
114446	ALU	04360049.3	EP1594280	FR	Data Authentication Method and Agent Based System	07.05.2004
114446	ALU	04360049.3	EP1594280	DE	Data Authentication Method and Agent Based System	07.05.2004
114446	ALU	04360049.3	EP1594280	GB	Data Authentication Method and Agent Based System	07.05.2004
Cai 108 (Y)	ALU	08713127.2	EP2127352	FR	Systems And Methods For Mobile Virtual Network Operator Mobile To Mobile Service	14.01.2008
Cai 108 (Y)	ALU	08713127.2	EP2127352	DE	Systems And Methods For Mobile Virtual Network Operator Mobile To Mobile Service	14.01.2008
Cai 108 (Y)	ALU	08713127.2	EP2127352	GB	Systems And Methods For Mobile Virtual Network Operator Mobile To Mobile Service	14.01.2008
					Methods And Apparatuses For In-Phase And Quadrature-Phase Imbalance Compensation	
809228	ALU	13/106312	US8718187	US		12.05.2011
809664	ALU	11305592.5		EP	System To Aid User Representation In Front Of Camera	17.05.2011
809624	ALU	11305593.3	EP2525587	EP	HAS Session Reconstruction (HAS-SR)	17.05.2011
807141	ALU	100123521	TW458312	TW	PTP-Network InterWorking Function (PN-IWF)	04.07.2011
Taylor-Smith 15 (RE)	ALU	05254412.9	EP1617500	FR	Solid State Proton Conductor System Derived From Hybrid Composite Inorganic-Organic Multicomponent Material	14.07.2005
Taylor-Smith 15 (RE)	ALU	05254412.9	EP1617500	DE	Solid State Proton Conductor System Derived From Hybrid Composite Inorganic-Organic Multicomponent Material	14.07.2005
Taylor-Smith 15 (RE)	ALU	05254412.9	EP1617500	GB	Solid State Proton Conductor System Derived From Hybrid Composite Inorganic-Organic Multicomponent Material	14.07.2005
804459	ALU	09164243.9	EP2278705	FR	Distributed Matching for ET optimized Multistandard/Multiband RF Amplifier	30.06.2009
804459	ALU	09164243.9	EP2278705	DE	Distributed Matching for ET optimized Multistandard/Multiband RF Amplifier	30.06.2009
804459	ALU	09164243.9	EP2278705	GB	Distributed Matching for ET optimized Multistandard/Multiband RF Amplifier	30.06.2009
808351	ALU	13/173612	US8881295	US	Garbled Circuit Generation In A Leakage-Resilient Manner	30.06.2011
114062	ALU	200810184150.7	ZL200810184150.7	CN	Temporary SNCP for Restoration	10.12.2008
106277	ALU	07301446.6	EP2048827	FR	HOW TO AVOID BER DEGRADATION IN CIRCUIT EMULATION SERVICES OVER PACKETS	10.10.2007

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
106277	ALU	07301446.6	EP2048827	DE	HOW TO AVOID BER DEGRADATION IN CIRCUIT EMULATION SERVICES OVER PACKETS	10.10.2007
106277	ALU	07301446.6	EP2048827	GB	HOW TO AVOID BER DEGRADATION IN CIRCUIT EMULATION SERVICES OVER PACKETS	10.10.2007
806857	ALU	11165312.7		EP	Well-being and health indicators via TV usage monitoring	09.05.2011
806832	ALU	100120703	WI483455	TW	PCB Mounted Microwave Re-Entrant Resonators And Filters Thereof	14.06.2011
Riverstone 28 ()	ALU	02795840.4	EP1454152	FR	Method And System For Providing Failure Protection In A Ring Network That Utilizes Label Switching	11.12.2002
Riverstone 28 ()	ALU	02795840.4	EP1454152	DE	Method And System For Providing Failure Protection In A Ring Network That Utilizes Label Switching	11.12.2002
Riverstone 28 ()	ALU	02795840.4	EP1454152	GB	Method And System For Providing Failure Protection In A Ring Network That Utilizes Label Switching	11.12.2002
121217	ALU	2009522283	JP4803562	JP	ANYCAST ADDRESS RESOLUTION BASED ON AA INFORMATION	03.08.2007
809716	ALU	13/159018	US8773532	US	Video Surveillance System Integrating Real And Logical Video Streams	13.06.2011
809799	ALU	13/217781	US8606908	US	Wake-Up Server	25.08.2011
139406	ALU	06018288.8	EP1783995	FR	CONFERENCE PRESENCE BASED MUSIC ON HOLD SUPPRESSION	01.09.2006
139406	ALU	06018288.8	EP1783995	DE	CONFERENCE PRESENCE BASED MUSIC ON HOLD SUPPRESSION	01.09.2006
139406	ALU	06018288.8	EP1783995	GB	CONFERENCE PRESENCE BASED MUSIC ON HOLD SUPPRESSION	01.09.2006
Kramer 19-22 (GG)	ALU	2011550193	JP5265026	JP	Simultaneous Estimation Of Multiple Channel Coefficients Using A Common Probing Sequence	10.02.2010
809868	ALU	13/151786	US8768110	US	Optical Isolator Using Phase Modulators	02.06.2011
801920	ALU	07290995.5	EP2023533	FR	HYBRID APPLICATION IDENTIFICATION USING STATISTICALLY GENERATED RULES FOR ENCRYPTED TRAFFIC	10.08.2007
801920	ALU	07290995.5	EP2023533	DE	HYBRID APPLICATION IDENTIFICATION USING STATISTICALLY GENERATED RULES FOR ENCRYPTED TRAFFIC	10.08.2007
801920	ALU	07290995.5	EP2023533	GB	HYBRID APPLICATION IDENTIFICATION USING STATISTICALLY GENERATED RULES FOR ENCRYPTED TRAFFIC	10.08.2007
114620	ALU	05292484.2	EP1788731	FR	High power double stage submarine EDFA	21.11.2005
114620	ALU	05292484.2	EP1788731	DE	High power double stage submarine EDFA	21.11.2005
114620	ALU	05292484.2	EP1788731	GB	High power double stage submarine EDFA	21.11.2005
Dayal 3-45 (S)	ALU	2011115456	JP5829432	JP	Magnetic Mouse And/Or Mouse-Pad	11.01.2001
809575	ALU	12305504.8		EP	Slewrate Limiter	07.05.2012
804823	ALU	201080022882.1	ZL201080022882.1	CN	Convert Unicast Client Requests to Multicast for Load Balancing and High Availability	19.05.2010
804823	ALU	2012513131	JP5746688	JP	Convert Unicast Client Requests to Multicast for Load Balancing and High Availability	19.05.2010
804823	ALU	20117027995	KR101276993	KR	Convert Unicast Client Requests to Multicast for Load Balancing and High Availability	19.05.2010
809830	ALU	11382213.4		EP	Added Value Video Services through Edge Tailoring of HAS Protocols	22.06.2011
105348	ALU	03293356.6	EP1548951	FR	ELECTRONIC CIRCUIT WHICH ALLOWS TO EQUALIZE THE IMPEDANCE OF AN INTERFACE ACCESS AND THE WIRE LINE CONNECTED	26.12.2003
105348	ALU	03293356.6	EP1548951	DE	ELECTRONIC CIRCUIT WHICH ALLOWS TO EQUALIZE THE IMPEDANCE OF AN INTERFACE ACCESS AND THE WIRE LINE CONNECTED	26.12.2003
105348	ALU	03293356.6	EP1548951	GB	ELECTRONIC CIRCUIT WHICH ALLOWS TO EQUALIZE THE IMPEDANCE OF AN INTERFACE ACCESS AND THE WIRE LINE CONNECTED	26.12.2003
139405	ALU	06017314.3	EP1768370	FR	CONFERENCE ACTIVITY PRESENCE	19.08.2006
139405	ALU	06017314.3	EP1768370	DE	CONFERENCE ACTIVITY PRESENCE	19.08.2006
139405	ALU	06017314.3	EP1768370	GB	CONFERENCE ACTIVITY PRESENCE	19.08.2006
802511	ALU	08305363.7	EP2141866	FR	Node performance cost parameter for GMPLS	30.06.2008
802511	ALU	08305363.7	EP2141866	DE	Node performance cost parameter for GMPLS	30.06.2008
802511	ALU	08305363.7	EP2141866	GB	Node performance cost parameter for GMPLS	30.06.2008
804683	ALU	20117031582	KR101318001	KR	Linking Inner and Outer MPLS Labels	22.06.2010
809363	ALU	13/282009	US8990586	US	Method For Selectively Exposing Subscriber Data	26.10.2011
804327	ALU	201080010779.5	ZL201080010779.5	CN	Dual time Signaling for the distribution of Time in PSNs (DST)	11.03.2010
804327	ALU	2011553457	JP5426695	JP	Dual time Signaling for the distribution of Time in PSNs (DST)	11.03.2010
804327	ALU	20117021101	KR101304745	KR	Dual time Signaling for the distribution of Time in PSNs (DST)	11.03.2010
809277	ALU	11306243.4		EP	Service Registration, Discovery And Access Control Using WiFi Hotspots	29.09.2011
Grosse 13-39 (EH)	ALU	06789176.2	EP1911241	FR	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks By Target Victim Self-Identification And Control	02.08.2006
Grosse 13-39 (EH)	ALU	06789176.2	EP1911241	DE	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks By Target Victim Self-Identification And Control	02.08.2006

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0361

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Grosse 13-39 (EH)	ALU	06789176.2	EP1911241	GB	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks By Target Victim Self-Identification And Control	02.08.2006
121347	ALU	06291988.1	EP1936983	FR	NETWORK PRESENCE AWARE IPTV SERVICES	19.12.2006
121347	ALU	06291988.1	EP1936983	DE	NETWORK PRESENCE AWARE IPTV SERVICES	19.12.2006
121347	ALU	06291988.1	EP1936983	GB	NETWORK PRESENCE AWARE IPTV SERVICES	19.12.2006
807602	ALU	100122435	TW447654	TW	"Mobile Touch" - A Cellular Short Range Mobile Phone Sensor System	27.06.2011
804662	ALU	201080006687.X	ZL201080006687.X	CN	Radio frequency power amplifier with PAPR regulated power supply	10.02.2010
804662	ALU	6257/CHENP/2011		IN	Radio frequency power amplifier with PAPR regulated power supply	10.02.2010
804662	ALU	10-2011-7020266	KR101374068	KR	Radio frequency power amplifier with PAPR regulated power supply	10.02.2010
804662	ALU	13/254358	US8536940	US	Radio frequency power amplifier with PAPR regulated power supply	10.02.2010
802440	ALU	201080004854.7	ZL201080004854.7	CN	System, Method And Computer Readable Medium For Application Placement	07.01.2010
802440	ALU	10700768.4		EP	System, Method And Computer Readable Medium For Application Placement	07.01.2010
802440	ALU	2011546280	JP5487219	JP	System, Method And Computer Readable Medium For Application Placement	07.01.2010
802440	ALU	20117016790	KR101426124	KR	System, Method And Computer Readable Medium For Application Placement	07.01.2010
809893	ALU	13/240783	US8990322	US	Archive Control For Text Messages	22.09.2011
809227	ALU	13/189872	US8885484	US	Bootstrapping Fault Detection Sessions Over A P2MP Tunnel	25.07.2011
809141	ALU	13/232060	US8693944	US	Method And Apparatus Of Performing Video Programming Security Control	14.09.2011
809841	ALU	12305036.1		EP	Non-disruptive, DELT-based Localization And Identification Of Impairments	10.01.2012
809842	ALU	11290485.9		EP	Non-intrusive System To Detect, Characterize And Localize Mismatched Segment	19.10.2011
809335	ALU	12152920.0		EP	Method and system for video Rols personalization	27.01.2012
809805	ALU	12305016.3		EP	Automated Pan-Tilt-Zoom Optimization	06.01.2012
809235	ALU	11290445.3		EP	Reference IPTV Transport Stream LipSync Transmitter & Receiver	29.09.2011
809667	ALU	11306487.7		EP	System and Method for Interactive Online Video Preview	15.11.2011
Kisel 17-18 (A)	ALU	200980156191.8	ZL200980156191.8	CN	Intelligent Bursting - Optimised BW Utilisation In Multimedia Networks with QoS	31.12.2009
Kisel 17-18 (A)	ALU	4687/CHENP/2011		IN	Intelligent Bursting - Optimised BW Utilisation In Multimedia Networks with QoS	31.12.2009
Kisel 17-18 (A)	ALU	2011544001	JP5302415	JP	Intelligent Bursting - Optimised BW Utilisation In Multimedia Networks with QoS	31.12.2009
809330	ALU	13/686659	US9148765	US	Non-TCP Push Server In Cellular Network	27.11.2012
804528	ALU	2011547000	JP5265785	JP	Scaled Ethernet OAM For Mesh And Hub-And-Spoke Networks	15.01.2010
804528	ALU	20117017852	KR101266671	KR	Scaled Ethernet OAM For Mesh And Hub-And-Spoke Networks	15.01.2010
802257	ALU	09150680.8	EP2081258	FR	A new sub-reflector dielectric support shape for low profile dual reflectors antenna application	15.01.2009
802257	ALU	09150680.8	EP2081258	DE	A new sub-reflector dielectric support shape for low profile dual reflectors antenna application	15.01.2009
802257	ALU	09150680.8	EP2081258	GB	A new sub-reflector dielectric support shape for low profile dual reflectors antenna application	15.01.2009
Bhatia 13-15-27 (RS)	ALU	08726745.6	EP2143235	FR	Method and Appartus For Providing Interactive Services To Users Using Unicast And Broadcast Wireless Networks	13.03.2008
Bhatia 13-15-27 (RS)	ALU	08726745.6	EP2143235	DE	Method and Appartus For Providing Interactive Services To Users Using Unicast And Broadcast Wireless Networks	13.03.2008
Bhatia 13-15-27 (RS)	ALU	08726745.6	EP2143235	GB	Method and Appartus For Providing Interactive Services To Users Using Unicast And Broadcast Wireless Networks	13.03.2008
Gao 2 (M)	ALU	07810891.7	EP2050298	FR	Access Network Broadcast Control-Signaling Channel	27.07.2007
Gao 2 (M)	ALU	07810891.7	EP2050298	DE	Access Network Broadcast Control-Signaling Channel	27.07.2007
Gao 2 (M)	ALU	07810891.7	EP2050298	GB	Access Network Broadcast Control-Signaling Channel	27.07.2007
139048	ALU	03027761.0	EP1432277	FR	LAYER 4 THROUGH 7 SERVER CARD HOSTED BY THE DSLAM	03.12.2003
139048	ALU	03027761.0	EP1432277	DE	LAYER 4 THROUGH 7 SERVER CARD HOSTED BY THE DSLAM	03.12.2003
139048	ALU	03027761.0	EP1432277	GB	LAYER 4 THROUGH 7 SERVER CARD HOSTED BY THE DSLAM	03.12.2003
804092	ALU	201080007234.9	ZL201080007234.9	CN	Availability indicator via video	01.02.2010
804092	ALU	10708256.2	EP2396949	EP	Availability indicator via video	01.02.2010
804092	ALU	2011549637	JP5363594	JP	Availability indicator via video	01.02.2010
804092	ALU	13/148442	US8909791	US	Availability indicator via video	01.02.2010
809901	ALU	13/217809	US9667445	US	Method And Apparatus For Signaling Plane Delay KPI Monitoring In Live Network Without Any Performance Degradation	25.08.2011

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
809985	ALU	13/191599	US9317336	US	Method And Apparatus For Assignment Of Virtual Resources Within A Cloud Environment	27.07.2011
804206	ALU	201080005873.1	ZL201080005873.1	CN	LOCALISATION OF XDSL WIRING ISSUES BY SYNCHRONOUS LISTENING AT XTU'S	27.01.2010
804206	ALU	13/144019	US8829916	US	LOCALISATION OF XDSL WIRING ISSUES BY SYNCHRONOUS LISTENING AT XTU'S	27.01.2010
803536	ALU	08021349.9	EP2200225	FR	Efficient protocol forwarding by header exchange based on commercial devices	09.12.2008
803536	ALU	08021349.9	EP2200225	DE	Efficient protocol forwarding by header exchange based on commercial devices	09.12.2008
810094	ALU	11360030.8		EP	Neighbor-Cooperative Carrier Sense Multiple Access With Collision Avoidance	27.07.2011
810096	ALU	13/189024	US8527310	US	Method And Apparatus For Customer Experience Management	22.07.2011
139358	ALU	05737442.3	EP1738596	FR	MEDIA GATEWAY SELECTION IN A SOFTSWITCH ENVIRONMENT BASED ON TARGET BASE STATION	21.04.2005
139358	ALU	05737442.3	EP1738596	DE	MEDIA GATEWAY SELECTION IN A SOFTSWITCH ENVIRONMENT BASED ON TARGET BASE STATION	21.04.2005
139358	ALU	05737442.3	EP1738596	GB	MEDIA GATEWAY SELECTION IN A SOFTSWITCH ENVIRONMENT BASED ON TARGET BASE STATION	21.04.2005
135544	ALU	00119350.7	EP1083706	FR	PACKET-LEVEL RESTORATION OF IP TRAFFIC USING SONET OVERHEAD	08.09.2000
135544	ALU	00119350.7	EP1083706	DE	PACKET-LEVEL RESTORATION OF IP TRAFFIC USING SONET OVERHEAD	08.09.2000
135544	ALU	00119350.7	EP1083706	GB	PACKET-LEVEL RESTORATION OF IP TRAFFIC USING SONET OVERHEAD	08.09.2000
131310	ALU	05292695.3	EP1798882	FR	NEW METHOD TO PASS A SYNCHRONISM BETWEEN TWO DIFFERENT CLOCK DOMAINS	14.12.2005
131310	ALU	05292695.3	EP1798882	DE	NEW METHOD TO PASS A SYNCHRONISM BETWEEN TWO DIFFERENT CLOCK DOMAINS	14.12.2005
131310	ALU	05292695.3	EP1798882	GB	NEW METHOD TO PASS A SYNCHRONISM BETWEEN TWO DIFFERENT CLOCK DOMAINS	14.12.2005
111727	ALU	01107818.5	EP1152267	FR	Printed Optical Circuit Boards	06.04.2001
111727	ALU	01107818.5	EP1152267	DE	Printed Optical Circuit Boards	06.04.2001
111727	ALU	01107818.5	EP1152267	GB	Printed Optical Circuit Boards	06.04.2001
804305	ALU	201080019972.5	ZL2010800199725	CN	Learning packets to get faster coherent optical packet detectors	03.03.2010
804305	ALU	2012508957	JP5367907	JP	Learning packets to get faster coherent optical packet detectors	03.03.2010
804305	ALU	20117026197	KR1380141	KR	Learning packets to get faster coherent optical packet detectors	03.03.2010
804305	ALU	13/265985	US9178612	US	Learning packets to get faster coherent optical packet detectors	03.03.2010
804183	ALU	201080019935.4	ZL2010800199354	CN	Stitching of Labels for Inter-Carrier service Enforcement (SLICE)	15.03.2010
804183	ALU	20117026208	KR1333020	KR	Stitching of Labels for Inter-Carrier service Enforcement (SLICE)	15.03.2010
804183	ALU	13/265963	US8750287	US	Stitching of Labels for Inter-Carrier service Enforcement (SLICE)	15.03.2010
Chung 1-18 (S)	ALU	01302760.2	EP1161020	FR	Method Of Producing ChannelError Flags For Error Mitigation And ConcealmentIn Source Decoders	26.03.2001
Chung 1-18 (S)	ALU	01302760.2	EP1161020	DE	Method Of Producing ChannelError Flags For Error Mitigation And ConcealmentIn Source Decoders	26.03.2001
Chung 1-18 (S)	ALU	01302760.2	EP1161020	GB	Method Of Producing ChannelError Flags For Error Mitigation And ConcealmentIn Source Decoders	26.03.2001
809916	ALU	11290434.7		EP	A Mean And Method For Recharging Electrical Vehicles On Motorails	26.09.2011
804002	ALU	10713711.9	EP2396957	EP	Synchronizing Packet Sequence Number In TDM-PW Service For Line Card Redundancy	10.02.2010
804002	ALU	2011549699	JP5639083	JP	Synchronizing Packet Sequence Number In TDM-PW Service For Line Card Redundancy	10.02.2010
804002	ALU	20117018817	KR101337054	KR	Synchronizing Packet Sequence Number In TDM-PW Service For Line Card Redundancy	10.02.2010
Cai 130-45 (Y)	ALU	13/185714	US8301114	US	Offline Charging For Sessions Over A 3GPP Network And A WLAN Access Network	19.07.2011
810184	ALU	13/270600	US8361825	US	Mechanical Switch With A Curved Bilayer	11.10.2011
114997	ALU	06290148.3	EP1811596	FR	Transmission line made of plastic foil laminated with a metal layer	20.01.2006
114997	ALU	06290148.3	EP1811596	DE	Transmission line made of plastic foil laminated with a metal layer	20.01.2006
114997	ALU	06290148.3	EP1811596	GB	Transmission line made of plastic foil laminated with a metal layer	20.01.2006
802247	ALU	201080015409.0	ZL201080015409.0	CN	Mobility Management in a Mobile Ethernet Network	18.03.2010
802247	ALU	2012502562	JP5202760	JP	Mobility Management in a Mobile Ethernet Network	18.03.2010
802247	ALU	20117023172	KR101307114	KR	Mobility Management in a Mobile Ethernet Network	18.03.2010

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REEL: 043877 FRAME: 0363

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
802247	ALU	13/202215	US8594046	US	Mobility Management in a Mobile Ethernet Network	18.03.2010
804110	ALU	20117026298	KR1311572	KR	A Method For Controlling Admission Of Undeclared Traffic Flows In Data Communication Systems	22.04.2010
802249	ALU	08290986.2	EP2178219	FR	Switching-less broadband matching for efficiency optimised power amplifiers	20.10.2008
802249	ALU	08290986.2	EP2178219	DE	Switching-less broadband matching for efficiency optimised power amplifiers	20.10.2008
802249	ALU	08290986.2	EP2178219	GB	Switching-less broadband matching for efficiency optimised power amplifiers	20.10.2008
804632	ALU	201080011440.7	ZL201080011440.7	CN	Transport of logical client interfaces over OTN using ODU-flex	09.03.2010
804632	ALU	2011553433	JP5362044	JP	Transport of logical client interfaces over OTN using ODU-flex	09.03.2010
804632	ALU	10-2011-7023610	KR10-1232105	KR	Transport of logical client interfaces over OTN using ODU-flex	09.03.2010
804632	ALU	13/254891	US8849116	US	Transport of logical client interfaces over OTN using ODU-flex	09.03.2010
804014	ALU	09001272.5	EP2214305	FR	Digitally Controlled SMALA	30.01.2009
804014	ALU	09001272.5	EP2214305	DE	Digitally Controlled SMALA	30.01.2009
804014	ALU	09001272.5	EP2214305	GB	Digitally Controlled SMALA	30.01.2009
803897	ALU	09001271.7	EP2214304	FR	Precise control for high efficient variable power supplies	30.01.2009
803897	ALU	09001271.7	EP2214304	DE	Precise control for high efficient variable power supplies	30.01.2009
803897	ALU	09001271.7	EP2214304	GB	Precise control for high efficient variable power supplies	30.01.2009
804810	ALU	09171862.7	EP2306638	FR	Principle and Architecture for Delay Compensation of Envelope Tracked Amplifiers	30.09.2009
804810	ALU	09171862.7	EP2306638	DE	Principle and Architecture for Delay Compensation of Envelope Tracked Amplifiers	30.09.2009
804810	ALU	09171862.7	EP2306638	GB	Principle and Architecture for Delay Compensation of Envelope Tracked Amplifiers	30.09.2009
115050	ALU	06300937.7	EP1898663	FR	XD Mini-splitter plug	08.09.2006
115050	ALU	06300937.7	EP1898663	DE	XD Mini-splitter plug	08.09.2006
115050	ALU	06300937.7	EP1898663	GB	XD Mini-splitter plug	08.09.2006
806596	ALU	13/205363	US8385911	US	Method to convert radio channel information captured in WCDMA/LTE live network into macroscopic parameters.	08.08.2011
800392	ALU	07291586.1	EP2073441	FR	DSL CONFIGURATION PROFILE AMENDMENTS	21.12.2007
800392	ALU	07291586.1	EP2073441	DE	DSL CONFIGURATION PROFILE AMENDMENTS	21.12.2007
800392	ALU	07291586.1	EP2073441	GB	DSL CONFIGURATION PROFILE AMENDMENTS	21.12.2007
809850	ALU	1157582	FR2979509	FR	Passive cache-based tracking	29.08.2011
809820	ALU	13290199.2		EP	Thermally Improved Active Antenna Array Architecture	22.08.2013
121099	ALU	05291798.6	EP1760904	FR	VIRTUAL BINDER IDENTIFICATION BY MEANS OF CODING INFORMATION.	29.08.2005
121099	ALU	05291798.6	EP1760904	DE	VIRTUAL BINDER IDENTIFICATION BY MEANS OF CODING INFORMATION.	29.08.2005
121099	ALU	05291798.6	EP1760904	GB	VIRTUAL BINDER IDENTIFICATION BY MEANS OF CODING INFORMATION.	29.08.2005
810296	ALU	13/230962	US8270779	US	Multithickness Layered Electronic-Photonic Devices	13.09.2011
804426	ALU	201080011376.2	ZL201080011376.2	CN	Intrusion Detection For Virtual Layer-2 Services	11.03.2010
804426	ALU	2011553555	JP5460746	JP	Intrusion Detection For Virtual Layer-2 Services	11.03.2010
804426	ALU	20117021205	KR101266592	KR	Intrusion Detection For Virtual Layer-2 Services	11.03.2010
810317	ALU	13/228063	US8798561	US	Radio-Frequency Circuit Having A Transcoupling Element	08.09.2011
804595	ALU	09290426.7	EP2262171	FR	Hitless Routing Change	10.06.2009
804595	ALU	09290426.7	EP2262171	DE	Hitless Routing Change	10.06.2009
804595	ALU	09290426.7	EP2262171	GB	Hitless Routing Change	10.06.2009
810367	ALU	13/251573	US8594621	US	Usage Sharing Across Fixed Line And Mobile Subscribers	03.10.2011
810147	ALU	13/231587	US8806420	US	In-Grid On-Device Decoupling For BGA	13.09.2011
810148	ALU	13/231609	US8863071	US	De-Pop On-Device Decoupling For BGA	13.09.2011
809886	ALU	12305118.7		EP	Organization based spatial distribution in conference	31.01.2012
810256	ALU	13/731791		US	Method And Apparatus For Video Session Management	31.12.2012
800794	ALU	07291580.4	EP2073567	FR	DSLAM POWER MANAGER	20.12.2007
800794	ALU	07291580.4	EP2073567	DE	DSLAM POWER MANAGER	20.12.2007
800794	ALU	07291580.4	EP2073567	GB	DSLAM POWER MANAGER	20.12.2007
804049	ALU	201080013709.5	CN201080013709.5	CN	Class-O EER Transmitter	16.03.2010
804049	ALU	6841/CHENP/2011		IN	Class-O EER Transmitter	16.03.2010
804049	ALU	2012501243	JP5210459	JP	Class-O EER Transmitter	16.03.2010
804049	ALU	10-2011-7024996	KR10-1235671	KR	Class-O EER Transmitter	16.03.2010
804049	ALU	13/258650	US8611754	US	Class-O EER Transmitter	16.03.2010
804993	ALU	09306284.2	EP2337372	FR	Scalable Agnostic Optical Switch Fabric	18.12.2009
804993	ALU	09306284.2	EP2337372	DE	Scalable Agnostic Optical Switch Fabric	18.12.2009
804993	ALU	09306284.2	EP2337372	GB	Scalable Agnostic Optical Switch Fabric	18.12.2009
810348	ALU	13/304289		US	System And Method For Aligning Cameras	23.11.2011
805006	ALU	09290482.0	EP2271021	FR	Crosstalk Cancellation On Lines Terminated At Multiple Line Termination Cards	24.06.2009

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
805006	ALU	09290482.0	EP2271021	DE	Crosstalk Cancellation On Lines Terminated At Multiple Line Termination Cards	24.06.2009
805006	ALU	09290482.0	EP2271021	GB	Crosstalk Cancellation On Lines Terminated At Multiple Line Termination Cards	24.06.2009
Bu 11-35-26-1-3-7 (T)	ALU	08835161.4	EP2206375	FR	Method And System For Correlating IP Layer Traffic And Wireless Layer Elements In A UMTS/GSM Network	16.09.2008
Bu 11-35-26-1-3-7 (T)	ALU	08835161.4	EP2206375	DE	Method And System For Correlating IP Layer Traffic And Wireless Layer Elements In A UMTS/GSM Network	16.09.2008
Bu 11-35-26-1-3-7 (T)	ALU	08835161.4	EP2206375	GB	Method And System For Correlating IP Layer Traffic And Wireless Layer Elements In A UMTS/GSM Network	16.09.2008
Hacena 4 (F)	ALU	09705765.7	EP2250744	FR	Synchronization Of Call Traffic In The Forward Direction Over Backhaul Links	22.01.2009
Hacena 4 (F)	ALU	09705765.7	EP2250744	DE	Synchronization Of Call Traffic In The Forward Direction Over Backhaul Links	22.01.2009
Hacena 4 (F)	ALU	09705765.7	EP2250744	GB	Synchronization Of Call Traffic In The Forward Direction Over Backhaul Links	22.01.2009
804201	ALU	201080026777.5	ZL201080026777.5	CN	CHOKING-BASED CONGESTION CONTROL RELYING ON LEARNED TRAFFIC CHARACTERISTICS	10.06.2010
139487	ALU	06024581.8	EP1791294	FR	TROUBLESHOOTING A MULTICAST FLOW PROBLEM	28.11.2006
139487	ALU	06024581.8	EP1791294	DE	TROUBLESHOOTING A MULTICAST FLOW PROBLEM	28.11.2006
139487	ALU	06024581.8	EP1791294	GB	TROUBLESHOOTING A MULTICAST FLOW PROBLEM	28.11.2006
804964(1)	ALU	09305595.2	EP2276187	FR	Method to exchange user-network information to dynamically adjust connection	24.06.2009
804964(1)	ALU	09305595.2	EP2276187	DE	Method to exchange user-network information to dynamically adjust connection	24.06.2009
804964(1)	ALU	09305595.2	EP2276187	GB	Method to exchange user-network information to dynamically adjust connection	24.06.2009
809975	ALU	11306257.4		EP	A Method to manage call handover on a dual-mode smarphone between WiFi and cellular network	30.09.2011
809733	ALU	13/267959	US9341676	US	Packet-Based Propagation Of Testing Information	07.10.2011
804342	ALU	201080016947.1	ZL2010800169471	CN	Dataplane solution to prevent Black Holing of customer frames in Ethernet switched networks	01.04.2010
804342	ALU	2012505123	JP5645920	JP	Dataplane solution to prevent Black Holing of customer frames in Ethernet switched networks	01.04.2010
804342	ALU	10-2011-7027094	KR10-1354467	KR	Dataplane solution to prevent Black Holing of customer frames in Ethernet switched networks	01.04.2010
804342	ALU	13262137	US9172630	US	Dataplane solution to prevent Black Holing of customer frames in Ethernet switched networks	01.04.2010
804595	ALU	201080025107.1	ZL201080025107.1	CN	Hitless Routing Change	19.05.2010
804595	ALU	2012514409	JP5699138	JP	Hitless Routing Change	19.05.2010
804595	ALU	20117029563	KR101307699	KR	Hitless Routing Change	19.05.2010
804595	ALU	13/321035	US8615011	US	Hitless Routing Change	19.05.2010
802911	ALU	09305005.2	EP2204920	FR	FAST CONVERGENCE FOR CROSSTALK CHANNEL ESTIMATION BY INTELLIGENT CHOICE OF PROBING SIGNALS	05.01.2009
802911	ALU	09305005.2	EP2204920	DE	FAST CONVERGENCE FOR CROSSTALK CHANNEL ESTIMATION BY INTELLIGENT CHOICE OF PROBING SIGNALS	05.01.2009
802911	ALU	09305005.2	EP2204920	GB	FAST CONVERGENCE FOR CROSSTALK CHANNEL ESTIMATION BY INTELLIGENT CHOICE OF PROBING SIGNALS	05.01.2009
809760	ALU	12305459.5		EP	A Method For Improving The Efficiency Of Microwave Power Amplifiers With Envelope-Modulated Supply Voltage.	20.04.2012
810236	ALU	12305871.1		EP	Real Time RF Pallet System Efficiency Optimizer	18.07.2012
Hua 1-61-3 (N)	ALU	20117024150	KR101334583	KR	Variable-Stride Stream Segmentation and Multi-Pattern Matching	13.04.2010
Hua 1-61-3 (N)	ALU	7425/CHENP/2011		IN	Variable-Stride Stream Segmentation and Multi-Pattern Matching	13.04.2010
810606	ALU	13/273415	US9300548	US	Providing Dynamic Reliability And Security In Communications Environments	14.10.2011
810608	ALU	13/273686	US8755409	US	Processing Messages With Incomplete Primary Identification Information	14.10.2011
810291	ALU	11306605.4		EP	High-precision OTN Delay Measurement	02.12.2011
810404	ALU	12150879.0	EP2615755	EP	Super "Multicast switch"-based A/D block for transparent WDM node	12.01.2012
810554	ALU	12163018.0		EP	A Robust Optical Packet Arrival Detector for Coherent Transmission	03.04.2012
810070	ALU	13/472615	US8565718	US	Method And Apparatus For Classifying Mobile Network Usage Patterns	16.05.2012
800167	ALU	08169437.4	EP2063560	FR	ANY-RATE VCO-LESS CLOCK TRANSMISSION	19.11.2008
800167	ALU	08169437.4	EP2063560	DE	ANY-RATE VCO-LESS CLOCK TRANSMISSION	19.11.2008
800167	ALU	08169437.4	EP2063560	GB	ANY-RATE VCO-LESS CLOCK TRANSMISSION	19.11.2008

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
809763	ALU	13/338923	US8983476	US	Method And Apparatus For Dynamically Allocating Physical Cell Identifiers	28.12.2011
810427	ALU	13/370443	US9535748	US	Apparatus And Method For Matching Offers And Requests For Sharing Of Resources	10.02.2012
810447	ALU	13/300937		US	Personal Cloud Computing And Virtual Distributed Cloud Computing System	21.11.2011
810370	ALU	12305024.7		EP	eCharging Assistance System	09.01.2012
810178	ALU	13/727978	US9036647	US	Network Security Architecture using VRF	27.12.2012
Huo 12-41 (DD)	ALU	05252542.5	EP1596525	FR	Hybrid Wireless Communications System	22.04.2005
Huo 12-41 (DD)	ALU	05252542.5	EP1596525	DE	Hybrid Wireless Communications System	22.04.2005
Huo 12-41 (DD)	ALU	05252542.5	EP1596525	GB	Hybrid Wireless Communications System	22.04.2005
804031	ALU	200980158845.0	ZL200980158845.0	CN	Add and Drop Elements for an NTP On-path-Support (ADES)	21.04.2009
804031	ALU	2012506589	JP5373185	JP	Add and Drop Elements for an NTP On-path-Support (ADES)	21.04.2009
804031	ALU	20117024765	KR101336360	KR	Add and Drop Elements for an NTP On-path-Support (ADES)	21.04.2009
805290	ALU	1013285.6		BR	Dual beam active antenna	28.05.2010
805290	ALU	201080021600.6	ZL201080021600.6	CN	Dual beam active antenna	28.05.2010
805290	ALU	9411/CHENP/2011		IN	Dual beam active antenna	28.05.2010
805290	ALU	2012515414	JP5319840	JP	Dual beam active antenna	28.05.2010
805290	ALU	20117029894	KR1298518	KR	Dual beam active antenna	28.05.2010
805290	ALU	13/377640	US9083398	US	Dual beam active antenna	28.05.2010
809911	ALU	12290036.8		EP	Method For Implicit Guidance Of The Quality-Selection Algorithms In http Adaptive Streaming	31.01.2012
809403	ALU	12382006.0		EP	Intra-segment packetization for HTTP Adaptive Streaming	12.01.2012
810028	ALU	13/250124	US8630202	US	Method And Apparatus For Controlling Buffer Status Report Messaging	30.09.2011
150040	ALU	06301146.4	EP1786157	FR	System On Chip Switched Bus Architecture	14.11.2006
150040	ALU	06301146.4	EP1786157	DE	System On Chip Switched Bus Architecture	14.11.2006
150040	ALU	06301146.4	EP1786157	GB	System On Chip Switched Bus Architecture	14.11.2006
150311	ALU	08737748.7	EP2127233	FR	Redundant Far-End Pseudo-Wire Connectivity	29.01.2008
150311	ALU	08737748.7	EP2127233	DE	Redundant Far-End Pseudo-Wire Connectivity	29.01.2008
150311	ALU	08737748.7	EP2127233	GB	Redundant Far-End Pseudo-Wire Connectivity	29.01.2008
802921	ALU	09715202.9	EP2248328	FR	Bridgeport Private MAC Address Discovery Mechanism In Ethernet Access Networks	17.02.2009
802921	ALU	09715202.9	EP2248328	DE	Bridgeport Private MAC Address Discovery Mechanism In Ethernet Access Networks	17.02.2009
802921	ALU	09715202.9	EP2248328	GB	Bridgeport Private MAC Address Discovery Mechanism In Ethernet Access Networks	17.02.2009
803669	ALU	09787293.1	EP2314022	FR	Dynamic To Static VC Switching For TDM VLLS (Also Known As CPIPEs Static To Dynamic VC-Switching)	03.07.2009
803669	ALU	09787293.1	EP2314022	DE	Dynamic To Static VC Switching For TDM VLLS (Also Known As CPIPEs Static To Dynamic VC-Switching)	03.07.2009
803669	ALU	09787293.1	EP2314022	GB	Dynamic To Static VC Switching For TDM VLLS (Also Known As CPIPEs Static To Dynamic VC-Switching)	03.07.2009
105694	ALU	05746896.9	EP1759471	FR	TERRESTRIAL REPEATER WITH CODES REDISTRIBUTION ON CARRIERS OF DIFFERENT FREQUENCIES	29.04.2005
105694	ALU	05746896.9	EP1759471	DE	TERRESTRIAL REPEATER WITH CODES REDISTRIBUTION ON CARRIERS OF DIFFERENT FREQUENCIES	29.04.2005
105694	ALU	05746896.9	EP1759471	IT	TERRESTRIAL REPEATER WITH CODES REDISTRIBUTION ON CARRIERS OF DIFFERENT FREQUENCIES	29.04.2005
810679	ALU	13/343457	US9420059	US	Indication Of Authorized/Unauthorized PCC Rules From VPCRF To HPCRF	04.01.2012
Grosse 14 (EH)	ALU	06789264.6	EP1911243	FR	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks Based On Specified Source/Destination IP Address Pairs	02.08.2006
Grosse 14 (EH)	ALU	06789264.6	EP1911243	DE	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks Based On Specified Source/Destination IP Address Pairs	02.08.2006
Grosse 14 (EH)	ALU	06789264.6	EP1911243	GB	Method And Apparatus For Defending Against Denial Of Service Attacks In IP Networks Based On Specified Source/Destination IP Address Pairs	02.08.2006
804293	ALU	201080019213.9	ZL201080019213.9	CN	Per Flow Packet Flooding Control at Egress PE on MPLS Domain	16.04.2010
804293	ALU	2012508525	JP5275512	JP	Per Flow Packet Flooding Control at Egress PE on MPLS Domain	16.04.2010
804293	ALU	20117025935	KR101302410	KR	Per Flow Packet Flooding Control at Egress PE on MPLS Domain	16.04.2010

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
805141	ALU	201080019542.3	ZL201080019542.3	CN	Configurable Signal Suspension And Validated Resumption In DSL Systems	29.04.2010
805141	ALU	10772597.0		EP	Configurable Signal Suspension And Validated Resumption In DSL Systems	29.04.2010
805141	ALU	2012508667	JP5323254	JP	Configurable Signal Suspension And Validated Resumption In DSL Systems	29.04.2010
805141	ALU	20117026052	KR101272616	KR	Configurable Signal Suspension And Validated Resumption In DSL Systems	29.04.2010
804110	ALU	09305394.0	EP2249524	FR	A Method For Controlling Admission Of Undeclared Traffic Flows In Data Communication Systems	04.05.2009
804110	ALU	09305394.0	EP2249524	DE	A Method For Controlling Admission Of Undeclared Traffic Flows In Data Communication Systems	04.05.2009
804110	ALU	09305394.0	EP2249524	GB	A Method For Controlling Admission Of Undeclared Traffic Flows In Data Communication Systems	04.05.2009
804108	ALU	7858/CHENP/2011		IN	Class-O LINC Transmitter	15.04.2010
804108	ALU	2012507670	JP5450795	JP	Class-O LINC Transmitter	15.04.2010
804108	ALU	10-2011-7028016	KR101355823	KR	Class-O LINC Transmitter	15.04.2010
804108	ALU	13/266162	US9264359	US	Class-O LINC Transmitter	15.04.2010
113166	ALU	13160643	US8515279	US	Synchroner Crossconnect für OTN-Signale	15.06.2011
131299	ALU	13/226001	US8923288	US	OUTPUT DRIVEN MEMORY BASED SWITCH FOR TDM AND PACKET DATA CROSSCONNECTION	06.09.2011
810688	ALU	13/275809	US8842698	US	NAI Subscription-Id Hint Bit Handling	18.10.2011
803978	ALU	10716590.4	EP2436134	EP	Repair Mechanism of Real-Time Broadcasted Services in Hybrid DVB-Satellite Handled and Cellular Systems.	29.03.2010
810690	ALU	13/275647	US9615390	US	PCRF Session Architecture For Roaming	18.10.2011
105219	ALU	05290492.7	EP1575226	FR	SECURING PING RESPONSES	04.03.2005
105219	ALU	05290492.7	EP1575226	DE	SECURING PING RESPONSES	04.03.2005
105219	ALU	05290492.7	EP1575226	GB	SECURING PING RESPONSES	04.03.2005
810743	ALU	13/275870	US9264884	US	LTE Subscriber Identity Correlation Service	18.10.2011
805161	ALU	201080023227.8	ZL201080023227.8	CN	A Fault-Resilient Method Of Generating Complete Correlated IMS Charging Data Records	20.05.2010
805161	ALU	2012513134	JP5709850	JP	A Fault-Resilient Method Of Generating Complete Correlated IMS Charging Data Records	20.05.2010
805161	ALU	20117031024	KR101310621	KR	A Fault-Resilient Method Of Generating Complete Correlated IMS Charging Data Records	20.05.2010
804458	ALU	09290521.5	EP2273828	FR	Low consumption WiFi access points	30.06.2009
804458	ALU	09290521.5	EP2273828	DE	Low consumption WiFi access points	30.06.2009
804458	ALU	09290521.5	EP2273828	GB	Low consumption WiFi access points	30.06.2009
Chowdhury 15-1 (A)	ALU	07794832.1	EP2024786	FR	Nonlinear Optical Devices Based On Metamaterials	14.05.2007
Chowdhury 15-1 (A)	ALU	07794832.1	EP2024786	DE	Nonlinear Optical Devices Based On Metamaterials	14.05.2007
Chowdhury 15-1 (A)	ALU	07794832.1	EP2024786	GB	Nonlinear Optical Devices Based On Metamaterials	14.05.2007
139376	ALU	05738536.1	EP1738485	FR	METHOD AND SYSTEM FOR PROVIDING PUSH-TO-TALK COMMUNICATIONS IN A TELECOMMUNICATIONS NETWORK	21.04.2005
139376	ALU	05738536.1	EP1738485	DE	METHOD AND SYSTEM FOR PROVIDING PUSH-TO-TALK COMMUNICATIONS IN A TELECOMMUNICATIONS NETWORK	21.04.2005
139376	ALU	05738536.1	EP1738485	GB	METHOD AND SYSTEM FOR PROVIDING PUSH-TO-TALK COMMUNICATIONS IN A TELECOMMUNICATIONS NETWORK	21.04.2005
803918	ALU	09290253.5	EP2237453	FR	Criterion for an intelligent optical channel monitoring	03.04.2009
803918	ALU	09290253.5	EP2237453	DE	Criterion for an intelligent optical channel monitoring	03.04.2009
803918	ALU	09290253.5	EP2237453	GB	Criterion for an intelligent optical channel monitoring	03.04.2009
Ma 27-1 (Z)	ALU	09789484.4	EP2272279	FR	Method Of Reconfiguring Sector Coverage In In-Building Communications System	27.02.2009
Ma 27-1 (Z)	ALU	09789484.4	EP2272279	DE	Method Of Reconfiguring Sector Coverage In In-Building Communications System	27.02.2009
Ma 27-1 (Z)	ALU	09789484.4	EP2272279	GB	Method Of Reconfiguring Sector Coverage In In-Building Communications System	27.02.2009
802836	ALU	13/317933	US8462822	US	Polarization insensitive injection locked laser diodes for access applications	01.11.2011
805161	ALU	8399/CHENP/2011		IN	A Fault-Resilient Method Of Generating Complete Correlated IMS Charging Data Records	20.05.2010
810770	ALU	11360051.4		EP	Wideband, Low-Profile, Small-Footprint Antenna Element	15.11.2011
805006	ALU	201080027589.4	ZL201080027589.4	CN	Crosstalk Cancellation On Lines Terminated At Multiple Line Termination Cards	10.06.2010
805006	ALU	2012-516625	JP5335137	JP	Crosstalk Cancellation On Lines Terminated At Multiple Line Termination Cards	10.06.2010
805006	ALU	13/319248	US9100506	US	Crosstalk Cancellation On Lines Terminated At Multiple Line Termination Cards	10.06.2010
803079	ALU	2012515489	JP5730296	JP	Manual attachment on customer's Femto cell.	17.06.2010

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
803079	ALU	20117029985	KR1464953	KR	Manual attachment on customer's Femto cell.	17.06.2010
804752	ALU	8969/CHENP/2011		IN	Notification Of Charging Rate Adjustments In Regions Of A Mobile Network To Control Bandwidth Usage In The Regions	01.06.2009
804752	ALU	2012513914	JP5379299	JP	Notification Of Charging Rate Adjustments In Regions Of A Mobile Network To Control Bandwidth Usage In The Regions	01.06.2009
804752	ALU	20117031624	KR101312325	KR	Notification Of Charging Rate Adjustments In Regions Of A Mobile Network To Control Bandwidth Usage In The Regions	01.06.2009
804752	ALU	13/320108	US8792857	US	Notification Of Charging Rate Adjustments In Regions Of A Mobile Network To Control Bandwidth Usage In The Regions	11.11.2011
150038	ALU	06849459.0	EP1972095	FR	Graceful Restart For Source and Destination SPVCs	11.12.2006
150038	ALU	06849459.0	EP1972095	DE	Graceful Restart For Source and Destination SPVCs	11.12.2006
150038	ALU	06849459.0	EP1972095	GB	Graceful Restart For Source and Destination SPVCs	11.12.2006
804716	ALU	201080025892.0	ZL201080025892.0	CN	Variable concentrator for flexible bitrate transponders	03.03.2010
804716	ALU	2012514399	JP5558564	JP	Variable concentrator for flexible bitrate transponders	03.03.2010
804716	ALU	13/319236	US8624762	US	Variable concentrator for flexible bitrate transponders	03.03.2010
137429	ALU	02292369.2	EP1298866	FR	OPTIMIZATION OF REDUNDANT LINK USAGE IN A MULTI-SHELF NE	26.09.2002
137429	ALU	02292369.2	EP1298866	DE	OPTIMIZATION OF REDUNDANT LINK USAGE IN A MULTI-SHELF NE	26.09.2002
137429	ALU	02292369.2	EP1298866	GB	OPTIMIZATION OF REDUNDANT LINK USAGE IN A MULTI-SHELF NE	26.09.2002
804694	ALU	09169181.6	EP2293433	FR	Envelope Tracking Amplifier Pallet	01.09.2009
804694	ALU	09169181.6	EP2293433	DE	Envelope Tracking Amplifier Pallet	01.09.2009
804694	ALU	09169181.6	EP2293433	GB	Envelope Tracking Amplifier Pallet	01.09.2009
810818	ALU	13/631264	US8948014	US	System And Method For Load Balancing MMEs And MME Pools	28.09.2012
804632	ALU	09425094.1	EP2228928	FR	Transport of logical client interfaces over OTN using ODU-flex	09.03.2009
804632	ALU	09425094.1	EP2228928	DE	Transport of logical client interfaces over OTN using ODU-flex	09.03.2009
804632	ALU	09425094.1	EP2228928	GB	Transport of logical client interfaces over OTN using ODU-flex	09.03.2009
804632	ALU	11188229.6		EP	Transport of logical client interfaces over OTN using ODU-flex	08.11.2011
810941	ALU	13/536359	US8842959	US	Increased Connector Port Density Via Extending Faceplate	28.06.2012
804774	ALU	201080033978.8	ZL201080033978.8	CN	PTP (Message) Frequency Field (PFF)	22.07.2010
804774	ALU	2012522115	JP5548268	JP	PTP (Message) Frequency Field (PFF)	22.07.2010
804774	ALU	20127002709	KR101315593	KR	PTP (Message) Frequency Field (PFF)	22.07.2010
804774	ALU	13/375960	US9009282	US	PTP (Message) Frequency Field (PFF)	22.07.2010
805512	ALU	201080028849.X	ZL201080028849.X	CN	Receiver For Optical Transverse-Mode-Multiplexed Signals	18.06.2010
805512	ALU	10727622.2		EP	Receiver For Optical Transverse-Mode-Multiplexed Signals	18.06.2010
805512	ALU	20127001748	KR101355011	KR	Receiver For Optical Transverse-Mode-Multiplexed Signals	18.06.2010
804964(1)	ALU	201080028523.7	ZL201080028523.7	CN	Method to exchange user-network information to dynamically adjust connection	18.06.2010
804964(1)	ALU	2012-516661	JP5504342	JP	Method to exchange user-network information to dynamically adjust connection	18.06.2010
804964(1)	ALU	10-2011-7030583	KR10-1354469	KR	Method to exchange user-network information to dynamically adjust connection	18.06.2010
804964(1)	ALU	13/321654	US8594058	US	Method to exchange user-network information to dynamically adjust connection	18.06.2010
Bernasconi 6-4 (PA)	ALU	05250276.2	EP1560047	FR	Active/Passive Monolithically Integrated Channel Filtering Polarization Splitter	20.01.2005
Bernasconi 6-4 (PA)	ALU	05250276.2	EP1560047	DE	Active/Passive Monolithically Integrated Channel Filtering Polarization Splitter	20.01.2005
Bernasconi 6-4 (PA)	ALU	05250276.2	EP1560047	GB	Active/Passive Monolithically Integrated Channel Filtering Polarization Splitter	20.01.2005
810935	ALU	11306542.9		EP	Solution Architect	23.11.2011
810788	ALU	12360011.6		EP	Parallel Doherty Amplifier	29.02.2012
804799	ALU	10162984.8	EP2273759	FR	Strategy for efficiently and Reliably locating session data in clusters	17.05.2010
804799	ALU	10162984.8	EP2273759	DE	Strategy for efficiently and Reliably locating session data in clusters	17.05.2010
804799	ALU	10162984.8	EP2273759	IT	Strategy for efficiently and Reliably locating session data in clusters	17.05.2010
804799	ALU	10162984.8	EP2273759	GB	Strategy for efficiently and Reliably locating session data in clusters	17.05.2010
804538	ALU	09790009.6		EP	Front-End Charging System That Generates Charging Data Entity Having A Revenue Share	30.06.2009
804538	ALU	9923/DELNP/2011		IN	Front-End Charging System That Generates Charging Data Entity Having A Revenue Share	30.06.2009
804538	ALU	2012518518	JP5511950	JP	Front-End Charging System That Generates Charging Data Entity Having A Revenue Share	30.06.2009

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
804538	ALU	20127002305	KR1411329	KR	Front-End Charging System That Generates Charging Data Entity Having A Revenue Share	30.06.2009
804538	ALU	13/320230	US9380168	US	Front-End Charging System That Generates Charging Data Entity Having A Revenue Share	11.11.2011
805311	ALU	201080029203.3	ZL201080029203.3	CN	Message Delivery Over LTE Networks	16.06.2010
805311	ALU	10727615.6		EP	Message Delivery Over LTE Networks	16.06.2010
805311	ALU	2012518542	JP5519787	JP	Message Delivery Over LTE Networks	16.06.2010
804661	ALU	09305776.8	EP2288090	FR	Server_to_client_UNI	21.08.2009
804661	ALU	09305776.8	EP2288090	DE	Server_to_client_UNI	21.08.2009
804661	ALU	09305776.8	EP2288090	GB	Server_to_client_UNI	21.08.2009
Alexiou 6-1 (A)	ALU	06800797.0	EP1915827	FR	Scheduling Multi-User Transmission In The Downlink Of A Multi-Antenna Wireless Communication System	04.08.2006
Alexiou 6-1 (A)	ALU	06800797.0	EP1915827	DE	Scheduling Multi-User Transmission In The Downlink Of A Multi-Antenna Wireless Communication System	04.08.2006
Alexiou 6-1 (A)	ALU	06800797.0	EP1915827	GB	Scheduling Multi-User Transmission In The Downlink Of A Multi-Antenna Wireless Communication System	04.08.2006
804656	ALU	201080025829.7	ZL201080025829.7	CN	Intelligent notification and rewarding engine in the Parental Control system	06.05.2010
804656	ALU	10727462.3		EP	Intelligent notification and rewarding engine in the Parental Control system	06.05.2010
804656	ALU	2012514513	JP5501450	JP	Intelligent notification and rewarding engine in the Parental Control system	06.05.2010
804656	ALU	20127000705	KR101344661	KR	Intelligent notification and rewarding engine in the Parental Control system	06.05.2010
139348	ALU	06024583.4	EP1793538	FR	SEAMLESS MOBILITY IN L2 RAN FOR WIRELESS NETWORKS	28.11.2006
139348	ALU	06024583.4	EP1793538	DE	SEAMLESS MOBILITY IN L2 RAN FOR WIRELESS NETWORKS	28.11.2006
139348	ALU	06024583.4	EP1793538	GB	SEAMLESS MOBILITY IN L2 RAN FOR WIRELESS NETWORKS	28.11.2006
801444	ALU	07290738.9	EP2003824	FR	CENTRAL ADMISSION CONTROL FOR MULTICAST TRAFFIC	12.06.2007
801444	ALU	07290738.9	EP2003824	DE	CENTRAL ADMISSION CONTROL FOR MULTICAST TRAFFIC	12.06.2007
801444	ALU	07290738.9	EP2003824	GB	CENTRAL ADMISSION CONTROL FOR MULTICAST TRAFFIC	12.06.2007
121246	ALU	07291416.1	EP2066073	FR	TRANSPARENT SNOOPER WITH PROXY PIGGY BACK.	28.11.2007
121246	ALU	07291416.1	EP2066073	DE	TRANSPARENT SNOOPER WITH PROXY PIGGY BACK.	28.11.2007
121246	ALU	07291416.1	EP2066073	GB	TRANSPARENT SNOOPER WITH PROXY PIGGY BACK.	28.11.2007
810906	ALU	13/369475	US8856960	US	Data Leakage Prevention For Cloud And Enterprise Networks	09.02.2012
811051	ALU	13/348243	US8868647	US	Reducing Latency And Cost In Resilient Cloud File Systems	11.01.2012
806130	ALU	10290072.7	EP2360967	FR	Handover mechanism for high-speed line-of-sight scenario and corresponding system concept	15.02.2010
806130	ALU	10290072.7	EP2360967	DE	Handover mechanism for high-speed line-of-sight scenario and corresponding system concept	15.02.2010
806130	ALU	10290072.7	EP2360967	GB	Handover mechanism for high-speed line-of-sight scenario and corresponding system concept	15.02.2010
810925	ALU	13/348754	US8812454	US	Apparatus And Method For Managing Storage Of Data Blocks	12.01.2012
811064	ALU	13/358615	US8304276	US	Film Stress Management For MEMS Through Selective Relaxation	26.01.2012
805242	ALU	09290788.0	EP2312749	FR	Reed Resonator based Spectral rf Power Amplifier ("HARP amplifier")	15.10.2009
805242	ALU	09290788.0	EP2312749	DE	Reed Resonator based Spectral rf Power Amplifier ("HARP amplifier")	15.10.2009
805242	ALU	09290788.0	EP2312749	GB	Reed Resonator based Spectral rf Power Amplifier ("HARP amplifier")	15.10.2009
807682	ALU	11192003.9		EP	A Method and a Tool for Document Printing Confidentiality Reinforcement in Companies	05.12.2011
801898	ALU	08290174.5	EP2093919	FR	Channel time-variation measurement and classification based on WiMAX pilot structures, providing a decision basis for scheduling of PUSC or AMC allocation	25.02.2008
801898	ALU	08290174.5	EP2093919	DE	Channel time-variation measurement and classification based on WiMAX pilot structures, providing a decision basis for scheduling of PUSC or AMC allocation	25.02.2008
801898	ALU	08290174.5	EP2093919	GB	Channel time-variation measurement and classification based on WiMAX pilot structures, providing a decision basis for scheduling of PUSC or AMC allocation	25.02.2008
804169	ALU	09290898.7	EP2330856	FR	Interference Coordination Scheme with implicit Communication between neighboring basestations	03.12.2009
804169	ALU	09290898.7	EP2330856	DE	Interference Coordination Scheme with implicit Communication between neighboring basestations	03.12.2009
804169	ALU	09290898.7	EP2330856	GB	Interference Coordination Scheme with implicit Communication between neighboring basestations	03.12.2009
810649	ALU	12305160.9		EP	Mediated Asynchronous Video Communication System	14.02.2012

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Kulkarni 3-122 (NA)	ALU	07874484.4	EP2092702	FR	Measurement Data Record Method For Detecting Hybrid Mobile Tune Away	30.04.2007
Kulkarni 3-122 (NA)	ALU	07874484.4	EP2092702	DE	Measurement Data Record Method For Detecting Hybrid Mobile Tune Away	30.04.2007
Kulkarni 3-122 (NA)	ALU	07874484.4	EP2092702	GB	Measurement Data Record Method For Detecting Hybrid Mobile Tune Away	30.04.2007
Hoekstra 5-5 (GJ)	ALU	2011-267028	JP5242763	JP	Maintaining Quality Of Service For Wireless Communications	06.06.2007
121129	ALU	05291838.0	EP1761012	FR	DETECTING MISSING DSL FILTER/SPLITTER.	06.09.2005
121129	ALU	05291838.0	EP1761012	DE	DETECTING MISSING DSL FILTER/SPLITTER.	06.09.2005
121129	ALU	05291838.0	EP1761012	GB	DETECTING MISSING DSL FILTER/SPLITTER.	06.09.2005
811104	ALU	13/367441	US8566373	US	Probabilistic Fingerprint Checking For Preventing Data Leakage	07.02.2012
810443	ALU	13/476678	US9161187	US	Caller ID For Text Messaging	21.05.2012
805296	ALU	201080030738.2	ZL201080030738.2	CN	An Optical Coupler	22.06.2010
805296	ALU	10725594.5		EP	An Optical Coupler	22.06.2010
805296	ALU	PI2011006411	MY157037	MY	An Optical Coupler	22.06.2010
805296	ALU	20127000364	KR1333418	KR	An Optical Coupler	22.06.2010
810908	ALU	13/724926	US8938134	US	Hybrid Optical Modulator For Photonic Integrated Circuit Devices	21.12.2012
810918	ALU	12305545.1	EP2665212	EP	Optical packet multi-ring architecture	16.05.2012
811044	ALU	12305346.4		EP	Interconnection protection in a communication system	26.03.2012
804270	ALU	09787609.8		EP	Mechanism to convey dynamic Charging related info over SIP (including Charging Offer Answer Model)	24.07.2009
804270	ALU	2012521156	JP5635607	JP	Mechanism to convey dynamic Charging related info over SIP (including Charging Offer Answer Model)	24.07.2009
804270	ALU	20127004633		KR	Mechanism to convey dynamic Charging related info over SIP (including Charging Offer Answer Model)	24.07.2009
804298	ALU	201080033540.X	ZL201080033540.X	CN	Differential Clock Recovery Using TimeStamp with a Decimal Precision	02.07.2010
804298	ALU	10747600.4	EP2457343	EP	Differential Clock Recovery Using TimeStamp with a Decimal Precision	02.07.2010
804298	ALU	2012520986	JP5378601	JP	Differential Clock Recovery Using TimeStamp with a Decimal Precision	02.07.2010
804298	ALU	20127004706	KR101340752	KR	Differential Clock Recovery Using TimeStamp with a Decimal Precision	02.07.2010
804298	ALU	13/384812	US8698530	US	Differential Clock Recovery Using TimeStamp with a Decimal Precision	02.07.2010
810967	ALU	13/438265		US	Spending Limits For Offline Charging	03.04.2012
804201	ALU	09290462.2	EP2264954	FR	CHOKING-BASED CONGESTION CONTROL RELYING ON LEARNED TRAFFIC CHARACTERISTICS	18.06.2009
804201	ALU	09290462.2	EP2264954	DE	CHOKING-BASED CONGESTION CONTROL RELYING ON LEARNED TRAFFIC CHARACTERISTICS	18.06.2009
804201	ALU	09290462.2	EP2264954	GB	CHOKING-BASED CONGESTION CONTROL RELYING ON LEARNED TRAFFIC CHARACTERISTICS	18.06.2009
804773	ALU	10151116.0	EP2239874	FR	Detection terminal taking full advantage of the coherent detection	19.01.2010
804773	ALU	10151116.0	EP2239874	DE	Detection terminal taking full advantage of the coherent detection	19.01.2010
804773	ALU	10151116.0	EP2239874	GB	Detection terminal taking full advantage of the coherent detection	19.01.2010
804824	ALU	201080037013.6	ZL201080037013.6	CN	Server-Side Load Balancing Using Parent-Child Link Aggregation Groups	18.08.2010
804824	ALU	10747372.0		EP	Server-Side Load Balancing Using Parent-Child Link Aggregation Groups	18.08.2010
804775	ALU	2012526096	JP5449555	JP	Criteria for the selection of physical parameters of bi-directional links	12.08.2010
804775	ALU	1020127007409	KR101525464	KR	Criteria for the selection of physical parameters of bi-directional links	12.08.2010
804775	ALU	13/390742		US	Criteria for the selection of physical parameters of bi-directional links	12.08.2010
804739	ALU	201080037982.1	CN102484831B	CN	Identifying Cell Spots	13.08.2010
804739	ALU	2012525146	JP5368638	JP	Identifying Cell Spots	13.08.2010
Cai 119 (Y)	ALU	13/349661	US8848888	US	Charging For Long Duration Sessions in Communication Networks	13.01.2012
805456	ALU	09290738.5	EP2302851	FR	COC Compliant and Green DSL Line Driver Supply Rail Selection	29.09.2009
805456	ALU	09290738.5	EP2302851	DE	COC Compliant and Green DSL Line Driver Supply Rail Selection	29.09.2009
805456	ALU	09290738.5	EP2302851	GB	COC Compliant and Green DSL Line Driver Supply Rail Selection	29.09.2009
811273	ALU	13/369691	US8644257	US	A new BSS Network, which supports both IP and TDM	01.06.2007
Wang 13 (J)	ALU	08794383.3	EP2171874	FR	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Wang 13 (J)	ALU	08794383.3	EP2171874	DE	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wang 13 (J)	ALU	08794383.3	EP2171874	IT	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wang 13 (J)	ALU	08794383.3	EP2171874	ES	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
Wang 13 (J)	ALU	08794383.3	EP2171874	GB	Dynamic Expansion Of A Frame Selection Interval In A Wireless Communication Network	26.06.2008
811245	ALU	13/363334	US8824480	US	Method And Apparatus For End-Host Based Mobility, Multi-Homing And Multipath Protocols	31.01.2012
803864	ALU	08305901.4	EP2197170	FR	VOIP Registration Backup on VRRP Routers	09.12.2008
803864	ALU	08305901.4	EP2197170	DE	VOIP Registration Backup on VRRP Routers	09.12.2008
803864	ALU	08305901.4	EP2197170	GB	VOIP Registration Backup on VRRP Routers	09.12.2008
804824	ALU	20127004404	KR101337039	KR	Server-Side Load Balancing Using Parent-Child Link Aggregation Groups	18.08.2010
801658	ALU	13/352451	US9419995	US	Malware Detection System and Method	18.01.2012
811041	ALU	12305168.2		EP	Detachable base station	15.02.2012
132709	ALU	03007232.6	EP1353473	FR	SNMP Trap and Inform Shaping Mechanism	01.04.2003
132709	ALU	03007232.6	EP1353473	DE	SNMP Trap and Inform Shaping Mechanism	01.04.2003
132709	ALU	03007232.6	EP1353473	GB	SNMP Trap and Inform Shaping Mechanism	01.04.2003
104366	ALU	02748859.2	EP1497933	FR	System And Method For Real-Time Interconnection Of Elements Of A Wide Area Monitoring, Measurement Or Data Collection System Through A Direct Digital Satellite Broadcasting Multiplexing System	09.04.2002
104366	ALU	02748859.2	EP1497933	DE	System And Method For Real-Time Interconnection Of Elements Of A Wide Area Monitoring, Measurement Or Data Collection System Through A Direct Digital Satellite Broadcasting Multiplexing System	09.04.2002
104366	ALU	02748859.2	EP1497933	GB	System And Method For Real-Time Interconnection Of Elements Of A Wide Area Monitoring, Measurement Or Data Collection System Through A Direct Digital Satellite Broadcasting Multiplexing System	09.04.2002
104663	ALU	02796286.9	EP1421723	FR	DISPOSITIF DE TRANSMISSION SECURISEE DE TRAMES COMPRIEMES	28.06.2002
104663	ALU	02796286.9	EP1421723	DE	DISPOSITIF DE TRANSMISSION SECURISEE DE TRAMES COMPRIEMES	28.06.2002
104663	ALU	02796286.9	EP1421723	GB	DISPOSITIF DE TRANSMISSION SECURISEE DE TRAMES COMPRIEMES	28.06.2002
102319	ALU	00949652.2	EP1112630	FR	SNR estimation in a telecommunication receiver and use for controlling an emitter	06.07.2000
102319	ALU	00949652.2	EP1112630	DE	SNR estimation in a telecommunication receiver and use for controlling an emitter	06.07.2000
102319	ALU	00949652.2	EP1112630	GB	SNR estimation in a telecommunication receiver and use for controlling an emitter	06.07.2000
805997	ALU	201080040819.0	ZL201080040819.0	CN	ODU TCM Layer for OTN Auto-discovery	13.08.2010
805997	ALU	2108/CHENP/2012		IN	ODU TCM Layer for OTN Auto-discovery	13.08.2010
805997	ALU	2012528297	JP5506931	JP	ODU TCM Layer for OTN Auto-discovery	13.08.2010
805997	ALU	1020127009369	KR1342429	KR	ODU TCM Layer for OTN Auto-discovery	13.08.2010
805997	ALU	13/394897	US9203540	US	ODU TCM Layer for OTN Auto-discovery	13.08.2010
811105	ALU	13/434399	US8989376	US	Method And Apparatus For Authenticating Video Content	29.03.2012
805282	ALU	10290175.8	EP2372905	FR	Efficiency improved Doherty	01.04.2010
805282	ALU	10290175.8	EP2372905	DE	Efficiency improved Doherty	01.04.2010
805282	ALU	10290175.8	EP2372905	GB	Efficiency improved Doherty	01.04.2010
804762	ALU	09290524.9	EP2273702	FR	Optical power saving transponder	30.06.2009
804762	ALU	09290524.9	EP2273702	DE	Optical power saving transponder	30.06.2009
804762	ALU	09290524.9	EP2273702	GB	Optical power saving transponder	30.06.2009
811395	ALU	13/369994	US8818701	US	Locating Sensor Nodes Through Correlations	09.02.2012
810680	ALU	13/429021	US8631491	US	Replay Attack Protection With Small State In Secure Group Communication	23.03.2012
810976	ALU	12382084.7		EP	Increase SP subscribers privacy, while monetizing geolocation services in Distributed CG-NAT for IPv4	05.03.2012
811403	ALU	13/420256	US8450143	US	Organic Semiconductor Compositions With Nanoparticles	14.03.2012
804522	ALU	201080042944.5	ZL201080042944.5	CN	Traffic and Interference Aware Resource Management	20.09.2010
804522	ALU	20127009815	KR101461372	KR	Traffic and Interference Aware Resource Management	20.09.2010
804522	ALU	13/496315	US8948774	US	Traffic and Interference Aware Resource Management	20.09.2010
805517	ALU	201080060530.5	ZL201080060530.5	CN	Detecting BGP Path Exploration Events by Means of Hidden Markov Model (HMM)	20.12.2010

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
805517	ALU	2012546411	JP5509340	JP	Detecting BGP Path Exploration Events by Means of Hidden Markov Model (HMM)	20.12.2010
805517	ALU	2012-7020312	KR101389670	KR	Detecting BGP Path Exploration Events by Means of Hidden Markov Model (HMM)	20.12.2010
805517	ALU	13/515455		US	Detecting BGP Path Exploration Events by Means of Hidden Markov Model (HMM)	20.12.2010
806967	ALU	201180028833.3	ZL201180028833.3	CN	A Combined Connectivity - Betweenness Centrality Metric For Path-Vector Routing	07.06.2011
806967	ALU	2013-513659	JP5588064	JP	A Combined Connectivity - Betweenness Centrality Metric For Path-Vector Routing	07.06.2011
806967	ALU	2013-7000694	KR101384400	KR	A Combined Connectivity - Betweenness Centrality Metric For Path-Vector Routing	07.06.2011
806967	ALU	13/698511	US8964565	US	A Combined Connectivity - Betweenness Centrality Metric For Path-Vector Routing	07.06.2011
Aksyuk 56-17 (VA)	ALU	201210022803.8	ZL201210022803.8	CN	Surface Plasmon Polariton Modulation	28.10.2008
806008	ALU	201080042475.7	ZL201080042475.7	CN	Digital Coherent Detection Of Multi-Carrier Optical Signal	16.09.2010
805508	ALU	201080043548.4	ZL201080043548.4	CN	Immobilization Module For Security On A Communication System	20.09.2010
805508	ALU	10773748.8		EP	Immobilization Module For Security On A Communication System	20.09.2010
805508	ALU	2932/CHENP/2012		IN	Immobilization Module For Security On A Communication System	20.09.2010
805508	ALU	2012532117	JP6059016	JP	Immobilization Module For Security On A Communication System	20.09.2010
811077	ALU	13/415881		US	Method And Apparatus For Identifying An Application Associated With An IP Flow Using DNS Data	09.03.2012
811419	ALU	13/413205	US8676210	US	Handling Of Event Trigger Registrations On BBERF During Hand-Over	06.03.2012
805456	ALU	201080042925.2	ZL201080042925.2	CN	COC Compliant and Green DSL Line Driver Supply Rail Selection	17.09.2010
805456	ALU	2012-531321	JP5591338	JP	COC Compliant and Green DSL Line Driver Supply Rail Selection	17.09.2010
805456	ALU	10-2012-7010731	KR101305932	KR	COC Compliant and Green DSL Line Driver Supply Rail Selection	17.09.2010
802923	ALU	08290096.0	EP2086237	FR	Method to retrieve SVC RTP packets decoding order when using RTP sessions multiplexing	04.02.2008
802923	ALU	08290096.0	EP2086237	DE	Method to retrieve SVC RTP packets decoding order when using RTP sessions multiplexing	04.02.2008
802923	ALU	08290096.0	EP2086237	GB	Method to retrieve SVC RTP packets decoding order when using RTP sessions multiplexing	04.02.2008
807565	ALU	201180027295.6	ZL201180027295.6	CN	A framework based on multiple directed graphs to use and manage the objects to the Web	09.03.2011
807565	ALU	10060/CHENP/2012		IN	A framework based on multiple directed graphs to use and manage the objects to the Web	09.03.2011
807565	ALU	2013512966	JP5646050	JP	A framework based on multiple directed graphs to use and manage the objects to the Web	09.03.2011
807565	ALU	20127034366	KR101485331	KR	A framework based on multiple directed graphs to use and manage the objects to the Web	09.03.2011
807565	ALU	13/700487		US	A framework based on multiple directed graphs to use and manage the objects to the Web	09.03.2011
131329	ALU	06291666.3	EP1916798	FR	Efficient discovery SNMP MIB Tree	23.10.2006
131329	ALU	06291666.3	EP1916798	DE	Efficient discovery SNMP MIB Tree	23.10.2006
131329	ALU	06291666.3	EP1916798	GB	Efficient discovery SNMP MIB Tree	23.10.2006
Borst 18-15 (SC)	ALU	08742281.2	EP2143212	FR	Mimo Communication System With User Scheduling Based On Reduced Channel State Information	26.03.2008
Borst 18-15 (SC)	ALU	08742281.2	EP2143212	DE	Mimo Communication System With User Scheduling Based On Reduced Channel State Information	26.03.2008
Borst 18-15 (SC)	ALU	08742281.2	EP2143212	GB	Mimo Communication System With User Scheduling Based On Reduced Channel State Information	26.03.2008
811362	ALU	13/653737	US9253101	US	Group Data Plan Quota Allocation For Mobile Devices	17.10.2012
811416	ALU	12305202.9	EP2632072	EP	Remote Transmission Selection Unit For A Latency Tolerant C-RAN Architecture	22.02.2012
811418	ALU	13/564840	US9215019	US	Method And Apparatus For Interference Cancellation In Hybrid Satellite-Terrestrial Network	02.08.2012
103344	ALU	02292185.2	EP1292072	FR	PROTECTED OPTICAL RING	05.09.2002
103344	ALU	02292185.2	EP1292072	DE	PROTECTED OPTICAL RING	05.09.2002
103344	ALU	02292185.2	EP1292072	GB	PROTECTED OPTICAL RING	05.09.2002
804824	ALU	13/718379	US9705799	US	Server-Side Load Balancing Using Parent-Child Link Aggregation Groups	18.12.2012
811154	ALU	1252439	FR2988253	FR	Multi-screen usage control	19.03.2012

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
811497	ALU	13/446010	US8943269	US	Apparatus And Method For Meeting Performance Metrics For Users In File Systems	13.04.2012
805181	ALU	201080057572.3	ZL201080057572.3	CN	Crosstalk Control Method And Apparatus Using A Bandwidth-Adaptive Precoder Interface	23.11.2010
805181	ALU	2012544554	JP5498585	JP	Crosstalk Control Method And Apparatus Using A Bandwidth-Adaptive Precoder Interface	23.11.2010
805181	ALU	20127018419	KR101394106	KR	Crosstalk Control Method And Apparatus Using A Bandwidth-Adaptive Precoder Interface	23.11.2010
811581	ALU	13/456402	US9229778	US	Method And System For Dynamic Scaling In A Cloud Environment	26.04.2012
809938	ALU	13/564160	US9002932	US	Cloud Computing Service Access Gateway In IMS Network	01.08.2012
150262	ALU	07804937.6	EP2020130	FR	Port Association For Port Operational Status Event Monitoring	14.05.2007
150262	ALU	07804937.6	EP2020130	DE	Port Association For Port Operational Status Event Monitoring	14.05.2007
150262	ALU	07804937.6	EP2020130	GB	Port Association For Port Operational Status Event Monitoring	14.05.2007
805174	ALU	201080043531.9	ZL201080043531.9	CN	"void" regeneration for multiplexing of multi-modulation rates optical packets	15.09.2010
805174	ALU	10770564.2		EP	"void" regeneration for multiplexing of multi-modulation rates optical packets	15.09.2010
805174	ALU	20127010710	KR101451608	KR	"void" regeneration for multiplexing of multi-modulation rates optical packets	15.09.2010
805174	ALU	13/497216	US8737835	US	"void" regeneration for multiplexing of multi-modulation rates optical packets	15.09.2010
804234	ALU	10770561.8		EP	Technique for polarization tributaries identification	15.09.2010
804234	ALU	2012531472	JP5583222	JP	Technique for polarization tributaries identification	15.09.2010
804234	ALU	20127010704	KR1392793	KR	Technique for polarization tributaries identification	15.09.2010
804234	ALU	13/496669	US9219548	US	Technique for polarization tributaries identification	15.09.2010
Liu 46 (X)	ALU	06816417.7	EP1932261	FR	Optical Demodulating Apparatus And Method	05.10.2006
Liu 46 (X)	ALU	06816417.7	EP1932261	DE	Optical Demodulating Apparatus And Method	05.10.2006
Liu 46 (X)	ALU	06816417.7	EP1932261	GB	Optical Demodulating Apparatus And Method	05.10.2006
805803	ALU	201080057575.7	ZL201080057575.7	CN	Automatic optimization of carrier phase estimator for non linear impairment mitigation in coherent systems	19.11.2010
805803	ALU	2012543570	JP5351342	JP	Automatic optimization of carrier phase estimator for non linear impairment mitigation in coherent systems	19.11.2010
805803	ALU	20127018687	KR1319906	KR	Automatic optimization of carrier phase estimator for non linear impairment mitigation in coherent systems	19.11.2010
805803	ALU	13/513950	US9166682	US	Automatic optimization of carrier phase estimator for non linear impairment mitigation in coherent systems	19.11.2010
805187	ALU	201080044455.3	ZL201080044455.3	CN	Control and Use things through a video interaction	03.09.2010
805187	ALU	3074/CHENP/2012		IN	Control and Use things through a video interaction	03.09.2010
805187	ALU	2012532642	JP5799018	JP	Control and Use things through a video interaction	03.09.2010
805187	ALU	20127008786	KR101470711	KR	Control and Use things through a video interaction	03.09.2010
805187	ALU	13/499691	US9063537	US	Control and Use things through a video interaction	03.09.2010
805242	ALU	1120120087835		BR	Reed Resonator based Spectral rf Power Amplifier ("HARP amplifier")	04.10.2010
805242	ALU	201080046572.3	ZL201080046572.3	CN	Reed Resonator based Spectral rf Power Amplifier ("HARP amplifier")	04.10.2010
805242	ALU	3312/CHNEP/2012		IN	Reed Resonator based Spectral rf Power Amplifier ("HARP amplifier")	04.10.2010
805242	ALU	2012533567	JP5373975	JP	Reed Resonator based Spectral rf Power Amplifier ("HARP amplifier")	04.10.2010
805242	ALU	1020127012217	KR101356599	KR	Reed Resonator based Spectral rf Power Amplifier ("HARP amplifier")	04.10.2010
805242	ALU	13/499695	US8674762	US	Reed Resonator based Spectral rf Power Amplifier ("HARP amplifier")	04.10.2010
Harms 3-2 (DC)	ALU	13/421301	US8571219	US	Authentication Loading Control And Information Recapture In A UMTS Network	15.03.2012
					Techniques for Caching and Pre-fetching of Mobile Content At the Network Edge Based on Prediction of Users' Locations and Content Demands	
804722	ALU	20127011542	KR101529372	KR		04.11.2010
805415	ALU	2012533573	JP5732465	JP	OADM for continuous waveband signals	06.10.2010
805415	ALU	1020127012076	KR10-1392794	KR	OADM for continuous waveband signals	06.10.2010
805415	ALU	13/499409	US8867916	US	OADM for continuous waveband signals	06.10.2010
811495	ALU	12290126.7	EP2651123	EP	Implementation Of A Network PVR	10.04.2012
811001	ALU	13/626279	US8880691	US	Confidence Based Network Management	25.09.2012
803004	ALU	09715170.8	EP2248301	FR	In-Bound Mechanism That Verifies End-To-End Service Configuration With Application Awareness	17.02.2009

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
803004	ALU	09715170.8	EP2248301	DE	In-Bound Mechanism That Verifies End-To-End Service Configuration With Application Awareness	17.02.2009
803004	ALU	09715170.8	EP2248301	GB	In-Bound Mechanism That Verifies End-To-End Service Configuration With Application Awareness	17.02.2009
811525	ALU	12305616.0		EP	A Network Feature Enabled Cloud Service Brokerage Platform	01.06.2012
Cai 121-39 (Y)	ALU	08832978.4	EP2195964	FR	Charging For Roaming Users In IMS Networks	15.09.2008
Cai 121-39 (Y)	ALU	08832978.4	EP2195964	DE	Charging For Roaming Users In IMS Networks	15.09.2008
Cai 121-39 (Y)	ALU	08832978.4	EP2195964	GB	Charging For Roaming Users In IMS Networks	15.09.2008
808322	ALU	101115410	TWI460948	TW	Semiconductor Optical Amplifier Device And Optical Matrix Switch	30.04.2012
811055	ALU	13/456749	US8879647	US	Methods Of Allocating Resources In A System And Systems Implementing The Same	26.04.2012
810913	ALU	12306611.0		EP	Natural Hyper-whispering: Using A Leaning Gesture For Conference Call Control	18.12.2012
811394	ALU	12306020.4		EP	Video Summarization for Heterogenous Video Sharing Service Providers	24.08.2012
811463	ALU	12290211.7		EP	Smooth Quality Transitions In Adaptive Streaming	28.06.2012
135997	ALU	03012382.2	EP1370108	FR	OPTICAL SWITCH CONTROLLER FOR FAIR AND EFFECTIVE LIGHTPATH RESERVATION	30.05.2003
135997	ALU	03012382.2	EP1370108	DE	OPTICAL SWITCH CONTROLLER FOR FAIR AND EFFECTIVE LIGHTPATH RESERVATION	30.05.2003
806349	ALU	201080050923.8	ZL201080050923.8	CN	Antenna Apparatus and Antenna Selection Method	21.09.2010
806349	ALU	4203/CHENP/2012		IN	Antenna Apparatus and Antenna Selection Method	21.09.2010
806349	ALU	2012538253	JP5698253	JP	Antenna Apparatus and Antenna Selection Method	21.09.2010
806349	ALU	2012124066	RU2522022	RU	Antenna Apparatus and Antenna Selection Method	21.09.2010
806349	ALU	13/509293	US8688108	US	Antenna Apparatus and Antenna Selection Method	21.09.2010
811477	ALU	13/538916	US8902281	US	System And Method For Image Stabilization In Videoconferencing	29.06.2012
811447	ALU	12290330.5		EP	Detection Of Surge Protection Impacting DSL Lines	05.10.2012
811194	ALU	13/557843	US9042721	US	Stochastic Reflectometer	25.07.2012
811712	ALU	13/856624	US9124504	US	System And Method For Implementing LDP LSR Overload Protection	04.04.2013
811713	ALU	13/857137	US9306855	US	System And Method For Routable LDP LSR Identifier In IPv6 Networks	04.04.2013
811714	ALU	13/857110	US9264361	US	System And Method Providing For Multiple LDP Instances	04.04.2013
811715	ALU	13/857118	US9225649	US	System And Method For Data-Plane Fate Separation Of LDP LSPs	04.04.2013
102896	ALU	01949563.9	EP1210751	FR	Manufacturing process for cladding pumped fiber	28.06.2001
102896	ALU	01949563.9	EP1210751	DE	Manufacturing process for cladding pumped fiber	28.06.2001
102896	ALU	01949563.9	EP1210751	GB	Manufacturing process for cladding pumped fiber	28.06.2001
806084	ALU	201080063311.2	ZL201080063311.2	CN	Identification Of Receiving BSR-Femto From Handover From Macro Cellular Network	01.12.2010
806084	ALU	2012542385	JP5762436	JP	Identification Of Receiving BSR-Femto From Handover From Macro Cellular Network	01.12.2010
806084	ALU	1020127017513	KR1014736830000	KR	Identification Of Receiving BSR-Femto From Handover From Macro Cellular Network	01.12.2010
806084	ALU	13/514423	US9078178	US	Identification Of Receiving BSR-Femto From Handover From Macro Cellular Network	01.12.2010
811757	ALU	13/475236	US9130843	US	Method And Apparatus For Improving HTTP Adaptive Streaming Performance Using TCP Modifications At Content Source	18.05.2012
811764	ALU	13/474773	US9405588	US	Cloud Resource Allocation System And Method	18.05.2012
Cai 118 (Y)	ALU	13/450189	US8605874	US	Per-Session Dynamic Charging Caps In Communication Networks	18.04.2012
Dinu 7-16-74-9-15 (M)	ALU	06758567.9	EP1882331	FR	Quantum Key Distribution	25.04.2006
Dinu 7-16-74-9-15 (M)	ALU	06758567.9	EP1882331	DE	Quantum Key Distribution	25.04.2006
Dinu 7-16-74-9-15 (M)	ALU	06758567.9	EP1882331	GB	Quantum Key Distribution	25.04.2006
805777	ALU	09809000.4		EP	Handoff Maintenance Improvement	23.11.2009
805777	ALU	13/505419	US9112878	US	Handoff Maintenance Improvement	23.11.2009
805415	ALU	09305974.9	EP2312770	FR	OADM for continuous waveband signals	13.10.2009
805415	ALU	09305974.9	EP2312770	DE	OADM for continuous waveband signals	13.10.2009
805415	ALU	09305974.9	EP2312770	GB	OADM for continuous waveband signals	13.10.2009
805997	ALU	09305838.6	EP2296300	FR	ODU TCM Layer for OTN Auto-discovery	14.09.2009
805997	ALU	09305838.6	EP2296300	DE	ODU TCM Layer for OTN Auto-discovery	14.09.2009
805997	ALU	09305838.6	EP2296300	IT	ODU TCM Layer for OTN Auto-discovery	14.09.2009
805997	ALU	09305838.6	EP2296300	ES	ODU TCM Layer for OTN Auto-discovery	14.09.2009
805997	ALU	09305838.6	EP2296300	GB	ODU TCM Layer for OTN Auto-discovery	14.09.2009

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
811313	ALU	12172112.0		EP	Method For Simulating Uniform Scene Lighting In Immersive Video Conferences	15.06.2012
811793	ALU	12290142.4		EP	Transmitter Controller Reasoning System	27.04.2012
805955	ALU	201080055656.3	ZL201080055656.3	CN	CFM Timeout Interval Control To Support Hitless Software Upgrades	02.12.2010
805955	ALU	2012543159	JP5529288	JP	CFM Timeout Interval Control To Support Hitless Software Upgrades	02.12.2010
805955	ALU	20127014659	KR101425291	KR	CFM Timeout Interval Control To Support Hitless Software Upgrades	02.12.2010
805937	ALU	201080057680.0	ZL201080057680.0	CN	Photonic Match Filter	30.11.2010
805937	ALU	10787638.5		EP	Photonic Match Filter	30.11.2010
805937	ALU	2012544570	JP6039422	JP	Photonic Match Filter	30.11.2010
805937	ALU	PI2012002572	MY157208	MY	Photonic Match Filter	30.11.2010
805937	ALU	201204371-7	SG181692	SG	Photonic Match Filter	30.11.2010
805937	ALU	20127015563	KR101476012	KR	Photonic Match Filter	30.11.2010
804999	ALU	2012543564	JP5946412	JP	Synchronization Interface in a small form factor pluggable module (SFFPM)	17.11.2010
804999	ALU	10-2012-7018754	KR101576451	KR	Synchronization Interface in a small form factor pluggable module (SFFPM)	17.11.2010
804999	ALU	13/510448	US8774339	US	Synchronization Interface in a small form factor pluggable module (SFFPM)	17.11.2010
804993	ALU	201080057543.7	ZL201080057543.7	CN	Scalable Agnostic Optical Switch Fabric	26.11.2010
804993	ALU	2012543581	JP5431596	JP	Scalable Agnostic Optical Switch Fabric	26.11.2010
804993	ALU	1020127018266	KR101324058	KR	Scalable Agnostic Optical Switch Fabric	26.11.2010
804993	ALU	13/513725	US9173012	US	Scalable Agnostic Optical Switch Fabric	26.11.2010
805813	ALU	201080057589.9	ZL201080057589.9	CN	Variable bitrate OFDM	03.12.2010
805813	ALU	2012543593	JP5663032	JP	Variable bitrate OFDM	03.12.2010
805813	ALU	1020127018280	KR101346010	KR	Variable bitrate OFDM	03.12.2010
802957	ALU	08305395.9	EP2143380	FR	AN APPLICATION SERVER FOR REDUCING AMBIANCE NOISE IN AN AUSCULTATION SIGNAL, AND FOR RECORDING COMMENTS WHILE AUSCULTING A PATIENT WITH AN ELECTRONIC STETHOSCOPE	11.07.2008
802957	ALU	08305395.9	EP2143380	DE	AN APPLICATION SERVER FOR REDUCING AMBIANCE NOISE IN AN AUSCULTATION SIGNAL, AND FOR RECORDING COMMENTS WHILE AUSCULTING A PATIENT WITH AN ELECTRONIC STETHOSCOPE	11.07.2008
802957	ALU	08305395.9	EP2143380	GB	AN APPLICATION SERVER FOR REDUCING AMBIANCE NOISE IN AN AUSCULTATION SIGNAL, AND FOR RECORDING COMMENTS WHILE AUSCULTING A PATIENT WITH AN ELECTRONIC STETHOSCOPE	11.07.2008
811457	ALU	13/537300	US8972608	US	User-Selectable IEEE1588 Clock Class And Quality Level Mapping	29.06.2012
805370	ALU	201080057935.3	ZL201080057935.3	CN	Hosted and managed security service for non-technical people using network behavior techniques	08.12.2010
805370	ALU	10805798.5		EP	Hosted and managed security service for non-technical people using network behavior techniques	08.12.2010
805370	ALU	2012545374	JP5699162	JP	Hosted and managed security service for non-technical people using network behavior techniques	08.12.2010
805370	ALU	20127016005	KR101443472	KR	Hosted and managed security service for non-technical people using network behavior techniques	08.12.2010
805370	ALU	13/515316	US9104874	US	Hosted and managed security service for non-technical people using network behavior techniques	08.12.2010
811849	ALU	13/469503	US8971199	US	Apparatus And Method For Selecting Service Quality Metrics For Managed Services Quality Assurance	11.05.2012
Dinu 7-16-74-9-15 (M)	ALU	06769881.1	EP1882332	FR	Quantum Key Distribution	25.04.2006
Dinu 7-16-74-9-15 (M)	ALU	06769881.1	EP1882332	DE	Quantum Key Distribution	25.04.2006
Dinu 7-16-74-9-15 (M)	ALU	06769881.1	EP1882332	GB	Quantum Key Distribution	25.04.2006
807262	ALU	101119964	TW1481288	TW	System, Apparatus And Method For Address Management In A Distributed Mobile Core Network	04.06.2012
805667	ALU	201080057616.2	ZL201080057616.2	CN	OTN Tandem Connection Alarm Localization enhancement	17.12.2010
805667	ALU	2012543779	JP5581397	JP	OTN Tandem Connection Alarm Localization enhancement	17.12.2010
805667	ALU	10-2012-7018539	KR10-1397411	KR	OTN Tandem Connection Alarm Localization enhancement	17.12.2010
805928	ALU	20127023513	KR101557185	KR	Monitoring Of IEEE 1588V2 Transparent Clock Failure/ Degradation: Architecture And Implementation (M.I.T.)	09.02.2011

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
805928	ALU	13/509459	US9300422	US	Monitoring Of IEEE 1588V2 Transparent Clock Failure/ Degradation: Architecture And Implementation (M.I.T.)	09.02.2011
Cristallo 3-19 (G)	ALU	08291032.4	EP2184894	FR	Distributed Resource Management In Networks	05.11.2008
Cristallo 3-19 (G)	ALU	08291032.4	EP2184894	DE	Distributed Resource Management In Networks	05.11.2008
Cristallo 3-19 (G)	ALU	08291032.4	EP2184894	GB	Distributed Resource Management In Networks	05.11.2008
806084	ALU	09360052.6	EP2330850	FR	Identification Of Receiving BSR-Femto From Handover From Macro Cellular Network	07.12.2009
806084	ALU	09360052.6	EP2330850	DE	Identification Of Receiving BSR-Femto From Handover From Macro Cellular Network	07.12.2009
806084	ALU	09360052.6	EP2330850	GB	Identification Of Receiving BSR-Femto From Handover From Macro Cellular Network	07.12.2009
805087	ALU	201080052731.0	ZL201080052731.0	CN	Local Network Access For UE's In Coverage Of Home NodeBs	22.10.2010
805087	ALU	4367/CHENP/2012		IN	Local Network Access For UE's In Coverage Of Home NodeBs	22.10.2010
805087	ALU	2012539212	JP5536895	JP	Local Network Access For UE's In Coverage Of Home NodeBs	22.10.2010
805087	ALU	20127015707	KR101455127	KR	Local Network Access For UE's In Coverage Of Home NodeBs	22.10.2010
805087	ALU	13/510355		US	Local Network Access For UE's In Coverage Of Home NodeBs	22.10.2010
805896	ALU	10305021.7	EP2343833	FR	Digitally Controlled Adaptive Hybrid Balance Impedance	08.01.2010
805896	ALU	10305021.7	EP2343833	DE	Digitally Controlled Adaptive Hybrid Balance Impedance	08.01.2010
805896	ALU	10305021.7	EP2343833	GB	Digitally Controlled Adaptive Hybrid Balance Impedance	08.01.2010
811520	ALU	13/629731	US8842540	US	Active Queue Management Enhancements For Variable Bottleneck Rates	28.09.2012
Bosch 29-1 (P)	ALU	2012123696	RU2493678	RU	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
811458	ALU	13/837531	US9571381	US	Inter-Domain RSVP-TE LSP Load Balancing	15.03.2013
811821	ALU	12290270.3		EP	Novel Adaptive Broadband Impedance Transformer Circuit For Doherty Amplifiers	10.08.2012
805839	ALU	11733204.9		EP	High Speed Nested Mach-Zehnder Modulator With Asymmetric Carrier Dynamics	05.01.2011
806254	ALU	201180007699.9	ZL201180007699.9	CN	Method And Apparatus For Tracing Mobile Sessions	21.01.2011
806400	ALU	201180016318.3.	ZL201180016318.3	CN	Camera Calibration Using Projective Geometry Constrained, Similarity Invariant Search Spaces	08.03.2011
806400	ALU	7634/DELNP/2012		IN	Camera Calibration Using Projective Geometry Constrained, Similarity Invariant Search Spaces	08.03.2011
806400	ALU	2013-501714	JP5538617	JP	Camera Calibration Using Projective Geometry Constrained, Similarity Invariant Search Spaces	08.03.2011
806400	ALU	2012-7027882	KR101333871	KR	Camera Calibration Using Projective Geometry Constrained, Similarity Invariant Search Spaces	08.03.2011
806400	ALU	13/582164	US9303525	US	Camera Calibration Using Projective Geometry Constrained, Similarity Invariant Search Spaces	08.03.2011
Zarrabizadeh 22 (MH)	ALU	2012128629	JP5665799	JP	Watermarking Scheme For Digital Video	29.09.2004
812191	ALU	13/717982	US9166903	US	Method To Determine The ASBR For Inter-AS Multicast VPN	18.12.2012
806659	ALU	201180010883.9	ZL201180010883.9	CN	Method And Apparatus For Screening Request To Establish SIP Session	26.01.2011
806659	ALU	11703087.4		EP	Method And Apparatus For Screening Request To Establish SIP Session	26.01.2011
806659	ALU	2012555011	JP5512832	JP	Method And Apparatus For Screening Request To Establish SIP Session	26.01.2011
806659	ALU	20127022307	KR101412235	KR	Method And Apparatus For Screening Request To Establish SIP Session	26.01.2011
806330	ALU	10305275.9	EP2369781	FR	ADSL2x Low Power Mode with Guaranteed QOS (delay)	19.03.2010
806330	ALU	10305275.9	EP2369781	DE	ADSL2x Low Power Mode with Guaranteed QOS (delay)	19.03.2010
806330	ALU	10305275.9	EP2369781	GB	ADSL2x Low Power Mode with Guaranteed QOS (delay)	19.03.2010
137620	ALU	03300260.1	EP1432187	FR	H.248 Bulk Configuration Provisioning	11.12.2003
137620	ALU	03300260.1	EP1432187	DE	H.248 Bulk Configuration Provisioning	11.12.2003
137620	ALU	03300260.1	EP1432187	GB	H.248 Bulk Configuration Provisioning	11.12.2003
Bijwaard 7-17-5 (DJ)	ALU	13/534291	US8767733	US	Method And Apparatus For Establishing Multicast Groups	27.06.2012
806631	ALU	10305432.6	EP2381622	FR	Virtual Buffer technique to calculate and compensate node level residence time in nodes with hardware assisted time stamping not embedded in PHY	23.04.2010
806631	ALU	10305432.6	EP2381622	DE	Virtual Buffer technique to calculate and compensate node level residence time in nodes with hardware assisted time stamping not embedded in PHY	23.04.2010
806631	ALU	10305432.6	EP2381622	GB	Virtual Buffer technique to calculate and compensate node level residence time in nodes with hardware assisted time stamping not embedded in PHY	23.04.2010
812206	ALU	13/596363	US9338119	US	Direct Electronic Mail	28.08.2012
812103	ALU	13/563381	US9178806	US	High-Speed Content Routing	31.07.2012

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
812178	ALU	13/528802	US9537663	US	Manipulation And Restoration Of Authentication Challenge Parameters In Network Authentication Procedures	20.06.2012
811896	ALU	12290304.0		EP	Amplifier Efficiency Enhancement By Conditioning Signals To The Conduction Of Transistors	19.09.2012
811950	ALU	13/799009	US9042369	US	System And Method Implementing FEC Route Reflector	13.03.2013
811894	ALU	13305187.0		EP	Extended DNS Query	20.02.2013
811785	ALU	12185082.0		EP	One-Way/Two-Way Mode Switching (OTS)	19.09.2012
811863	ALU	13/630157	US8938579	US	Method And System For Using Range Bitmaps In TCAM Access	28.09.2012
812233	ALU	12305740.8		EP	Integrated Detection And Classification For Weakly Supervised Object Detection	26.06.2012
102802	ALU	01300114.4	EP1143643	FR	Improved transission spectral efficiency of optical DWDM channels.	08.01.2001
102802	ALU	01300114.4	EP1143643	DE	Improved transission spectral efficiency of optical DWDM channels.	08.01.2001
102802	ALU	01300114.4	EP1143643	GB	Improved transission spectral efficiency of optical DWDM channels.	08.01.2001
810841	ALU	13/686838		US	Methods And System For Providing Fairness And Stability TO Video Streams	27.11.2012
801079	ALU	07290401.4	EP1978668	FR	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	02.04.2007
801079	ALU	07290401.4	EP1978668	DE	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	02.04.2007
801079	ALU	07290401.4	EP1978668	GB	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	02.04.2007
812275	ALU	13/604756	US9712854	US	Cost-Aware Cloud-Based Content Delivery	06.09.2012
811974	ALU	12306595.5	EP2744292	EP	Green Comb for WiFi	17.12.2012
811924	ALU	12290321.4		EP	Dynamic Physical Energy Transportation	28.09.2012
810748	ALU	2244/DEL/2012		IN	Opportunistic Scheduling Of Multimedia File Downloads To Avoid Congestion And To Leverage Different Network Accesses	19.07.2012
812152	ALU	12306184.8		EP	variable packet size adaptation for DCF free POADM ring network	28.09.2012
812120	ALU	13305398.3	EP2784951	EP	ASE-based Loading channel for stream of optical packets	28.03.2013
811755	ALU	12306171.5		EP	Optimized Network Solution For E-LAN/E-Tree Services Over MRPS	27.09.2012
812096	ALU	12360065.2		EP	Macro Antenna Feeder Network - Optimal Design, Architecture And Instantiation	14.08.2012
801079	ALU	2012140442		JP	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	26.06.2012
807035	ALU	10290525.4	EP2437393	FR	Power Control for Reed Resonator based Spectral RF Power Amplifier	01.10.2010
807035	ALU	10290525.4	EP2437393	DE	Power Control for Reed Resonator based Spectral RF Power Amplifier	01.10.2010
807035	ALU	10290525.4	EP2437393	GB	Power Control for Reed Resonator based Spectral RF Power Amplifier	01.10.2010
812319	ALU	13/553751	US8949440	US	System And Method For Adaptive Rate Determination In Mobile Video Streaming	19.07.2012
806165	ALU	201180016084.2	ZL201180016084.2	CN	Transform Virtual Objects into Physical Objects	08.03.2011
806165	ALU	2013-500416	JP5591394	JP	Transform Virtual Objects into Physical Objects	08.03.2011
806165	ALU	2012-7027811	KR10-1494064	KR	Transform Virtual Objects into Physical Objects	08.03.2011
806165	ALU	13/637452		US	Transform Virtual Objects into Physical Objects	08.03.2011
806261	ALU	201180016091.2	ZL201180016091.2	CN	System and Method for Transforming Web from 2D into 3D	08.03.2011
806261	ALU	2013-500415	JP5728567	JP	System and Method for Transforming Web from 2D into 3D	08.03.2011
131326	ALU	07008293.8	EP1850423	GB	GIG-Array Connectors unhooking device	24.04.2007
812362	ALU	13/645037	US8892062	US	Closed-Loop Efficiency Modulation For Use In Network Powered Applications	04.10.2012
806935	ALU	201180009943.5	ZL201180009943.5	CN	Method And System For Common Group Action Filtering In Telecom Network Environments	07.02.2011
806935	ALU	2012553419	JP5760012	JP	Method And System For Common Group Action Filtering In Telecom Network Environments	07.02.2011
806935	ALU	20127021639	KR101395502	KR	Method And System For Common Group Action Filtering In Telecom Network Environments	07.02.2011
806876	ALU	201180008559.3	ZL201180008559.3	CN	Source Based Queue Selection Mechanism In The Routing Environment	07.02.2011
806876	ALU	2012554442	JP5468146	JP	Source Based Queue Selection Mechanism In The Routing Environment	07.02.2011
806876	ALU	20127021983	KR101445466	KR	Source Based Queue Selection Mechanism In The Routing Environment	07.02.2011
802873	ALU	09290295.6	EP2244391	FR	basestation with several transmitters & antennas	20.04.2009
802873	ALU	09290295.6	EP2244391	DE	basestation with several transmitters & antennas	20.04.2009
802873	ALU	09290295.6	EP2244391	GB	basestation with several transmitters & antennas	20.04.2009

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
806130	ALU	201180009667.2	CN102783213	CN	Handover mechanism for high-speed line-of-sight scenario and corresponding system concept	25.01.2011
806130	ALU	10-2012-7024093	KR101429031	KR	Handover mechanism for high-speed line-of-sight scenario and corresponding system concept	25.01.2011
806130	ALU	13/578869	US9386499	US	Handover mechanism for high-speed line-of-sight scenario and corresponding system concept	25.01.2011
809481	ALU	20137028244	KR101468833	KR	Hierarchical Profiled Scheduling And Shaping	18.04.2012
800790	ALU	07290038.4	EP1944902	FR	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	10.01.2007
800790	ALU	07290038.4	EP1944902	DE	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	10.01.2007
800790	ALU	07290038.4	EP1944902	GB	FLEXIBLE REMOTE IMPULSE NOISE MONITORING	10.01.2007
805645	ALU	09179319.0	EP2337255	FR	Fusible Single Use Optical Beam Shutter	15.12.2009
805645	ALU	09179319.0	EP2337255	DE	Fusible Single Use Optical Beam Shutter	15.12.2009
805645	ALU	09179319.0	EP2337255	GB	Fusible Single Use Optical Beam Shutter	15.12.2009
812261	ALU	12306333.1		EP	Homogeneous networks (Hom-Nets)	26.10.2012
806832	ALU	10609/DELNP/2012		IN	PCB Mounted Microwave Re-Entrant Resonators And Filters Thereof	21.06.2011
806832	ALU	2013-517163	JP5466340	JP	PCB Mounted Microwave Re-Entrant Resonators And Filters Thereof	21.06.2011
806832	ALU	PI 2012005607		MY	PCB Mounted Microwave Re-Entrant Resonators And Filters Thereof	21.06.2011
806832	ALU	201209567-5	SG186467	SG	PCB Mounted Microwave Re-Entrant Resonators And Filters Thereof	21.06.2011
806832	ALU	2013-7002380	KR101437796	KR	PCB Mounted Microwave Re-Entrant Resonators And Filters Thereof	21.06.2011
806832	ALU	13/702372	US8947177	US	PCB Mounted Microwave Re-Entrant Resonators And Filters Thereof	21.06.2011
Dominique 19-15-9 (F)	ALU	06752265.6	EP1886417	FR	Method Of Estimating A Current Channel Condition In A Wireless Communications Network	05.05.2006
Dominique 19-15-9 (F)	ALU	06752265.6	EP1886417	DE	Method Of Estimating A Current Channel Condition In A Wireless Communications Network	05.05.2006
Dominique 19-15-9 (F)	ALU	06752265.6	EP1886417	GB	Method Of Estimating A Current Channel Condition In A Wireless Communications Network	05.05.2006
812430	ALU	13/597905	US8811179	US	Method And Apparatus For Controlling Packet Flow In A Packet-Switched Network	29.08.2012
802657	ALU	08290540.7	EP2134008	FR	Analog half rate equalizer for Apol modulation formats	11.06.2008
802657	ALU	08290540.7	EP2134008	DE	Analog half rate equalizer for Apol modulation formats	11.06.2008
802657	ALU	08290540.7	EP2134008	GB	Analog half rate equalizer for Apol modulation formats	11.06.2008
810355	ALU	101128255	TWI487389	TW	Incast-avoidance Scheme For Data Center Networks	06.08.2012
805488	ALU	09306269.3	EP2337272	GB	Micro-Loop/Cycle Mitigation Scheme in Link-State Routing	18.12.2009
Bu 3-4-33 (T)	ALU	20127019442	KR101259775	KR	Methods And Devices For Defending A 3G Wireless Network Against A Signaling Attack	27.09.2007
805814	ALU	10290355.6	EP2403194	FR	Virtual Frame Switching	30.06.2010
805814	ALU	10290355.6	EP2403194	DE	Virtual Frame Switching	30.06.2010
805814	ALU	10290355.6	EP2403194	GB	Virtual Frame Switching	30.06.2010
806569	ALU	201180012494.X	ZL201180012494.X	CN	Feature For Secure Session Initiation With Hosts Behind Firewalls	02.03.2011
806569	ALU	2012556194	JP5524361	JP	Feature For Secure Session Initiation With Hosts Behind Firewalls	02.03.2011
806569	ALU	20127023107	KR101406556	KR	Feature For Secure Session Initiation With Hosts Behind Firewalls	02.03.2011
807124	ALU	11711197.1		EP	Method And Apparatus For Provisioning, Monitoring, Managing And Correlating Secure IPSEC Service Infrastructure To Underlying Transport Layer Elements And Related Business Models	16.03.2011
807124	ALU	2013500180	JP5707481	JP	Method And Apparatus For Provisioning, Monitoring, Managing And Correlating Secure IPSEC Service Infrastructure To Underlying Transport Layer Elements And Related Business Models	16.03.2011
807124	ALU	20127024140	KR101445468	KR	Method And Apparatus For Provisioning, Monitoring, Managing And Correlating Secure IPSEC Service Infrastructure To Underlying Transport Layer Elements And Related Business Models	16.03.2011
806814	ALU	11708632.2		EP	Hierarchical Resource Management in Network Management System	02.03.2011
806814	ALU	7851/CHENP/2012		IN	Hierarchical Resource Management in Network Management System	02.03.2011
806814	ALU	2013500065	JP5571239	JP	Hierarchical Resource Management in Network Management System	02.03.2011
806814	ALU	20127024031	KR101545910	KR	Hierarchical Resource Management in Network Management System	02.03.2011

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
807116	ALU	201180014224.2	ZL201180014224.2	CN	Borrower Prioritization And Pre-emption Process In Hierarchical Resource Management	02.03.2011
807116	ALU	11709242.9		EP	Borrower Prioritization And Pre-emption Process In Hierarchical Resource Management	02.03.2011
807116	ALU	7785/CHENP/2012		IN	Borrower Prioritization And Pre-emption Process In Hierarchical Resource Management	02.03.2011
807116	ALU	2013500064	JP5463437	JP	Borrower Prioritization And Pre-emption Process In Hierarchical Resource Management	02.03.2011
807116	ALU	20127024037	KR101483835	KR	Borrower Prioritization And Pre-emption Process In Hierarchical Resource Management	02.03.2011
114996	ALU	06291215.9	EP1883258	FR	Cooperative Spectrum Sharing (cooperation with Uni Kassel)	25.07.2006
114996	ALU	06291215.9	EP1883258	DE	Cooperative Spectrum Sharing (cooperation with Uni Kassel)	25.07.2006
114996	ALU	06291215.9	EP1883258	GB	Cooperative Spectrum Sharing (cooperation with Uni Kassel)	25.07.2006
805984	ALU	10195441.0	EP2346194	FR	Versatile WDM system to improve efficiency of optical networks	16.12.2010
805984	ALU	10195441.0	EP2346194	DE	Versatile WDM system to improve efficiency of optical networks	16.12.2010
805984	ALU	10195441.0	EP2346194	GB	Versatile WDM system to improve efficiency of optical networks	16.12.2010
806543	ALU	201180014424.8	ZL201180014424.8	CN	Dynamic Narrow Optical TX Filtering For Ultra High Density Optical Network	24.02.2011
806543	ALU	11705562.4	EP2548321	EP	Dynamic Narrow Optical TX Filtering For Ultra High Density Optical Network	24.02.2011
806543	ALU	20127026236	KR101449977	KR	Dynamic Narrow Optical TX Filtering For Ultra High Density Optical Network	24.02.2011
806543	ALU	13/580269	US8849118	US	Dynamic Narrow Optical TX Filtering For Ultra High Density Optical Network	24.02.2011
803690	ALU	09290239.4	EP2237503	FR	Application Recognition Based On Mutualized DPI	31.03.2009
803690	ALU	09290239.4	EP2237503	DE	Application Recognition Based On Mutualized DPI	31.03.2009
803690	ALU	09290239.4	EP2237503	GB	Application Recognition Based On Mutualized DPI	31.03.2009
812121	ALU	12290372.7		EP	SDN Enabling Cloud Elasticity	29.10.2012
804313	ALU	02732282.5	EP1430632	FR	Topology Discovery in Optical WDM Networks	04.06.2002
804313	ALU	02732282.5	EP1430632	DE	Topology Discovery in Optical WDM Networks	04.06.2002
804313	ALU	02732282.5	EP1430632	IT	Topology Discovery in Optical WDM Networks	04.06.2002
804313	ALU	02732282.5	EP1430632	GB	Topology Discovery in Optical WDM Networks	04.06.2002
812375	ALU	12290419.6		EP	A Virtual Accounting Grid For E-Mobility Consumers	29.11.2012
804718	ALU	09290523.1	EP2273701	FR	Optimized optical packet coherent detection with time-shifted parameter convergence	30.06.2009
804718	ALU	09290523.1	EP2273701	DE	Optimized optical packet coherent detection with time-shifted parameter convergence	30.06.2009
804718	ALU	09290523.1	EP2273701	GB	Optimized optical packet coherent detection with time-shifted parameter convergence	30.06.2009
807076	ALU	201180024598.2	ZL201180024598.2	CN	Self-test of Vectoring Functionalities	10.05.2011
807076	ALU	10-2012-7032724	KR101411967	KR	Self-test of Vectoring Functionalities	10.05.2011
807076	ALU	13/695750	US9270332	US	Self-test of Vectoring Functionalities	10.05.2011
805367	ALU	201180017212.5	ZL201180017212.5	CN	Speed-up end-to-end switching time delay for wavelength connection activations (SSTD)	25.02.2011
805367	ALU	2013501705	JP5774676	JP	Speed-up end-to-end switching time delay for wavelength connection activations (SSTD)	25.02.2011
806820	ALU	11708483.0		EP	Non-coherent OTDR using Golay sequences in Multi-channel environment	17.03.2011
806820	ALU	2013501736	JP5731631	JP	Non-coherent OTDR using Golay sequences in Multi-channel environment	17.03.2011
806820	ALU	20127025394	KR101470299	KR	Non-coherent OTDR using Golay sequences in Multi-channel environment	17.03.2011
807027	ALU	201180016111.6	ZL201180016111.6	CN	Dynamically configurable parallel architecture for energy efficient packet aggregation and transport	25.03.2011
807027	ALU	2013501768	JP5553933	JP	Dynamically configurable parallel architecture for energy efficient packet aggregation and transport	25.03.2011
807027	ALU	20127025393	KR101418271	KR	Dynamically configurable parallel architecture for energy efficient packet aggregation and transport	25.03.2011
807027	ALU	13/580451	US9001658	US	Dynamically configurable parallel architecture for energy efficient packet aggregation and transport	25.03.2011
807129	ALU	11745609.5		EP	Method And Apparatus For Rapid Switchover From Primary To Standby Multicast Trees	11.07.2011
807129	ALU	2013521803	JP5760083	JP	Method And Apparatus For Rapid Switchover From Primary To Standby Multicast Trees	11.07.2011
806669	ALU	2013510470	JP5536280	JP	A Mechanism To Identify Application Protocol Based On Centroid Keyword Vector	19.05.2010
806669	ALU	13/696431	US9031959	US	A Mechanism To Identify Application Protocol Based On Centroid Keyword Vector	19.05.2010
806669	ALU	1020127030076	KR101409563	KR	A Mechanism To Identify Application Protocol Based On Centroid Keyword Vector	19.05.2010

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Bosch 29-1 (P)	ALU	2012179992	JP5363629	JP	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
803459	ALU	08425466.3	EP2141861	FR	Methods to improve next generation networks using a Network Process Balancer (NPB)	04.07.2008
803459	ALU	08425466.3	EP2141861	DE	Methods to improve next generation networks using a Network Process Balancer (NPB)	04.07.2008
803459	ALU	08425466.3	EP2141861	GB	Methods to improve next generation networks using a Network Process Balancer (NPB)	04.07.2008
812223	ALU	12306012.1		EP	Reverse Hold-Over Detection	21.08.2012
810216	ALU	101133992	TW484779	TW	Cell-Free Large-Scale Antenna System	17.09.2012
806074	ALU	20127028366	KR101443997	KR	Athermal Optical Filters In Silicon-On-Insulator Waveguides	18.03.2011
806074	ALU	13/637830	US8938137	US	Athermal Optical Filters In Silicon-On-Insulator Waveguides	18.03.2011
137984	ALU	06300981.5	EP1768351	FR	Equalized Network Latency For Multi-Player Gaming	26.09.2006
137984	ALU	06300981.5	EP1768351	DE	Equalized Network Latency For Multi-Player Gaming	26.09.2006
137984	ALU	06300981.5	EP1768351	GB	Equalized Network Latency For Multi-Player Gaming	26.09.2006
805355	ALU	09290787.2	EP2312775	FR	Hardware Time Synchronization (HATS)	15.10.2009
805355	ALU	09290787.2	EP2312775	DE	Hardware Time Synchronization (HATS)	15.10.2009
805355	ALU	09290787.2	EP2312775	GB	Hardware Time Synchronization (HATS)	15.10.2009
812360	ALU	13150312.0		EP	Media controller ensuring consistent render based on a media composition model	04.01.2013
812162	ALU	12191347.9		EP	Co-operative Video Streaming Display	06.11.2012
812511	ALU	12306498.2		EP	Dynamic Meta multimedia analyser based on Social interaction Analysis	30.11.2012
812529	ALU	12306495.8		EP	HAS Client Procedure To Learn The Network Behaviour	30.11.2012
805461	ALU	10305001.9	EP2341649	FR	Stability Enhancement Of Timestamp Protocols Performance: System Implementation And Protocol Description (SET)	04.01.2010
805461	ALU	10305001.9	EP2341649	DE	Stability Enhancement Of Timestamp Protocols Performance: System Implementation And Protocol Description (SET)	04.01.2010
805461	ALU	10305001.9	EP2341649	GB	Stability Enhancement Of Timestamp Protocols Performance: System Implementation And Protocol Description (SET)	04.01.2010
804739	ALU	09290631.2	EP2288206	FR	Identifying Cell Spots	18.08.2009
804739	ALU	09290631.2	EP2288206	DE	Identifying Cell Spots	18.08.2009
804739	ALU	09290631.2	EP2288206	GB	Identifying Cell Spots	18.08.2009
807076	ALU	10305527.3	EP2388983	FR	Self-test of Vectoring Functionalities	18.05.2010
807076	ALU	10305527.3	EP2388983	DE	Self-test of Vectoring Functionalities	18.05.2010
807076	ALU	10305527.3	EP2388983	GB	Self-test of Vectoring Functionalities	18.05.2010
804206	ALU	09305082.1	EP2214390	FR	LOCALISATION OF XDSL WIRING ISSUES BY SYNCHRONOUS LISTENING AT XTU'S	30.01.2009
804206	ALU	09305082.1	EP2214390	DE	LOCALISATION OF XDSL WIRING ISSUES BY SYNCHRONOUS LISTENING AT XTU'S	30.01.2009
804206	ALU	09305082.1	EP2214390	GB	LOCALISATION OF XDSL WIRING ISSUES BY SYNCHRONOUS LISTENING AT XTU'S	30.01.2009
802414	ALU	08290550.6	EP2134058	FR	Multi-Layer and Multi Feedback Border Node Protection System	12.06.2008
802414	ALU	08290550.6	EP2134058	DE	Multi-Layer and Multi Feedback Border Node Protection System	12.06.2008
802414	ALU	08290550.6	EP2134058	GB	Multi-Layer and Multi Feedback Border Node Protection System	12.06.2008
812688	ALU	12306228.3	EP2720424	EP	Apparatus, Method and Computer Program Operable to Determine Estimates	09.10.2012
805850	ALU	201180024592.5	ZL201180024592.5	CN	Multi-Band High-Efficiency Doherty Amplifier	17.05.2011
805850	ALU	11746310.9		EP	Multi-Band High-Efficiency Doherty Amplifier	17.05.2011
805850	ALU	2013510693	JP5687760	JP	Multi-Band High-Efficiency Doherty Amplifier	17.05.2011
805850	ALU	9603/CHENP/2012		IN	Multi-Band High-Efficiency Doherty Amplifier	17.05.2011
805850	ALU	20127032624	KR101487728	KR	Multi-Band High-Efficiency Doherty Amplifier	17.05.2011
807367	ALU	11730744.7		EP	Event Based Social Networking Application	02.05.2011
807367	ALU	2013508573	JP5616524	JP	Event Based Social Networking Application	02.05.2011
807367	ALU	20127028707	KR101428353	KR	Event Based Social Networking Application	02.05.2011
803750	ALU	10150462.9	EP2207286	FR	Synchronous Status Message Tunneling (SSM-T)	11.01.2010
803750	ALU	10150462.9	EP2207286	DE	Synchronous Status Message Tunneling (SSM-T)	11.01.2010
803750	ALU	10150462.9	EP2207286	GB	Synchronous Status Message Tunneling (SSM-T)	11.01.2010
806776	ALU	201180031900.7	ZL201180031900.7	CN	Ringling Phase Echo Cancellation	23.05.2011
806776	ALU	2013517122	JP5509387	JP	Ringling Phase Echo Cancellation	23.05.2011
806776	ALU	20137000114	KR101442995	KR	Ringling Phase Echo Cancellation	23.05.2011
806776	ALU	13/700465	US8737601	US	Ringling Phase Echo Cancellation	23.05.2011
Cai 86-5-12-10-2 (Y)	ALU	13/614244	US8929256	US	Third Party Charging For SIP Sessions	13.09.2012
804518	ALU	10175615.3	EP2293521	FR	Determination of a user's place from an enterprise application	07.09.2010
804518	ALU	10175615.3	EP2293521	DE	Determination of a user's place from an enterprise application	07.09.2010
804518	ALU	10175615.3	EP2293521	GB	Determination of a user's place from an enterprise application	07.09.2010
804183	ALU	09305402.1	EP2249525	FR	Stitching of Labels for Inter-Carrier service Enforcement (SLICE)	06.05.2009

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
804688	ALU	10157684.1	EP2369792	FR	GASP- Genetic programming Algorithm to Settle inter-carrier Paths under adaptiveness constraints	25.03.2010
804688	ALU	10157684.1	EP2369792	DE	GASP- Genetic programming Algorithm to Settle inter-carrier Paths under adaptiveness constraints	25.03.2010
804688	ALU	10157684.1	EP2369792	GB	GASP- Genetic programming Algorithm to Settle inter-carrier Paths under adaptiveness constraints	25.03.2010
806631	ALU	2013505415	JP5548305	JP	Virtual Buffer technique to calculate and compensate node level residence time in nodes with hardware assisted time stamping not embedded in PHY	14.04.2011
806631	ALU	10-2012-7030438	KR10-1413506	KR	Virtual Buffer technique to calculate and compensate node level residence time in nodes with hardware assisted time stamping not embedded in PHY	14.04.2011
806631	ALU	13/637887	US9203725	US	Virtual Buffer technique to calculate and compensate node level residence time in nodes with hardware assisted time stamping not embedded in PHY	14.04.2011
807194	ALU	2013531655	JP5643433	JP	Method And Apparatus For Protocol Event Management	21.09.2011
805661	ALU	09306267.7	EP2337281	DE	Extended metric links	18.12.2009
805661	ALU	09306267.7	EP2337281	GB	Extended metric links	18.12.2009
812819	ALU	13/648628	US9712402	US	Method For Deploying Geographically-Distributed Applications Within A Distributed Cloud	10.10.2012
803112	ALU	08290804.7	EP2159974	FR	DANTE - Distributed Ant algorithm for end-to-end quality of service Negotiation and Traffic Engineering	27.08.2008
812433	ALU	13/729619	US8943331	US	Efficient Setup For Privacy-Preserving Database System	28.12.2012
812037	ALU	12306599.7	EP2744198	EP	Performance enhancement of video surveillance systems using mobile devices	17.12.2012
812114	ALU	12306695.3		EP	Packet reflective optical Selector & Detector	28.12.2012
812401	ALU	13305073.2		EP	Low Cost Optical Filter For TWDM Downstream Integrated In A BOSA	21.01.2013
812714	ALU	13306232.3		EP	Integrated Reflective Electro-Absorption Modulated Laser optical source	09.09.2013
812212	ALU	13305920.4		EP	A Method and a Tool for Dynamic Filters Generation for Classified Ads	28.06.2013
812879	ALU	12306491.7	EP2739024	EP	Seamless communication application shift	30.11.2012
812132	ALU	13/864608		US	Per User Schedule Based Prioritized Email Delivery	17.04.2013
812581	ALU	13290032.5		EP	Semantic recommendation system of relevant social topics for a dedicated multimedia content	18.02.2013
812679	ALU	12290396.6		EP	Feed-Forward Filter With Broad Transmission Zero	16.11.2012
105462	ALU	05300379.4	EP1635507	FR	ADAPTIVE DIAGNOSIS SYSTEM FOR IP SERVICES	17.05.2005
105462	ALU	05300379.4	EP1635507	DE	ADAPTIVE DIAGNOSIS SYSTEM FOR IP SERVICES	17.05.2005
105462	ALU	05300379.4	EP1635507	GB	ADAPTIVE DIAGNOSIS SYSTEM FOR IP SERVICES	17.05.2005
806480	ALU	10305466.4	EP2383899	FR	Number of Disturbers Estimation	30.04.2010
806480	ALU	10305466.4	EP2383899	DE	Number of Disturbers Estimation	30.04.2010
806480	ALU	10305466.4	EP2383899	GB	Number of Disturbers Estimation	30.04.2010
806614	ALU	201180020120.2	ZL201180020120.2	CN	Single stage, Low Noise Figure, voltage variable gain amplifier with constant input linearity.	18.04.2011
806614	ALU	11714576.3		EP	Single stage, Low Noise Figure, voltage variable gain amplifier with constant input linearity.	18.04.2011
806614	ALU	8863/CHENP/2012		IN	Single stage, Low Noise Figure, voltage variable gain amplifier with constant input linearity.	18.04.2011
806614	ALU	2013505437	JP5774090	JP	Single stage, Low Noise Figure, voltage variable gain amplifier with constant input linearity.	18.04.2011
806614	ALU	20127028974	KR101505821	KR	Single stage, Low Noise Figure, voltage variable gain amplifier with constant input linearity.	18.04.2011
806614	ALU	13/641789	US8928414	US	Single stage, Low Noise Figure, voltage variable gain amplifier with constant input linearity.	18.04.2011
807165	ALU	201180027568.7	ZL201180027568.7	CN	QoS-Aware Rate Throttling For Energy Efficient Delay Tolerant Data Transfer	01.06.2011
807165	ALU	2013513293	JP5596225	JP	QoS-Aware Rate Throttling For Energy Efficient Delay Tolerant Data Transfer	01.06.2011
807165	ALU	20127031657	KR101371804	KR	QoS-Aware Rate Throttling For Energy Efficient Delay Tolerant Data Transfer	01.06.2011
806412	ALU	11716733.8		EP	Methods Of Determining Coverage Areas	13.04.2011
806412	ALU	9651/CHENP/2012		IN	Methods Of Determining Coverage Areas	13.04.2011
806412	ALU	2013511163	JP5709983	JP	Methods Of Determining Coverage Areas	13.04.2011
806412	ALU	20127032880	KR101487223	KR	Methods Of Determining Coverage Areas	13.04.2011
807034	ALU	10305938.2	EP2426858	FR	Method And Apparatus For Restoring A Connection Through A Provider Network Upon Request	01.09.2010
807034	ALU	10305938.2	EP2426858	DE	Method And Apparatus For Restoring A Connection Through A Provider Network Upon Request	01.09.2010

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
807034	ALU	10305938.2	EP2426858	GB	Method And Apparatus For Restoring A Connection Through A Provider Network Upon Request	01.09.2010
806115	ALU	09306252.9	EP2337275	FR	Automatic adjacency creation with Pseudo-Nodes on point-to-point links	17.12.2009
806115	ALU	09306252.9	EP2337275	DE	Automatic adjacency creation with Pseudo-Nodes on point-to-point links	17.12.2009
806115	ALU	09306252.9	EP2337275	GB	Automatic adjacency creation with Pseudo-Nodes on point-to-point links	17.12.2009
Akyamac 1-6-37 (AA)	ALU	09731798.6	EP2291958	FR	Methods Of Protection Sharing For Multi-Protected Optical Demands In Large-Scale WDM Mesh Networks	16.04.2009
Akyamac 1-6-37 (AA)	ALU	09731798.6	EP2291958	DE	Methods Of Protection Sharing For Multi-Protected Optical Demands In Large-Scale WDM Mesh Networks	16.04.2009
Akyamac 1-6-37 (AA)	ALU	09731798.6	EP2291958	GB	Methods Of Protection Sharing For Multi-Protected Optical Demands In Large-Scale WDM Mesh Networks	16.04.2009
806507	ALU	201180022429.5	ZL201180022429.5	CN	On The Fly Data Sharing Conference based on email diffusion	16.03.2011
806507	ALU	11714358.6		EP	On The Fly Data Sharing Conference based on email diffusion	16.03.2011
806507	ALU	9175/DELNP/2012		IN	On The Fly Data Sharing Conference based on email diffusion	16.03.2011
806507	ALU	2013508537	JP5579926	JP	On The Fly Data Sharing Conference based on email diffusion	16.03.2011
806507	ALU	20127031592	KR1404437	KR	On The Fly Data Sharing Conference based on email diffusion	16.03.2011
807141	ALU	201180043249.5	ZL201180043249.5	CN	PTP-Network InterWorking Function (PN-IWF)	29.06.2011
807141	ALU	13/810271	US9209921	US	PTP-Network InterWorking Function (PN-IWF)	29.06.2011
120239	ALU	13/022408	US8638798	US	ATM header reduction technique	07.02.2011
812770	ALU	12360075.1		EP	Amplifier Architecture For Ultra-Wide, Multi-Band Applications	05.11.2012
805534	ALU	09290920.9	EP2333993	FR	Automatic Management of Precision Time Protocol IEEE 1588V2 : implementation and protocol description (AMP)	09.12.2009
805534	ALU	09290920.9	EP2333993	DE	Automatic Management of Precision Time Protocol IEEE 1588V2 : implementation and protocol description (AMP)	09.12.2009
805534	ALU	09290920.9	EP2333993	GB	Automatic Management of Precision Time Protocol IEEE 1588V2 : implementation and protocol description (AMP)	09.12.2009
812998	ALU	12290388.3		EP	Self Optimizing Parking Lot	13.11.2012
808196	ALU	201180043943.7	ZL201180043943.7	CN	Speech Enabled Virtual Assistant	09.09.2011
808196	ALU	2013528618	JP5681800	JP	Speech Enabled Virtual Assistant	09.09.2011
807058	ALU	201180046763.4		CN	System And Method For Controllably Viewing Digital Video Streams Captured By Surveillance Cameras	15.09.2011
807058	ALU	2013531629	JP5651786	JP	System And Method For Controllably Viewing Digital Video Streams Captured By Surveillance Cameras	15.09.2011
807058	ALU	20137007838	KR101526081	KR	System And Method For Controllably Viewing Digital Video Streams Captured By Surveillance Cameras	15.09.2011
150278	ALU	13/666596	US8976788	US	Improved Assert In PIM-SM	01.11.2012
812882	ALU	13290003.6		EP	Distributed Control Of The Energy Network	08.01.2013
806870	ALU	10305770.9	EP2408160	FR	Class-O with Improved Envelope Tracking	12.07.2010
806870	ALU	10305770.9	EP2408160	DE	Class-O with Improved Envelope Tracking	12.07.2010
806870	ALU	10305770.9	EP2408160	GB	Class-O with Improved Envelope Tracking	12.07.2010
806919	ALU	201180036031.7	ZL201180036031.7	CN	Ethernet Synchronization Messaging Channel Tunnelling (ESMC-T)	30.06.2011
806919	ALU	11729611.1		EP	Ethernet Synchronization Messaging Channel Tunnelling (ESMC-T)	30.06.2011
806919	ALU	2013517297	JP5466791	JP	Ethernet Synchronization Messaging Channel Tunnelling (ESMC-T)	30.06.2011
806919	ALU	20137002336	KR101550510	KR	Ethernet Synchronization Messaging Channel Tunnelling (ESMC-T)	30.06.2011
812555	ALU	12382486.4		EP	Out Of Path Transparent Caching	07.12.2012
Bu 1-2-28 (T)	ALU	05250060.0	EP1557984	FR	Network Architecture And Related Methods For Surviving Denial Of Service Attacks	07.01.2005
Bu 1-2-28 (T)	ALU	05250060.0	EP1557984	DE	Network Architecture And Related Methods For Surviving Denial Of Service Attacks	07.01.2005
Bu 1-2-28 (T)	ALU	05250060.0	EP1557984	GB	Network Architecture And Related Methods For Surviving Denial Of Service Attacks	07.01.2005
114997	ALU	2012236821	JP5620960	JP	Transmission line made of plastic foil laminated with a metal layer	11.01.2007
800777	ALU	07805020.0	EP2165399	FR	Halte teil zur Stapelung von Schellen zur Befestigung einer Vielzahl parallel verlaufender strangförmiger Gegenstände	03.07.2007
800777	ALU	07805020.0	EP2165399	DE	Halte teil zur Stapelung von Schellen zur Befestigung einer Vielzahl parallel verlaufender strangförmiger Gegenstände	03.07.2007
800777	ALU	07805020.0	EP2165399	GB	Halte teil zur Stapelung von Schellen zur Befestigung einer Vielzahl parallel verlaufender strangförmiger Gegenstände	03.07.2007
807672	ALU	10305979.6	EP2429114	FR	Method for Efficient Implementation of Phantom Mode	13.09.2010
807672	ALU	10305979.6	EP2429114	DE	Method for Efficient Implementation of Phantom Mode	13.09.2010

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
807672	ALU	10305979.6	EP2429114	GB	Method for Efficient Implementation of Phantom Mode	13.09.2010
806478	ALU	201180032721.5	ZL2011800327215	CN	Automatic adaptation of antenna tilt angle in mobile radio networks	20.05.2011
806478	ALU	833/CHENP/2013		IN	Automatic adaptation of antenna tilt angle in mobile radio networks	20.05.2011
806478	ALU	2013518999		JP	Automatic adaptation of antenna tilt angle in mobile radio networks	20.05.2011
806482	ALU	10305465.6	EP2383898	FR	Virtual Binder Identification Based on Trend Analysis of Multiple Lines	30.04.2010
806482	ALU	10305465.6	EP2383898	DE	Virtual Binder Identification Based on Trend Analysis of Multiple Lines	30.04.2010
806482	ALU	10305465.6	EP2383898	GB	Virtual Binder Identification Based on Trend Analysis of Multiple Lines	30.04.2010
812778	ALU	13/746119		US	CTL Plane Encryption In IP/MPLS Networks	21.01.2013
812779	ALU	13/748244	US9106618	US	Control Plane Encryption In IP/MPLS Networks	23.01.2013
803524	ALU	09787216.2	EP2342887	FR	System And Method Of Serving Gateway Having Mobile Packet Protocol Application-Aware Packet Management	20.08.2009
803524	ALU	09787216.2	EP2342887	DE	System And Method Of Serving Gateway Having Mobile Packet Protocol Application-Aware Packet Management	20.08.2009
803524	ALU	09787216.2	EP2342887	GB	System And Method Of Serving Gateway Having Mobile Packet Protocol Application-Aware Packet Management	20.08.2009
802741	ALU	09714027.1	EP2263363	FR	Compressed IP Flow Recognition For In-Line, Integrated Mobile DPI	17.02.2009
802741	ALU	09714027.1	EP2263363	DE	Compressed IP Flow Recognition For In-Line, Integrated Mobile DPI	17.02.2009
802741	ALU	09714027.1	EP2263363	GB	Compressed IP Flow Recognition For In-Line, Integrated Mobile DPI	17.02.2009
105031	ALU	03292683.4	EP1418733	FR	ASSIGNING A VLAN IDENTIFIER TO AN IP PHONE	28.10.2003
105031	ALU	03292683.4	EP1418733	DE	ASSIGNING A VLAN IDENTIFIER TO AN IP PHONE	28.10.2003
105031	ALU	03292683.4	EP1418733	GB	ASSIGNING A VLAN IDENTIFIER TO AN IP PHONE	28.10.2003
807363	ALU	20137010767	KR101448413	KR	QoS-Oriented Scheduling Mechanisms For ATCA Based Products	24.08.2011
807363	ALU	13/820798	US9178826	US	QoS-Oriented Scheduling Mechanisms For ATCA Based Products	24.08.2011
800941	ALU	03291182.8	EP1367850	FR	Method for restricting the use of a radio terminal and associated restriction device	20.05.2003
800941	ALU	03291182.8	EP1367850	DE	Method for restricting the use of a radio terminal and associated restriction device	20.05.2003
800941	ALU	03291182.8	EP1367850	GB	Method for restricting the use of a radio terminal and associated restriction device	20.05.2003
812917	ALU	14/041851	US9148364	US	System, Method And Apparatus For Efficient Management Of S-PMSE Resource In RSVP P2MP Multicast Networks	30.09.2013
813172	ALU	12306665.6		EP	Robust Content-Based Solution For Dynamically Optimizing Multi-User Wireless Multimedia Transmission	21.12.2012
805517	ALU	10305003.5	EP2341669	FR	Detecting BGP Path Exploration Events by Means of Hidden Markov Model (HMM)	04.01.2010
805517	ALU	10305003.5	EP2341669	DE	Detecting BGP Path Exploration Events by Means of Hidden Markov Model (HMM)	04.01.2010
805517	ALU	10305003.5	EP2341669	GB	Detecting BGP Path Exploration Events by Means of Hidden Markov Model (HMM)	04.01.2010
808126	ALU	201180044895.3		CN	Content Capture Device And Methods For Automatically Tagging Content	12.09.2011
808126	ALU	11758653.7		EP	Content Capture Device And Methods For Automatically Tagging Content	12.09.2011
808126	ALU	20137006495	KR101432457	KR	Content Capture Device And Methods For Automatically Tagging Content	12.09.2011
803524	ALU	13/754258	US9232381	US	System And Method Of Serving Gateway Having Mobile Packet Protocol Application-Aware Packet Management	30.01.2013
807638	ALU	10305659.4	EP2398148	FR	Multi octave digital transmitter	21.06.2010
807638	ALU	10305659.4	EP2398148	DE	Multi octave digital transmitter	21.06.2010
807638	ALU	10305659.4	EP2398148	GB	Multi octave digital transmitter	21.06.2010
806606	ALU	13/805566	US8913102	US	Personalized videoconference camera selection based on social proximity.	21.06.2011
807030	ALU	10305853.3	EP2418922	FR	Method to Minimize the POTS Splitter Impact on VDSL Performance	02.08.2010
807030	ALU	10305853.3	EP2418922	DE	Method to Minimize the POTS Splitter Impact on VDSL Performance	02.08.2010
807030	ALU	10305853.3	EP2418922	GB	Method to Minimize the POTS Splitter Impact on VDSL Performance	02.08.2010

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Stoll 2-2 (D)	ALU	04255714.0	EP1638228	FR	Method And Apparatus For Computing Virtual Concatenation Group Bandwidth Data	20.09.2004
Stoll 2-2 (D)	ALU	04255714.0	EP1638228	DE	Method And Apparatus For Computing Virtual Concatenation Group Bandwidth Data	20.09.2004
Stoll 2-2 (D)	ALU	04255714.0	EP1638228	GB	Method And Apparatus For Computing Virtual Concatenation Group Bandwidth Data	20.09.2004
812991	ALU	13/738361	US9722498	US	Control Circuit For Switching Power Converters With Synchronous Rectifiers	10.01.2013
134092	ALU	02022625.4	EP1303086	FR	A hierarchical protocol classification engine with integrated support for network address translation, firewall decision and quality of service (QoS) tagging	09.10.2002
134092	ALU	02022625.4	EP1303086	DE	A hierarchical protocol classification engine with integrated support for network address translation, firewall decision and quality of service (QoS) tagging	09.10.2002
134092	ALU	02022625.4	EP1303086	GB	A hierarchical protocol classification engine with integrated support for network address translation, firewall decision and quality of service (QoS) tagging	09.10.2002
Rao 28 (AM)	ALU	08835872.6	EP2198662	FR	A Method And Apparatus For A Coordinated Scheduling Method To Avoid Multiplexing Of Control And Data For Power Limited Users In The LTE Reverse Link	24.09.2008
Rao 28 (AM)	ALU	08835872.6	EP2198662	DE	A Method And Apparatus For A Coordinated Scheduling Method To Avoid Multiplexing Of Control And Data For Power Limited Users In The LTE Reverse Link	24.09.2008
Rao 28 (AM)	ALU	08835872.6	EP2198662	GB	A Method And Apparatus For A Coordinated Scheduling Method To Avoid Multiplexing Of Control And Data For Power Limited Users In The LTE Reverse Link	24.09.2008
805667	ALU	09306265.1	EP2337268	FR	OTN Tandem Connection Alarm Localization enhancement	18.12.2009
805667	ALU	09306265.1	EP2337268	DE	OTN Tandem Connection Alarm Localization enhancement	18.12.2009
805667	ALU	09306265.1	EP2337268	GB	OTN Tandem Connection Alarm Localization enhancement	18.12.2009
Buddhikot 16-1 (MM)	ALU	08834074.0	EP2196043	FR	Method And Apparatus for Authenticating Nodes In A Wireless Network	23.09.2008
Buddhikot 16-1 (MM)	ALU	08834074.0	EP2196043	DE	Method And Apparatus for Authenticating Nodes In A Wireless Network	23.09.2008
Buddhikot 16-1 (MM)	ALU	08834074.0	EP2196043	GB	Method And Apparatus for Authenticating Nodes In A Wireless Network	23.09.2008
806149	ALU	13/808048		US	Loyalty-Based QoS Upgrade	02.07.2010
813044	ALU	13290028.3		EP	Feed-Back Filter With Broad Transmission Zero	14.02.2013
803277	ALU	08291206.4	EP2200185	FR	PREJOINING: ANTICIPATING THE ACTIVATION OF A DSL LINE	18.12.2008
803277	ALU	08291206.4	EP2200185	DE	PREJOINING: ANTICIPATING THE ACTIVATION OF A DSL LINE	18.12.2008
803277	ALU	08291206.4	EP2200185	GB	PREJOINING: ANTICIPATING THE ACTIVATION OF A DSL LINE	18.12.2008
807034	ALU	201180042237.0	ZL201180042237.0	CN	Method And Apparatus For Restoring A Connection Through A Provider Network Upon Request	03.08.2011
807034	ALU	2013526386	JP5567213	JP	Method And Apparatus For Restoring A Connection Through A Provider Network Upon Request	03.08.2011
807034	ALU	1020137007128	KR10-1444684	KR	Method And Apparatus For Restoring A Connection Through A Provider Network Upon Request	03.08.2011
807034	ALU	13/814414		US	Method And Apparatus For Restoring A Connection Through A Provider Network Upon Request	03.08.2011
805420	ALU	201180032447.1	ZL201180032447.1	CN	Optical fiber coupling by bonding with optoelectronic components	01.07.2011
805420	ALU	11736025.5		EP	Optical fiber coupling by bonding with optoelectronic components	01.07.2011
805420	ALU	2013517314	JP5755327	JP	Optical fiber coupling by bonding with optoelectronic components	01.07.2011
805420	ALU	2012005661		MY	Optical fiber coupling by bonding with optoelectronic components	01.07.2011
805420	ALU	20137002698	KR101437797	KR	Optical fiber coupling by bonding with optoelectronic components	01.07.2011
805420	ALU	13/806484	US8998510	US	Optical fiber coupling by bonding with optoelectronic components	01.07.2011
807602	ALU	201180033051.9	ZL201180033051.9	CN	"Mobile Touch" - A Cellular Short Range Mobile Phone Sensor System	16.06.2011
807602	ALU	2013517062	JP5907960	JP	"Mobile Touch" - A Cellular Short Range Mobile Phone Sensor System	16.06.2011
807672	ALU	2013527529	JP5670573	JP	Method for Efficient Implementation of Phantom Mode	16.08.2011
807672	ALU	10-2013-7009114	KR101419693	KR	Method for Efficient Implementation of Phantom Mode	16.08.2011
807672	ALU	13/816856	US8773178	US	Method for Efficient Implementation of Phantom Mode	16.08.2011
807780	ALU	2013529558	JP5681289	JP	Control Of Femtocell Sleep-Modes Through Radio Transmissions Of Underlay Macrocell Base Stations	04.08.2011
807780	ALU	20137009692	KR101507721	KR	Control Of Femtocell Sleep-Modes Through Radio Transmissions Of Underlay Macrocell Base Stations	04.08.2011

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
807780	ALU	13/825480	US9179403	US	Control Of Femtocell Sleep-Modes Through Radio Transmissions Of Underlay Macrocell Base Stations	04.08.2011
807320	ALU	2013-520182	JP5670567	JP	Wireless Internet Connection Green, Secure and Without Potential Health Impact	13.07.2011
808659	ALU	2013538726	JP5625121	JP	Prioritizing Forwarding Table Updates In OSPF Routers Based On MPLS Paths	05.10.2011
808659	ALU	20137012121	KR101457317	KR	Prioritizing Forwarding Table Updates In OSPF Routers Based On MPLS Paths	05.10.2011
808661	ALU	11770965.9		EP	Lookahead Computation Of Routing Information	03.10.2011
808661	ALU	2013538723	JP5622942	JP	Lookahead Computation Of Routing Information	03.10.2011
808661	ALU	20137012207	KR101463364	KR	Lookahead Computation Of Routing Information	03.10.2011
807067	ALU	2013-520072	JP5542240	JP	Self-cleaning Rules	14.07.2011
807067	ALU	2013-7003999	KR101457314	KR	Self-cleaning Rules	14.07.2011
813042	ALU	13305667.1		EP	Crosstalk Channel Estimation In An Over-subscribed FTU-O Module	23.05.2013
812880	ALU	1028/DEL/2013		IN	Dynamic Selection Of Bandwidth Mode By The User In GPON Access Networks	05.04.2013
806149	ALU	201080067887.6	ZL201080067887.6	CN	Loyalty-Based QoS Upgrade	02.07.2010
813217	ALU	13290109.1		EP	Improved Energy Management System For Uninterrupted Power Supply Using Universal Electrical Storage Device	17.05.2013
811041	ALU	102101494	TW516187	TW	Detachable base station	15.01.2013
807117	ALU	10290354.9	EP2403183	FR	Innovative Network Management Systems to increase energy efficiency	30.06.2010
807117	ALU	10290354.9	EP2403183	DE	Innovative Network Management Systems to increase energy efficiency	30.06.2010
807117	ALU	10290354.9	EP2403183	GB	Innovative Network Management Systems to increase energy efficiency	30.06.2010
813299	ALU	13306148.1		EP	Packet add/dropp multiplexer node architecture for colored WDM packets	13.08.2013
813316	ALU	13305249.8		EP	Frequency Offset QAM Transmission System	05.03.2013
					SCHEDULING OF DATA BURSTS IN A BURST SWITCHING COMMUNICATION NETWORK	
812829	ALU	13305341.3	EP2782273	EP		21.03.2013
813259	ALU	13305113.6	EP2763334	EP	All-optical resynchronization of a WDM optical packet ring	01.02.2013
812999	ALU	13305978.2		EP	Dynamic and context based distribution of Immersive Video conference processing	09.07.2013
812797	ALU	13305790.1		EP	A method to improve multimedia conference quality	11.06.2013
802719	ALU	08290078.8	EP2086130	FR	Coherent PolSK-PSK modulation format for improved tolerance to both linear and non linear effects.	29.01.2008
802719	ALU	08290078.8	EP2086130	DE	Coherent PolSK-PSK modulation format for improved tolerance to both linear and non linear effects.	29.01.2008
802719	ALU	08290078.8	EP2086130	GB	Coherent PolSK-PSK modulation format for improved tolerance to both linear and non linear effects.	29.01.2008
Aksyuk 56-17 (VA)	ALU	20133183	JP5484605	JP	Surface Plasmon Polariton Modulation	11.01.2013
807337	ALU	201180036501.X	ZL201180036501.X	CN	Bringing Up IPv6CP Between IP Pseudowire Service Access Point And Customer Equipment (CE) Service Access Point	20.07.2011
807337	ALU	2013521245	JP5602946	JP	Bringing Up IPv6CP Between IP Pseudowire Service Access Point And Customer Equipment (CE) Service Access Point	20.07.2011
808542	ALU	11767866.4		EP	Surveillance Video Router	27.09.2011
808542	ALU	2013534924	JP5931077	JP	Surveillance Video Router	27.09.2011
808542	ALU	20137010043	KR101473127	KR	Surveillance Video Router	27.09.2011
809005	ALU	20147003179	KR101596175	KR	System And Method For Powering Redundant Components	19.07.2012
					Identification And Separation Of Topology And Impairments Patterns From Vectoring Heatmap	
813520	ALU	13305290.2		EP		14.03.2013
807819	ALU	2013534311	JP5805775	JP	IEEE1588V2 Transparent clock DEVIation for layer violation avoidance (T-DEV)	19.10.2011
807819	ALU	20137012828	KR101488233	KR	IEEE1588V2 Transparent clock DEVIation for layer violation avoidance (T-DEV)	19.10.2011
807819	ALU	13/877547	US9491106	US	IEEE1588V2 Transparent clock DEVIation for layer violation avoidance (T-DEV)	19.10.2011
807510	ALU	11793929.8		EP	Method And Apparatus For Local Gateway Assignment In Wireless Networks	22.11.2011
807510	ALU	20137016750	KR101506923	KR	Method And Apparatus For Local Gateway Assignment In Wireless Networks	22.11.2011
813531	ALU	13290072.1		EP	Improving QoE In HTTP Adaptive Streaming With Efficient Usage Of Buffer Size	27.03.2013
806021	ALU	10290454.7	EP2424313	FR	Improved Cell Edge Throughput for E-DCH	25.08.2010

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PATENT
REEL: 043877 FRAME: 0385

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
806021	ALU	10290454.7	EP2424313	DE	Improved Cell Edge Throughput for E-DCH	25.08.2010
806021	ALU	10290454.7	EP2424313	GB	Improved Cell Edge Throughput for E-DCH	25.08.2010
810605	ALU	13/911325	US9167201	US	User-feedback Channel For Video Conferencing With A Portable Camera	06.06.2013
Bhatt 7-150-3 (JB)	ALU	13/791476	US8855689	US	Direct SMS Message Delivery Over Broadband Data Networks Through An SMS-C	08.03.2013
806994	ALU	201180052188.9	ZL201180052188.9	CN	Content Based VLAN Classification And Framework For Ethernet Network To Support Content Based Bridging	26.10.2011
808021	ALU	201180056889.X	ZL201180056889.X	CN	Implementation of an xDSL Access Cable Crosstalk Emulator Coupling Matrix	23.11.2011
808021	ALU	2013-541292	JP5707507	JP	Implementation of an xDSL Access Cable Crosstalk Emulator Coupling Matrix	23.11.2011
808021	ALU	10-2013-7016751	KR10-1529536	KR	Implementation of an xDSL Access Cable Crosstalk Emulator Coupling Matrix	23.11.2011
808021	ALU	13/878900	US9672136	US	Implementation of an xDSL Access Cable Crosstalk Emulator Coupling Matrix	23.11.2011
808693	ALU	201180059762.3	ZL201180059762.3	CN	Optimized Parallel Initialization Of G.vector Lines By Handshake Prolongation	07.12.2011
808693	ALU	2013-542525	JP5681812	JP	Optimized Parallel Initialization Of G.vector Lines By Handshake Prolongation	07.12.2011
808693	ALU	10-2013-7017813	KR10-1520313	KR	Optimized Parallel Initialization Of G.vector Lines By Handshake Prolongation	07.12.2011
808693	ALU	13/990330	US8958544	US	Optimized Parallel Initialization Of G.vector Lines By Handshake Prolongation	07.12.2011
808498	ALU	201180060560.0	ZL201180060560.0	CN	DSL Vectoring Stabilisation By Seamless Phase Out Of Excess Disturbers	07.12.2011
808498	ALU	2013-543650	JP5775169	JP	DSL Vectoring Stabilisation By Seamless Phase Out Of Excess Disturbers	07.12.2011
808498	ALU	1020137018425	KR10-1529537	KR	DSL Vectoring Stabilisation By Seamless Phase Out Of Excess Disturbers	07.12.2011
808498	ALU	13/990615	US9172427	US	DSL Vectoring Stabilisation By Seamless Phase Out Of Excess Disturbers	07.12.2011
809838	ALU	2012800291824	ZL2012800291824	CN	Efficient Point-To-Multipoint Architecture	04.06.2012
809838	ALU	2014-515130	JP5756885	JP	Efficient Point-To-Multipoint Architecture	04.06.2012
809838	ALU	10-2013-7033199	KR10-1521043	KR	Efficient Point-To-Multipoint Architecture	04.06.2012
809838	ALU	14/117954	US9313038	US	Efficient Point-To-Multipoint Architecture	04.06.2012
808502	ALU	20137024704	KR101493636	KR	Consulting interactive TV content for past programs	16.02.2012
808232	ALU	201280012262.9		CN	Automated video "tweeting"	08.03.2012
808232	ALU	2013-557098	JP5731677	JP	Automated video "tweeting"	08.03.2012
810133	ALU	2014525047	JP5878238	JP	Method And Apparatus For Comparing Videos	31.07.2012
810133	ALU	20147003319	KR101517750	KR	Method And Apparatus For Comparing Videos	31.07.2012
813612	ALU	13/890304	US9065748	US	Achieving Symmetrical Latency With TDM Circuit Emulated Service	09.05.2013
813613	ALU	13/899720	US9331804	US	Using Multiple Oscillators Across A Sub-Network For Improved Holdover	22.05.2013
806132	ALU	09306268.5	EP2337282	FR	Advertising IP-over-CLNP tunnels adjacencies in a dual environment	18.12.2009
806132	ALU	09306268.5	EP2337282	DE	Advertising IP-over-CLNP tunnels adjacencies in a dual environment	18.12.2009
806132	ALU	09306268.5	EP2337282	GB	Advertising IP-over-CLNP tunnels adjacencies in a dual environment	18.12.2009
805506	ALU	09306285.9	EP2337279	FR	Dual Attachment Coordinated Protection & Restoration	18.12.2009
805506	ALU	09306285.9	EP2337279	DE	Dual Attachment Coordinated Protection & Restoration	18.12.2009
805506	ALU	09306285.9	EP2337279	GB	Dual Attachment Coordinated Protection & Restoration	18.12.2009
808420	ALU	201180047571.5		CN	An Audio Source Locator And Tracker, A Method Of Directing A Camera To View An Audio Source And Video Conferencing Terminal	15.09.2011
813617	ALU	13/803910	US9344487	US	Method For Networking cPaaS Components For Application On-Boarding	14.03.2013
Bosch 29-1 (P)	ALU	13/768460	US8737358	US	Method For Providing Seamless Transition Between Networks Following Different Protocols	15.02.2013
102552	ALU	00403623.2	EP1124392	FR	Mixte terminal.	21.12.2000
102552	ALU	00403623.2	EP1124392	DE	Mixte terminal.	21.12.2000
102552	ALU	00403623.2	EP1124392	GB	Mixte terminal.	21.12.2000
813393	ALU	13305369.4		EP	IP TV commercial monitor	26.03.2013
Nuzman 12-13 (CJ)	ALU	07838678.6	EP2082541	FR	Admission Control Of Sessions With Preference Lists	21.09.2007
Nuzman 12-13 (CJ)	ALU	07838678.6	EP2082541	DE	Admission Control Of Sessions With Preference Lists	21.09.2007

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Nuzman 12-13 (CJ)	ALU	07838678.6	EP2082541	GB	Admission Control Of Sessions With Preference Lists	21.09.2007
803583	ALU	08305715.8	EP2180611	FR	Photonic Radio Transceiver	23.10.2008
803583	ALU	08305715.8	EP2180611	DE	Photonic Radio Transceiver	23.10.2008
803583	ALU	08305715.8	EP2180611	IT	Photonic Radio Transceiver	23.10.2008
803583	ALU	08305715.8	EP2180611	ES	Photonic Radio Transceiver	23.10.2008
803583	ALU	08305715.8	EP2180611	GB	Photonic Radio Transceiver	23.10.2008
813718	ALU	13/785231	US9369209	US	Flexible Optical Modulator For Advanced Modulation Formats	05.03.2013
813668	ALU	13/832842	US9154733	US	End To End Video Latency In A Realtime Video Conversation	15.03.2013
808209	ALU	201180054183.X	ZL201180054183X	CN	Multi-link (delay) Asymmetry Monitoring (MAM)	27.10.2011
808209	ALU	11776774.9	EP2641348	EP	Multi-link (delay) Asymmetry Monitoring (MAM)	27.10.2011
808209	ALU	2013538127	JP5658375	JP	Multi-link (delay) Asymmetry Monitoring (MAM)	27.10.2011
808209	ALU	20137011778	KR101481396	KR	Multi-link (delay) Asymmetry Monitoring (MAM)	27.10.2011
808209	ALU	13/825604	US8971357	US	Multi-link (delay) Asymmetry Monitoring (MAM)	27.10.2011
Bosch 29-1 (P)	ALU	MX/a/2013/001775	MX312807	MX	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
804560	ALU	09290741.9	EP2301635	FR	Method And Apparatus For Network Delay Equalization	29.09.2009
804560	ALU	09290741.9	EP2301635	DE	Method And Apparatus For Network Delay Equalization	29.09.2009
804560	ALU	09290741.9	EP2301635	GB	Method And Apparatus For Network Delay Equalization	29.09.2009
					Method For Connecting cPaaS Manager To Multiple Private Customer Networks	
813717	ALU	13/826322	US9342341	US		14.03.2013
801569	ALU	07290969.0	EP2023568	FR	Dual attachment & transport protection co-ordination	01.08.2007
801569	ALU	07290969.0	EP2023568	DE	Dual attachment & transport protection co-ordination	01.08.2007
801569	ALU	07290969.0	EP2023568	GB	Dual attachment & transport protection co-ordination	01.08.2007
813669	ALU	13157089.7		EP	Method To Improve Wireless Broadcast Performance Of Small Objects	27.02.2013
Khan 46 (FU)	ALU	201334763	JP5642216	JP	Cell Switching And Packet Combining In A Wireless Communication System	11.07.2005
135998	ALU	03014402.6	EP1377108	FR	LIGHTPATH SEGMENTATION METHOD	27.06.2003
135998	ALU	03014402.6	EP1377108	DE	LIGHTPATH SEGMENTATION METHOD	27.06.2003
135998	ALU	03014402.6	EP1377108	GB	LIGHTPATH SEGMENTATION METHOD	27.06.2003
Bosch 29-1 (P)	ALU	09758664.8	EP2289284	FR	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	09758664.8	EP2289284	DE	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	09758664.8	EP2289284	GB	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
811154	ALU	13158202.5		EP	Multi-screen usage control	07.03.2013
808826	ALU	2013543579	JP5671629	JP	Method For Routing In Name Based Networking	26.09.2011
808826	ALU	20137015340	KR101467720	KR	Method For Routing In Name Based Networking	26.09.2011
106463	ALU	07291183.7	EP2043313	FR	HOW TO IMPROVE THE BALANCE OF LATENCY ON TDM TRAFFIC VS. TRANSPORT EFFICIENCY	28.09.2007
106463	ALU	07291183.7	EP2043313	DE	HOW TO IMPROVE THE BALANCE OF LATENCY ON TDM TRAFFIC VS. TRANSPORT EFFICIENCY	28.09.2007
106463	ALU	07291183.7	EP2043313	GB	HOW TO IMPROVE THE BALANCE OF LATENCY ON TDM TRAFFIC VS. TRANSPORT EFFICIENCY	28.09.2007
813169	ALU	201310108750.6		CN	A New Method To Handle Call Forwarding To Establish Instant Communication	29.03.2013
807556	ALU	201180058915.2	ZL201180058915.2	CN	Combined Single-Ended Line Test Using both Reflectometry and Metallic Line Test	03.10.2011
137962	ALU	06809258.4	EP1929707	FR	Passive Real-Time Address Space Validation System	22.08.2006
137962	ALU	06809258.4	EP1929707	DE	Passive Real-Time Address Space Validation System	22.08.2006
805813	ALU	09290957.1	EP2337245	FR	Variable bitrate OFDM	17.12.2009
805813	ALU	09290957.1	EP2337245	DE	Variable bitrate OFDM	17.12.2009
800136	ALU	07301386.4	EP2040307	FR	HIGH SENSITIVITY SEPARATED ABSORPTION GRADING AND MULTIPLICATION AVALANCHE PHOTODIODE (SAGM APD) WITH INTRA-BAND QUANTUM-WELL INFRA-RED (QWIP) ABSORPTION LAYER	20.09.2007
800136	ALU	07301386.4	EP2040307	DE	HIGH SENSITIVITY SEPARATED ABSORPTION GRADING AND MULTIPLICATION AVALANCHE PHOTODIODE (SAGM APD) WITH INTRA-BAND QUANTUM-WELL INFRA-RED (QWIP) ABSORPTION LAYER	20.09.2007
800136	ALU	07301386.4	EP2040307	GB	HIGH SENSITIVITY SEPARATED ABSORPTION GRADING AND MULTIPLICATION AVALANCHE PHOTODIODE (SAGM APD) WITH INTRA-BAND QUANTUM-WELL INFRA-RED (QWIP) ABSORPTION LAYER	20.09.2007
813701	ALU	13290128.1		EP	Improvement Of Broadband Zero Reflection Type Filter Using Lumped Elements	10.06.2013

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PATENT
REEL: 043877 FRAME: 0387

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
806541	ALU	201180053339.2	ZL2011800533392	CN	PDM 3PSK modulation format for increase tolerance to non linear effects	17.10.2011
806541	ALU	11772944.2		EP	PDM 3PSK modulation format for increase tolerance to non linear effects	17.10.2011
806541	ALU	2013537058	JP5785620	JP	PDM 3PSK modulation format for increase tolerance to non linear effects	17.10.2011
806541	ALU	1020137011416	KR101542757	KR	PDM 3PSK modulation format for increase tolerance to non linear effects	17.10.2011
806541	ALU	13/877587	US9143154	US	PDM 3PSK modulation format for increase tolerance to non linear effects	17.10.2011
804899	ALU	10169009.7	EP2282430	FR	More flexible directionless OXC architecture optimized for coherent detection	09.07.2010
804899	ALU	10169009.7	EP2282430	DE	More flexible directionless OXC architecture optimized for coherent detection	09.07.2010
804899	ALU	10169009.7	EP2282430	GB	More flexible directionless OXC architecture optimized for coherent detection	09.07.2010
810652	ALU	201280061185.6	ZL201280061185.6	CN	Multimedia RTMP Streaming Real-time Up- And Downstream Quality Of Service Characterisation For Immersive Communications	06.12.2012
810652	ALU	3984/DELNP/2014		IN	Multimedia RTMP Streaming Real-time Up- And Downstream Quality Of Service Characterisation For Immersive Communications	06.12.2012
803310	ALU	08291020.9	EP2182759	FR	Flat IP architecture improvement	31.10.2008
803310	ALU	08291020.9	EP2182759	DE	Flat IP architecture improvement	31.10.2008
803310	ALU	08291020.9	EP2182759	GB	Flat IP architecture improvement	31.10.2008
806481	ALU	10305467.2	EP2383896	FR	Detection of Switching Power Supplies Impacting DSL Lines	30.04.2010
806481	ALU	10305467.2	EP2383896	DE	Detection of Switching Power Supplies Impacting DSL Lines	30.04.2010
806481	ALU	10305467.2	EP2383896	GB	Detection of Switching Power Supplies Impacting DSL Lines	30.04.2010
813307	ALU	13/921442		US	Dynamic Network Service Association and On Demand Service Provisioning	19.06.2013
813654	ALU	13290162.0		EP	Adaptive Intelligent Server For HTTP Based Panoramic Video	12.07.2013
813218	ALU	13305743.0		EP	HTTP Adaptive Streaming Monitoring Based On Multiple Session Processing And Retrieval-delay	04.06.2013
813288	ALU	13305819.8		EP	A TCP-friendly HTTP Adaptive Streaming Client	18.06.2013
813656	ALU	13290164.6		EP	Hierarchical Manifest Files For HTTP Adaptive Streaming Based Panoramic Video	12.07.2013
813560	ALU	14/063730		US	FM Transmitter In STBs Providing Music Channel Via IPTV Delivering Network To Radio Receivers	25.10.2013
807557	ALU	201180063993.1	ZL201180063993.1	CN	Automatic SELT/MELT Cross-Calibration	21.12.2011
807557	ALU	2013-546669	JP5759016	JP	Automatic SELT/MELT Cross-Calibration	21.12.2011
807557	ALU	20137019746	KR10-1478003	KR	Automatic SELT/MELT Cross-Calibration	21.12.2011
807557	ALU	13/995303	US9316715	US	Automatic SELT/MELT Cross-Calibration	21.12.2011
813545	ALU	13306176.2	EP2843967	EP	Hierarchical Scheduling In Optical Burst Switching Networks And Related Node Architecture	28.08.2013
813705	ALU	13290241.2		EP	Frequency-domain Sample Compression With Reduced Representation Based On Reference Loop	08.10.2013
813699	ALU	13290227.1	EP2852067	EP	Successive Distributed Vectoring	23.09.2013
813708	ALU	13305970.9	EP2824844	EP	Method For The Detection Of Line Unbalance, Based On Hlog Measurement	08.07.2013
813581	ALU	13306308.1		EP	Small Cell DCCH Diversity To Improve Handover Success Rates	25.09.2013
808814	ALU	201280015563.7	ZL201280015563.7	CN	Managing Data File Transmission	22.03.2012
808814	ALU	12711328.0		EP	Managing Data File Transmission	22.03.2012
808814	ALU	2014502635	JP5833737	JP	Managing Data File Transmission	22.03.2012
808814	ALU	20137028519	KR101495560	KR	Managing Data File Transmission	22.03.2012
813648	ALU	14/230501		US	Distributed Collaborative Offline Charging System	31.03.2014
813719	ALU	13/859367	US9374236	US	System And Method For Improving Network Efficiency Using MVPN Site-Type Attribute	09.04.2013
808309	ALU	201280006549.0	ZL2012800065490	CN	IEEE 1588V2 Transparent clock On-Demand (TOD)	27.01.2012
808309	ALU	2013552900	JP5661951	JP	IEEE 1588V2 Transparent clock On-Demand (TOD)	27.01.2012
808309	ALU	20137020174	KR101426325	KR	IEEE 1588V2 Transparent clock On-Demand (TOD)	27.01.2012
808309	ALU	13/993122	US9258073	US	IEEE 1588V2 Transparent clock On-Demand (TOD)	27.01.2012
808852	ALU	20137017739	KR101556513	KR	Detecting Duplicated Videos With Insertion/Deletion/Substitution By Sequence Matching	04.01.2012
807593	ALU	201180061331.0		CN	Automatic Video Image Annotation	14.12.2011
808959	ALU	20137016309	KR101726475	KR	Integrated Video Monitoring Planning, Camera Configuration & Calibration For CCTV Deployment	21.12.2011

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PATENT
REEL: 043877 FRAME: 0388

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
808959	ALU	13/995713		US	Integrated Video Monitoring Planning, Camera Configuration & Calibration For CCTV Deployment	21.12.2011
808626	ALU	201180061736.4	ZL201180061736.4	CN	Integrated Video Monitoring Planning, Camera Configuration & Calibration For CCTV Deployment	21.12.2011
800739	ALU	07291176.1	EP2043193	FR	A highly stable high performance VSWR detector	28.09.2007
800739	ALU	07291176.1	EP2043193	DE	A highly stable high performance VSWR detector	28.09.2007
800739	ALU	07291176.1	EP2043193	GB	A highly stable high performance VSWR detector	28.09.2007
Bejerano 14-10-9-8 (Y)	ALU	05257702.0	EP1677459	FR	Methods And Devices For Associating A Mobile Device To Access Points Within A WLAN	15.12.2005
Bejerano 14-10-9-8 (Y)	ALU	05257702.0	EP1677459	DE	Methods And Devices For Associating A Mobile Device To Access Points Within A WLAN	15.12.2005
Bejerano 14-10-9-8 (Y)	ALU	05257702.0	EP1677459	GB	Methods And Devices For Associating A Mobile Device To Access Points Within A WLAN	15.12.2005
807760	ALU	10306313.7	EP2458761	FR	Node architecture for slotted packet optical add-drop multiplexed networks	29.11.2010
807760	ALU	10306313.7	EP2458761	DE	Node architecture for slotted packet optical add-drop multiplexed networks	29.11.2010
807760	ALU	10306313.7	EP2458761	GB	Node architecture for slotted packet optical add-drop multiplexed networks	29.11.2010
811701	ALU	102117751	TW511476	TW	eOTDR Crosstalk Mitigation Through Digital Signal Processing	20.05.2013
Garay 13-4-24 (JA)	ALU	13/894581	US8799679	US	Message Authentication Code Pre-Computation With Application To Secure Memory	15.05.2013
808758	ALU	201280007793.9		CN	Dynamic HAS Caching Algorithms	02.02.2012
808758	ALU	2013552200	JP5747090	JP	Dynamic HAS Caching Algorithms	02.02.2012
808758	ALU	2013-7020783	KR101556453	KR	Dynamic HAS Caching Algorithms	02.02.2012
807747	ALU	11843717.7		EP	Authentication Based Multi-player On-line Video Game System	14.10.2011
807747	ALU	14/004200	US9380049	US	Authentication Based Multi-player On-line Video Game System	14.10.2011
808442	ALU	201180059489.4	ZL201180059489.4	CN	Resource Profile Adjustment For Pre-Fetching Of Assets To User Equipment	06.12.2011
808442	ALU	11837313.3		EP	Resource Profile Adjustment For Pre-Fetching Of Assets To User Equipment	06.12.2011
121308	ALU	06292015.2	EP1936826	FR	PSD SHAPING AT REMOTE TERMINALS BY NOISE INJECTION.	20.12.2006
121308	ALU	06292015.2	EP1936826	DE	PSD SHAPING AT REMOTE TERMINALS BY NOISE INJECTION.	20.12.2006
121308	ALU	06292015.2	EP1936826	GB	PSD SHAPING AT REMOTE TERMINALS BY NOISE INJECTION.	20.12.2006
Kisel 10-11-3 (A)	ALU	08290051.5	EP2081362	FR	Resource Arbitration In A Converged Multi-Media Environment	21.01.2008
Kisel 10-11-3 (A)	ALU	08290051.5	EP2081362	DE	Resource Arbitration In A Converged Multi-Media Environment	21.01.2008
Kisel 10-11-3 (A)	ALU	08290051.5	EP2081362	GB	Resource Arbitration In A Converged Multi-Media Environment	21.01.2008
814195	ALU	12/636435	US8578491	US	Network Based Malware Detection And Reporting	11.12.2009
814198	ALU	12/714202		US	Method And Apparatus For Content Targeting One User Group Based On Behavioral Profiling Of Another User Group	26.02.2010
814201	ALU	13/083501	US8635697	US	Method And System For Operating System Identification In A Network Based Security Monitoring Solution	08.04.2011
814202	ALU	13/077696	US8489523	US	Categorization Automation	31.03.2011
810688	ALU	201280051465.9		CN	NAI Subscription-Id Hint Bit Handling	17.10.2012
810688	ALU	12842234.2		EP	NAI Subscription-Id Hint Bit Handling	17.10.2012
810688	ALU	2403/CHENP/2014		IN	NAI Subscription-Id Hint Bit Handling	17.10.2012
810688	ALU	2014536077	JP5816759	JP	NAI Subscription-Id Hint Bit Handling	17.10.2012
810688	ALU	20147010236	KR101575551	KR	NAI Subscription-Id Hint Bit Handling	17.10.2012
808258	ALU	201280009759.5	ZL201280009759.5	CN	Automatic Capture of the network Delay Component (AC-DC)	01.02.2012
808258	ALU	2013552189	JP5779664	JP	Automatic Capture of the network Delay Component (AC-DC)	01.02.2012
808258	ALU	20137023244	KR101504055	KR	Automatic Capture of the network Delay Component (AC-DC)	01.02.2012
808258	ALU	13/982622	US9413625	US	Automatic Capture of the network Delay Component (AC-DC)	01.02.2012
807784	ALU	2013553885	JP5789679	JP	Energy Efficient Cross-Layer Packet-Processing Unit	10.02.2012
807985	ALU	201280005405.3	ZL201280005405.3	CN	Single Early Discard for Reduced Delay in Network Buffers	05.01.2012
807985	ALU	2013549466	JP5676780	JP	Single Early Discard for Reduced Delay in Network Buffers	05.01.2012
807985	ALU	20137018144	KR101493632	KR	Single Early Discard for Reduced Delay in Network Buffers	05.01.2012
803437	ALU	09164223.1	EP2141842	FR	Lower WSS-consuming OXC architecture optimized for high connectivity	30.06.2009
803437	ALU	09164223.1	EP2141842	DE	Lower WSS-consuming OXC architecture optimized for high connectivity	30.06.2009
803437	ALU	09164223.1	EP2141842	GB	Lower WSS-consuming OXC architecture optimized for high connectivity	30.06.2009
807888	ALU	2013541268	JP5717868	JP	Tunnel Follow-Up Message For Transparent Clock (TFM4TC)	25.10.2011
807888	ALU	20137017078	KR101504854	KR	Tunnel Follow-Up Message For Transparent Clock (TFM4TC)	25.10.2011
807888	ALU	13/990300	US9608750	US	Tunnel Follow-Up Message For Transparent Clock (TFM4TC)	25.10.2011

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
805280	ALU	09290907.6	EP2330746	FR	Energy saving by intelligent interaction of RRM and Transceiver Unit	04.12.2009
805280	ALU	09290907.6	EP2330746	DE	Energy saving by intelligent interaction of RRM and Transceiver Unit	04.12.2009
805280	ALU	09290907.6	EP2330746	GB	Energy saving by intelligent interaction of RRM and Transceiver Unit	04.12.2009
802861	ALU	08290172.9	EP2093969	FR	Multi-layer profile architecture for H.248 controlled Media Gateways	21.02.2008
802861	ALU	08290172.9	EP2093969	DE	Multi-layer profile architecture for H.248 controlled Media Gateways	21.02.2008
802861	ALU	08290172.9	EP2093969	GB	Multi-layer profile architecture for H.248 controlled Media Gateways	21.02.2008
813942	ALU	13305930.3		EP	Dynamic Service Deployment Optimisation Using Observed Target Behaviour	01.07.2013
Das 19-17-41 (\$)	ALU	102116611	TW514804	TW	Methods Of Reverse Link Power Control	16.02.2007
Das 19-17-41 (\$)	ALU	102116610	TW1478522	TW	Methods Of Reverse Link Power Control	16.02.2007
806400	ALU	10305309.6	EP2375376	FR	Camera Calibration Using Projective Geometry Constrained, Similarity Invariant Search Spaces	26.03.2010
806400	ALU	10305309.6	EP2375376	DE	Camera Calibration Using Projective Geometry Constrained, Similarity Invariant Search Spaces	26.03.2010
806400	ALU	10305309.6	EP2375376	GB	Camera Calibration Using Projective Geometry Constrained, Similarity Invariant Search Spaces	26.03.2010
804293	ALU	10715430.4	EP2425591	FR	Per Flow Packet Flooding Control at Egress PE on MPLS Domain	16.04.2010
804293	ALU	10715430.4	EP2425591	DE	Per Flow Packet Flooding Control at Egress PE on MPLS Domain	16.04.2010
804293	ALU	10715430.4	EP2425591	GB	Per Flow Packet Flooding Control at Egress PE on MPLS Domain	16.04.2010
811051	ALU	13700818.1		EP	Reducing Latency And Cost In Resilient Cloud File Systems	09.01.2013
803143	ALU	08007355.4	EP2110970	FR	Embedded OTDR applying binary test patterns	15.04.2008
803143	ALU	08007355.4	EP2110970	DE	Embedded OTDR applying binary test patterns	15.04.2008
803143	ALU	08007355.4	EP2110970	GB	Embedded OTDR applying binary test patterns	15.04.2008
804943	ALU	09306263.6	EP2337267	FR	3D User Interface for Element Network Management	18.12.2009
804943	ALU	09306263.6	EP2337267	DE	3D User Interface for Element Network Management	18.12.2009
804943	ALU	09306263.6	EP2337267	GB	3D User Interface for Element Network Management	18.12.2009
807973	ALU	11150135.9	EP2472753	FR	Method And Architecture For Optical Fiber Automated Temporal Asymmetry Direct Measurement And Absolute Round Trip Delay Measurement.	04.01.2011
807973	ALU	11150135.9	EP2472753	DE	Method And Architecture For Optical Fiber Automated Temporal Asymmetry Direct Measurement And Absolute Round Trip Delay Measurement.	04.01.2011
807973	ALU	11150135.9	EP2472753	GB	Method And Architecture For Optical Fiber Automated Temporal Asymmetry Direct Measurement And Absolute Round Trip Delay Measurement.	04.01.2011
814227	ALU	13305852.9	EP2816859	EP	Method for CQI Feedback management for Multicarrier based Systems	21.06.2013
813330	ALU	13306300.8		EP	Conference Switching	24.09.2013
814293	ALU	13305811.5		EP	Spurious Apparatus Detection Mechanism In Reverse Power Networks	17.06.2013
805512	ALU	2013123414	JP5587467	JP	Receiver For Optical Transverse-Mode-Multiplexed Signals	12.06.2013
808021	ALU	10306316.0	EP2458742	FR	Implementation of an xDSL Access Cable Crosstalk Emulator Coupling Matrix	30.11.2010
808021	ALU	10306316.0	EP2458742	DE	Implementation of an xDSL Access Cable Crosstalk Emulator Coupling Matrix	30.11.2010
808021	ALU	10306316.0	EP2458742	GB	Implementation of an xDSL Access Cable Crosstalk Emulator Coupling Matrix	30.11.2010
806776	ALU	10168440.5	EP2405587	FR	Ringing Phase Echo Cancellation	05.07.2010
806776	ALU	10168440.5	EP2405587	DE	Ringing Phase Echo Cancellation	05.07.2010
806776	ALU	10168440.5	EP2405587	GB	Ringing Phase Echo Cancellation	05.07.2010
814385	ALU	13/937182		US	Alcatel-Lucent Service Portal - Security Encryption Management	08.07.2013
814283	ALU	13/951129	US9253514	US	Trigger 911 SMS Using IPTV Infrastructure	25.07.2013
803751	ALU	09768029.2	EP2377256	FR	On-Node Frequency Support and Time distribution protocol inter-working	07.12.2009
803751	ALU	09768029.2	EP2377256	DE	On-Node Frequency Support and Time distribution protocol inter-working	07.12.2009
803751	ALU	09768029.2	EP2377256	GB	On-Node Frequency Support and Time distribution protocol inter-working	07.12.2009
808299	ALU	2014-503111	JP5781683	JP	Adaptive Generation of Optimal DSLAM Service & Spectrum Profiles	03.04.2012
808299	ALU	10-2013-7029490	KR101544301	KR	Adaptive Generation of Optimal DSLAM Service & Spectrum Profiles	03.04.2012
808299	ALU	14/005358	US9270615	US	Adaptive Generation of Optimal DSLAM Service & Spectrum Profiles	03.04.2012
814491	ALU	13306019.4		EP	Flexible Multimedia Descriptor For Adaptive Media Playback	16.07.2013

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
806967	ALU	10305625.5	EP2395711	FR	A Combined Connectivity - Betweenness Centrality Metric For Path-Vector Routing	11.06.2010
806967	ALU	10305625.5	EP2395711	DE	A Combined Connectivity - Betweenness Centrality Metric For Path-Vector Routing	11.06.2010
806967	ALU	10305625.5	EP2395711	GB	A Combined Connectivity - Betweenness Centrality Metric For Path-Vector Routing	11.06.2010
Bu 6-6-40 (T)	ALU	2012173597	JP5506871	JP	Methods And Devices For Defending A 3G Wireless Network Against Malicious Attacks	15.12.2006
Graybeal 4-17 (JM)	ALU	09700322.2	EP2245763	FR	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	09700322.2	EP2245763	DE	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	09700322.2	EP2245763	IT	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	09700322.2	EP2245763	ES	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
Graybeal 4-17 (JM)	ALU	09700322.2	EP2245763	GB	Realizing FDD Capability By Leveraging Existing TDD Technology	06.01.2009
102456	ALU	00942171.0	EP1145378	FR	Miniature T-patch antenna.	08.06.2000
102456	ALU	00942171.0	EP1145378	DE	Miniature T-patch antenna.	08.06.2000
102456	ALU	00942171.0	EP1145378	GB	Miniature T-patch antenna.	08.06.2000
808155	ALU	11360002.7	EP2475095	FR	Novel 3-Way Doherty Architecture For Optimum Cost And Performance	07.01.2011
808155	ALU	11360002.7	EP2475095	DE	Novel 3-Way Doherty Architecture For Optimum Cost And Performance	07.01.2011
808155	ALU	11360002.7	EP2475095	GB	Novel 3-Way Doherty Architecture For Optimum Cost And Performance	07.01.2011
Namjoshi 5-18 (KS)	ALU	14/165620	US9083731	US	Method And Apparatus For Pattern Matching For Intrusion Detection/Prevention Systems	28.01.2014
137443	ALU	02293210.7	EP1333624	FR	OAM CONTINUITY CHECK (OAM CC)	23.12.2002
137443	ALU	02293210.7	EP1333624	DE	OAM CONTINUITY CHECK (OAM CC)	23.12.2002
137443	ALU	02293210.7	EP1333624	GB	OAM CONTINUITY CHECK (OAM CC)	23.12.2002
804031	ALU	09786471.4	EP2422468	FR	Add and Drop Elements for an NTP On-path-Support (ADES)	21.04.2009
804031	ALU	09786471.4	EP2422468	DE	Add and Drop Elements for an NTP On-path-Support (ADES)	21.04.2009
804031	ALU	09786471.4	EP2422468	GB	Add and Drop Elements for an NTP On-path-Support (ADES)	21.04.2009
809355	ALU	201280018535.0	ZL201280018535.0	CN	Condensed Core-Energy-Efficient Architecture For Wan IP Backbones	11.04.2012
809355	ALU	12716909.2		EP	Condensed Core-Energy-Efficient Architecture For Wan IP Backbones	11.04.2012
809293	ALU	11305409.2	EP2509250	FR	Remote Coupling of Phantom Signals (inclusive implementation schemes and optimisations)	08.04.2011
809293	ALU	11305409.2	EP2509250	DE	Remote Coupling of Phantom Signals (inclusive implementation schemes and optimisations)	08.04.2011
809293	ALU	11305409.2	EP2509250	GB	Remote Coupling of Phantom Signals (inclusive implementation schemes and optimisations)	08.04.2011
807599	ALU	2013547937	JP5711387	JP	Efficient Video Duplication Detection	04.01.2012
807599	ALU	20137017701	KR101548438	KR	Efficient Video Duplication Detection	04.01.2012
813762	ALU	13306301.6		EP	Privacy-Preserving Location Area Delivery Based On Multi-Location K-Anonymity	24.09.2013
813354	ALU	201410042946.4		CN	High Availability Online Charging Solution For Always On IP Connectivity	29.01.2014
813890	ALU	13306863.5		EP	Processing free switch for efficient adaptive WDM transponder	26.12.2013
800285	ALU	07842899.2	EP2067347	FR	System and Methods for Implementing Generalized Conferencing	20.09.2007
800285	ALU	07842899.2	EP2067347	DE	System and Methods for Implementing Generalized Conferencing	20.09.2007
800285	ALU	07842899.2	EP2067347	GB	System and Methods for Implementing Generalized Conferencing	20.09.2007
814472	ALU	14305147.2	EP2903185	EP	Optical amplifier architecture for spatial division multiplexing	03.02.2014
814130	ALU	13306311.5		EP	Method For Authentication Of A Transport Network Data Container	25.09.2013
814035	ALU	13306194.5	EP2843926	EP	Using POTS To Startup A Reversed Powered Device	03.09.2013
814348	ALU	13306636.5		EP	Vectoring Performance Estimation In Vectoring Systems	29.11.2013
814356	ALU	13290258.6	EP2866398	EP	Combined Ethernet Interface Protection And OTH/SDH Path Protection Mechanism	28.10.2013
814082	ALU	14/037706	US9318410	US	Chip Heatspreader	26.09.2013
814135	ALU	14/034924	US9445259	US	Method Of Providing Services Only To Service Provider Certified Devices	24.09.2013
813271	ALU	13306155.6		EP	Post Compensation For Analog-Digital-Converter With Pulse-Width-Modulation	16.08.2013
813642	ALU	13306639.9		EP	Training Sequence Scheme For Inhibiting RF-PA Dynamic Effects	29.11.2013

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
801597	ALU	09155742.1	EP2107752	FR	Mobile and Wired Phone convergence in residential WiFi coverage	20.03.2009
801597	ALU	09155742.1	EP2107752	DE	Mobile and Wired Phone convergence in residential WiFi coverage	20.03.2009
801597	ALU	09155742.1	EP2107752	GB	Mobile and Wired Phone convergence in residential WiFi coverage	20.03.2009
814360	ALU	14/185479		US	Method For Fiber Based HPOA Input Loss Safeguarding	20.02.2014
121022	ALU	13/941698		US	HOME IP PLUG CONTROLLER.	15.07.2013
814091	ALU	15306081.9		EP	Semi-insulating Buried Heterostructure with dual current blocking layer for Photonic Integrated Circuits	02.07.2015
813768	ALU	13306559.9		EP	Transparent Content Origin	14.11.2013
813611	ALU	14157955.7		EP	Wire-Speed Pending Interest Table	05.03.2014
813957	ALU	14/043534	US9445411	US	Low Power CTS-To-Sell To Prevent Starvation In WiFi Networks	01.10.2013
809227	ALU	201280036766.4	ZL201280036766.4	CN	Bootstrapping Fault Detection Sessions Over A P2MP Tunnel	10.07.2012
809227	ALU	12737447.8		EP	Bootstrapping Fault Detection Sessions Over A P2MP Tunnel	10.07.2012
813281	ALU	13190700.8		EP	Tunable Open Cavity Filters	29.10.2013
805935	ALU	14/038951	US8849827	US	Method And Apparatus For Automatically Tagging Content	27.09.2013
800507	ALU	07291122.5	EP2040398	FR	Adaptive memory length for signal processing : application to coherent detection of optical signal	21.09.2007
800507	ALU	07291122.5	EP2040398	DE	Adaptive memory length for signal processing : application to coherent detection of optical signal	21.09.2007
800507	ALU	07291122.5	EP2040398	GB	Adaptive memory length for signal processing : application to coherent detection of optical signal	21.09.2007
808797	ALU	201180069943.4	ZL201180069943.4	CN	A Novel QoS Aware Multi-radio Access Point over TV Whitespaces.	08.04.2011
808797	ALU	11728388.7		EP	A Novel QoS Aware Multi-radio Access Point over TV Whitespaces.	08.04.2011
808797	ALU	2014-503221	JP5686926	JP	A Novel QoS Aware Multi-radio Access Point over TV Whitespaces.	08.04.2011
808797	ALU	10-2013-7029424	KR101538913	KR	A Novel QoS Aware Multi-radio Access Point over TV Whitespaces.	08.04.2011
814725	ALU	13290185.1		EP	Method For Congestion Control	02.08.2013
808188	ALU	11305206.2	EP2493084	FR	Method for Cancelling Crosstalk Towards Uncontrolled Lines	25.02.2011
808188	ALU	11305206.2	EP2493084	DE	Method for Cancelling Crosstalk Towards Uncontrolled Lines	25.02.2011
808188	ALU	11305206.2	EP2493084	GB	Method for Cancelling Crosstalk Towards Uncontrolled Lines	25.02.2011
804783	ALU	09290491.1	EP2273700	FR	Burst mode optical coherent mixer with fast adaptation	25.06.2009
804783	ALU	09290491.1	EP2273700	DE	Burst mode optical coherent mixer with fast adaptation	25.06.2009
804783	ALU	09290491.1	EP2273700	GB	Burst mode optical coherent mixer with fast adaptation	25.06.2009
Riazi 4-12-4 (H)	ALU	00307622.1	EP1087585	FR	Method And Apparatus For Identifying An Orthogonal Frequency Division Multiplexing (OFDM) Terrestrial Repeater Using Inactive Sub-Carriers	04.09.2000
Riazi 4-12-4 (H)	ALU	00307622.1	EP1087585	DE	Method And Apparatus For Identifying An Orthogonal Frequency Division Multiplexing (OFDM) Terrestrial Repeater Using Inactive Sub-Carriers	04.09.2000
Riazi 4-12-4 (H)	ALU	00307622.1	EP1087585	GB	Method And Apparatus For Identifying An Orthogonal Frequency Division Multiplexing (OFDM) Terrestrial Repeater Using Inactive Sub-Carriers	04.09.2000
809624	ALU	201280023157.5		CN	HAS Session Reconstruction (HAS-SR)	07.05.2012
809624	ALU	14/117696	US8973077	US	HAS Session Reconstruction (HAS-SR)	07.05.2012
814836	ALU	13/963204		US	New Methodology For LTE Congestion Alert -User Experience KPIs Based LTE Congestion Detection Method	09.08.2013
814863	ALU	13/959083	US9538482	US	Methods Of Reverse Link Power Control	05.08.2013
814654	ALU	13306240.6		EP	Data Transport Using Digital Fountain Codes With Reduced Latency, Complexity And Buffer Requirements	10.09.2013
814675	ALU	14/143120	US9722861	US	Fault-Resilient Broadcast, Multicast, and Unicast Services	30.12.2013
814499	ALU	14305398.1	EP2922226	EP	Packet power and phase detector for slotted rings	20.03.2014
814163	ALU	14/147100		US	Override R-Rated Intervals Of VoD Streaming Based On User Preference	03.01.2014
814381	ALU	14305006.0		EP	Determining Overall CDN Hit/Miss Without Log Correlation	06.01.2014
814295	ALU	14305654.7		EP	Customizable collaboration background	02.05.2014
814741	ALU	13306711.6		EP	MRF architecture for low cost videoconferencing to IMS users	12.12.2013
814468	ALU	13306398.2	EP2860933	EP	Method and apparatus for optimizing the personalized delivery of multiple media by maximizing the value of the pool of contents	10.10.2013
814732	ALU	14/188845	US9363814	US	Rate Allocation Mechanism For Optimization Of Adaptive Wireless Video Streaming	25.02.2014
803035	ALU	08290959.9	EP2175667	FR	7TH ORDER UNIVERSAL ISDN/POTS SPLITTER	10.10.2008
803035	ALU	08290959.9	EP2175667	DE	7TH ORDER UNIVERSAL ISDN/POTS SPLITTER	10.10.2008

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EXHIBIT A

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
803035	ALU	08290959.9	EP2175667	GB	7TH ORDER UNIVERSAL ISDN/POTS SPLITTER	10.10.2008
Gabler 4-1 (K)	ALU	06774391.4	EP1900244	FR	Method And Apparatus For Identifying And Tracking Target Subscribers In A Universal Mobile Telephone System	29.06.2006
Gabler 4-1 (K)	ALU	06774391.4	EP1900244	DE	Method And Apparatus For Identifying And Tracking Target Subscribers In A Universal Mobile Telephone System	29.06.2006
Gabler 4-1 (K)	ALU	06774391.4	EP1900244	GB	Method And Apparatus For Identifying And Tracking Target Subscribers In A Universal Mobile Telephone System	29.06.2006
814978	ALU	14/058413		US	Two Stage Anti Affinity Placement For Cloud Based Applications	21.10.2013
809019	ALU	2014526072	JP5805320	JP	Method And Apparatus For Controlling Wireless Uplink Sessions	08.08.2012
809019	ALU	20147003369	KR101518799	KR	Method And Apparatus For Controlling Wireless Uplink Sessions	08.08.2012
807262	ALU	201280027530.4	ZL201280027530.4	CN	System, Apparatus And Method For Address Management In A Distributed Mobile Core Network	03.05.2012
807262	ALU	12720379.2		EP	System, Apparatus And Method For Address Management In A Distributed Mobile Core Network	03.05.2012
806319	ALU	10158085.0	EP2369784	FR	Safe ADSL2x Low Power Activation : Method to Enable the ADSL2x Low Power Mode (=L2) in the Field Without Causing Transmission Problems	26.03.2010
806319	ALU	10158085.0	EP2369784	DE	Safe ADSL2x Low Power Activation : Method to Enable the ADSL2x Low Power Mode (=L2) in the Field Without Causing Transmission Problems	26.03.2010
806319	ALU	10158085.0	EP2369784	GB	Safe ADSL2x Low Power Activation : Method to Enable the ADSL2x Low Power Mode (=L2) in the Field Without Causing Transmission Problems	26.03.2010
801433	ALU	2013193780	JP5813072	JP	MPLS LSP Automation Engine For Ring Topologies	12.03.2009
808256	ALU	201280026689.4		CN	Architecture and Method to Maximize Consumer Utility of Recommended Content	05.04.2012
808256	ALU	20137031590	KR101520749	KR	Architecture and Method to Maximize Consumer Utility of Recommended Content	05.04.2012
808256	ALU	14/122761		US	Architecture and Method to Maximize Consumer Utility of Recommended Content	05.04.2012
808322	ALU	201280020642.7	ZL201280020642.7	CN	Semiconductor Optical Amplifier Device And Optical Matrix Switch	04.04.2012
808322	ALU	14/007850	US9083152	US	Semiconductor Optical Amplifier Device And Optical Matrix Switch	04.04.2012
809670	ALU	11306200.4	EP2574076	FR	Node Architecture For Fiber Mesh Networks	22.09.2011
809670	ALU	11306200.4	EP2574076	DE	Node Architecture For Fiber Mesh Networks	22.09.2011
809670	ALU	11306200.4	EP2574076	GB	Node Architecture For Fiber Mesh Networks	22.09.2011
814416	ALU	14/524323	US9603047	US	Application-Aware Load Balancing Across LTE Carriers	27.10.2014
812014	ALU	2015528911	JP5959748	JP	Learning enabler for automatic video orchestration in the context of video-conferences	05.06.2013
804662	ALU	09305185.2	EP2226932	FR	Radio frequency power amplifier with PAPR regulated power supply	02.03.2009
804662	ALU	09305185.2	EP2226932	DE	Radio frequency power amplifier with PAPR regulated power supply	02.03.2009
804662	ALU	09305185.2	EP2226932	GB	Radio frequency power amplifier with PAPR regulated power supply	02.03.2009
105680	ALU	06110951.8	EP1701473	FR	GUIDED DIAGNOSIS TREE REFINEMENT	10.03.2006
105680	ALU	06110951.8	EP1701473	DE	GUIDED DIAGNOSIS TREE REFINEMENT	10.03.2006
105680	ALU	06110951.8	EP1701473	GB	GUIDED DIAGNOSIS TREE REFINEMENT	10.03.2006
807562	ALU	10306363.2	EP2464088	FR	Broken Analogue-Front-End Detection via Reflectometry	07.12.2010
807562	ALU	10306363.2	EP2464088	DE	Broken Analogue-Front-End Detection via Reflectometry	07.12.2010
807562	ALU	10306363.2	EP2464088	GB	Broken Analogue-Front-End Detection via Reflectometry	07.12.2010
814444	ALU	14305072.2		EP	Efficient data crawling method for fast data ranking algorithm	20.01.2014
814523	ALU	13306382.6		EP	Method and Apparatus to automatically associate social interactions to the related TV programme	07.10.2013
814940	ALU	13290245.3		EP	Radio Head With Thermal Isolation	14.10.2013
139270	ALU	05745576.8	EP1745577	FR	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	03.05.2005
139270	ALU	05745576.8	EP1745577	DE	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	03.05.2005
139270	ALU	05745576.8	EP1745577	IT	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	03.05.2005
139270	ALU	05745576.8	EP1745577	ES	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	03.05.2005
139270	ALU	05745576.8	EP1745577	GB	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	03.05.2005
Claussen 13-10-17-46 (H)	ALU	07776407.4	EP2018735	FR	Method And Apparatus For Managing Interference In A Wireless Communication System	27.04.2007
Claussen 13-10-17-46 (H)	ALU	07776407.4	EP2018735	DE	Method And Apparatus For Managing Interference In A Wireless Communication System	27.04.2007
Claussen 13-10-17-46 (H)	ALU	07776407.4	EP2018735	GB	Method And Apparatus For Managing Interference In A Wireless Communication System	27.04.2007
814876	ALU	13306452.7		EP	Configurable Output Impedance For G.fast Line Driver In Power Down Mode	22.10.2013

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PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
814845	ALU	13290303.0		EP	Advanced DLM Technique To Improve G.INP Performance	06.12.2013
814951	ALU	13306538.3		EP	Cost-optimized Controller Architecture For Network Elements	12.11.2013
815149	ALU	14/035741	US9363382	US	CONFERENCE PRESENCE BASED MUSIC ON HOLD SUPPRESSION	24.09.2013
809226	ALU	11305780.6	EP2538568	FR	Binder Level Diagnosis	21.06.2011
809226	ALU	11305780.6	EP2538568	DE	Binder Level Diagnosis	21.06.2011
809226	ALU	11305780.6	EP2538568	GB	Binder Level Diagnosis	21.06.2011
803786	ALU	08305952.7	EP2200230	FR	ADAPTIVE PCN LEVELS	16.12.2008
803786	ALU	08305952.7	EP2200230	DE	ADAPTIVE PCN LEVELS	16.12.2008
803786	ALU	08305952.7	EP2200230	GB	ADAPTIVE PCN LEVELS	16.12.2008
Blahut 44 (DE)	ALU	00305858.3	EP1071288	FR	Video Controller	11.07.2000
Blahut 44 (DE)	ALU	00305858.3	EP1071288	DE	Video Controller	11.07.2000
Blahut 44 (DE)	ALU	00305858.3	EP1071288	GB	Video Controller	11.07.2000
810355	ALU	201180073213.1		CN	Incast-avoidance Scheme For Data Center Networks	06.09.2011
810355	ALU	11872079.6	EP2754274	EP	Incast-avoidance Scheme For Data Center Networks	06.09.2011
810355	ALU	1677/CHENP//2014		IN	Incast-avoidance Scheme For Data Center Networks	06.09.2011
810355	ALU	2014529595	JP5819530	JP	Incast-avoidance Scheme For Data Center Networks	06.09.2011
810355	ALU	14/237935	US9356878	US	Incast-avoidance Scheme For Data Center Networks	06.09.2011
809975	ALU	2012800475870		CN	A Method to manage call handover on a dual-mode smarphone between WiFi and cellular network	27.09.2012
809975	ALU	14/345710	US9319944	US	A Method to manage call handover on a dual-mode smarphone between WiFi and cellular network	27.09.2012
814314	ALU	55/DEL/2014		IN	A Method Of Selecting And Searching The Objects And Images Related Information On Pause Screen	07.01.2014
805891	ALU	09290929.0	EP2333990	FR	Stable optical MIMO transmission system over multimode-fiber	10.12.2009
805891	ALU	09290929.0	EP2333990	DE	Stable optical MIMO transmission system over multimode-fiber	10.12.2009
805891	ALU	09290929.0	EP2333990	GB	Stable optical MIMO transmission system over multimode-fiber	10.12.2009
804662	ALU	2013188069	JP5769771	JP	Radio frequency power amplifier with PAPR regulated power supply	10.02.2010
811784	ALU	201380060027.3		CN	Degraded P2P Transparent Clock (DEPP)	27.08.2013
811784	ALU	2015532356	JP5932157	JP	Degraded P2P Transparent Clock (DEPP)	27.08.2013
811784	ALU	20157010035	KR101594281	KR	Degraded P2P Transparent Clock (DEPP)	27.08.2013
811784	ALU	14/429476	US9571216	US	Degraded P2P Transparent Clock (DEPP)	27.08.2013
802718	ALU	08305215.9	EP2131614	FR	Broadcast services and DSL backhauled Femto Base Stations	30.05.2008
802718	ALU	08305215.9	EP2131614	DE	Broadcast services and DSL backhauled Femto Base Stations	30.05.2008
808232	ALU	11305258.3	EP2498520	FR	Automated video "tweeting"	10.03.2011
808232	ALU	11305258.3	EP2498520	DE	Automated video "tweeting"	10.03.2011
808232	ALU	11305258.3	EP2498520	GB	Automated video "tweeting"	10.03.2011
815214	ALU	14/137047		US	Scotch: Scaling Up SDN Control-Plane Using vSwitch Based Overlay	20.12.2013
814311	ALU	201410005371.9		CN	Server-Based Conference Participant Quantity Independent Packet Acoustic Echo Cancellation	06.01.2014
809838	ALU	11305742.6	EP2536034	FR	Efficient Point-To-Multipoint Architecture	14.06.2011
809838	ALU	11305742.6	EP2536034	DE	Efficient Point-To-Multipoint Architecture	14.06.2011
809838	ALU	11305742.6	EP2536034	GB	Efficient Point-To-Multipoint Architecture	14.06.2011
139054	ALU	03026350.3	EP1432274	FR	PROTECTION REQUEST MESSAGES	18.11.2003
139054	ALU	03026350.3	EP1432274	DE	PROTECTION REQUEST MESSAGES	18.11.2003
139054	ALU	03026350.3	EP1432274	GB	PROTECTION REQUEST MESSAGES	18.11.2003
Khan 46 (FU)	ALU	05254150.5	EP1615460	FR	Cell Switching And Packet Combining In A Wireless Communication System	01.07.2005
Khan 46 (FU)	ALU	05254150.5	EP1615460	DE	Cell Switching And Packet Combining In A Wireless Communication System	01.07.2005
Khan 46 (FU)	ALU	05254150.5	EP1615460	GB	Cell Switching And Packet Combining In A Wireless Communication System	01.07.2005
815121	ALU	14305161.3		EP	MRPS Protection Per-Section Ring ID	05.02.2014
808214	ALU	2014541593	JP5947391	JP	WIFI mobility handover controlled by DECT mobility handover	26.10.2012
811130	ALU	13767327.3		EP	Low Profile Standoff With Tool Stop	26.03.2013
809182	ALU	2014521640	JP5883136	JP	Interface Between 3GPP Networks And 3GPP2 Networks For WAP Text Messaging	29.06.2012
809182	ALU	20147001195	KR101565765	KR	Interface Between 3GPP Networks And 3GPP2 Networks For WAP Text Messaging	29.06.2012
813016	ALU	13788849.1		EP	A Method of HAS Congestion Management In Wireless Network	25.10.2013
813016	ALU	201380056373.4		CN	A Method of HAS Congestion Management In Wireless Network	25.10.2013
813016	ALU	2015539840	JP6096309	JP	A Method of HAS Congestion Management In Wireless Network	25.10.2013
808933	ALU	14/237703		US	HTTP Adaptive Streaming With Network Hints	09.07.2012
807561	ALU	14/344238	US9124683	US	Diagnostic Engine	27.08.2012
800011	ALU	06301157.1	EP1924109	FR	Adaptive Indoor System	20.11.2006

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EXHIBIT A

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
800011	ALU	06301157.1	DE602006039102.1	DE	Adaptive Indoor System	20.11.2006
800011	ALU	06301157.1	EP1924109	GB	Adaptive Indoor System	20.11.2006
815318	ALU	13360037.9		EP	Method For Priority Scheduling Of Notification And Ad Messages For Efficient Network Communication	09.12.2013
802196	ALU	08290136.4	EP2091196	FR	COORDINATED PHANTOM MODE TRANSCEIVER	13.02.2008
802196	ALU	08290136.4	EP2091196	DE	COORDINATED PHANTOM MODE TRANSCEIVER	13.02.2008
802196	ALU	08290136.4	EP2091196	GB	COORDINATED PHANTOM MODE TRANSCEIVER	13.02.2008
809499	ALU	2012800307485	ZL201280030748.5	CN	Low complexity iterative de-mapping and FEC Decoding For Differential Encoded Transmission System	15.06.2012
809499	ALU	2014-516282	JP5693791	JP	Low complexity iterative de-mapping and FEC Decoding For Differential Encoded Transmission System	15.06.2012
809499	ALU	1020147000367	KR10-1562526	KR	Low complexity iterative de-mapping and FEC Decoding For Differential Encoded Transmission System	15.06.2012
809499	ALU	14/122290	US9178655	US	Low complexity iterative de-mapping and FEC Decoding For Differential Encoded Transmission System	15.06.2012
808769	ALU	2012800318920	ZL2012800318920	CN	Digital post compensation of local oscillator phase noise for coherent receivers.	20.06.2012
810028	ALU	20147006349	KR101517383	KR	Method And Apparatus For Controlling Buffer Status Report Messaging	14.08.2012
106054	ALU	05301125.0	EP1804399	FR	SATELLITE BASED BTS	30.12.2005
106054	ALU	05301125.0	EP1804399	DE	SATELLITE BASED BTS	30.12.2005
106054	ALU	05301125.0	EP1804399	GB	SATELLITE BASED BTS	30.12.2005
808676	ALU	11305824.2	EP2541969	FR	Optical packet switch fabric featuring coherent detection for better statistical multiplexing	28.06.2011
808676	ALU	11305824.2	EP2541969	DE	Optical packet switch fabric featuring coherent detection for better statistical multiplexing	28.06.2011
808676	ALU	11305824.2	EP2541969	GB	Optical packet switch fabric featuring coherent detection for better statistical multiplexing	28.06.2011
802486	ALU	08290097.8	EP2086131	FR	Optical cross-connect architecture featuring modulation format-agile transmitters	04.02.2008
802486	ALU	08290097.8	EP2086131	DE	Optical cross-connect architecture featuring modulation format-agile transmitters	04.02.2008
802486	ALU	08290097.8	EP2086131	GB	Optical cross-connect architecture featuring modulation format-agile transmitters	04.02.2008
105271	ALU	04292448.0	EP1524802	FR	DYNAMIC REGULATION OF AVAILABLE WIRELESS NETWORK BANDWIDTH	14.10.2004
105271	ALU	04292448.0	EP1524802	DE	DYNAMIC REGULATION OF AVAILABLE WIRELESS NETWORK BANDWIDTH	14.10.2004
105271	ALU	04292448.0	EP1524802	GB	DYNAMIC REGULATION OF AVAILABLE WIRELESS NETWORK BANDWIDTH	14.10.2004
808636	ALU	2014528812	JP5886430	JP	Radio-Frequency Transmitter, Such As For Broadcasting And Cellular Base Stations	16.08.2012
810818	ALU	12778916.2		EP	System And Method For Load Balancing MMEs And MME Pools	15.10.2012
810818	ALU	2560/CHENP/2014		IN	System And Method For Load Balancing MMEs And MME Pools	15.10.2012
810818	ALU	2014537141	JP5901784	JP	System And Method For Load Balancing MMEs And MME Pools	15.10.2012
810818	ALU	20147010284	KR101574916	KR	System And Method For Load Balancing MMEs And MME Pools	15.10.2012
809277	ALU	2012800468773		CN	Service Registration, Discovery And Access Control Using WiFi Hotspots	14.09.2012
809277	ALU	2182/DELNP/2014		IN	Service Registration, Discovery And Access Control Using WiFi Hotspots	14.09.2012
809277	ALU	2014532312	JP6069327	JP	Service Registration, Discovery And Access Control Using WiFi Hotspots	14.09.2012
809277	ALU	20147008314	KR101567294	KR	Service Registration, Discovery And Access Control Using WiFi Hotspots	14.09.2012
809277	ALU	14/345678		US	Service Registration, Discovery And Access Control Using WiFi Hotspots	14.09.2012
814567	ALU	201410391681.9		CN	Historical Rating Support For Late Charging Event In Online Charging System	06.08.2014
809850	ALU	12753110.1		EP	Passive cache-based tracking	24.08.2012
809850	ALU	1187/DELNP/2014		IN	Passive cache-based tracking	24.08.2012
809850	ALU	2014527602	JP5795124	JP	Passive cache-based tracking	24.08.2012
809850	ALU	20147003499	KR101520751	KR	Passive cache-based tracking	24.08.2012
809850	ALU	14/237092		US	Passive cache-based tracking	24.08.2012
809893	ALU	201280046191.4	ZL201280046191.4	CN	Archive Control For Text Messages	05.09.2012
815216	ALU	14153338.0		EP	Method and apparatus to provide zapping recommendations between live video streams related to a public event	30.01.2014
815262	ALU	14305368.4		EP	Mechanism To Provide Control Over Internet Website Access	14.03.2014
809985	ALU	12735367.0		EP	Method And Apparatus For Assignment Of Virtual Resources Within A Cloud Environment	18.06.2012

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
150289	ALU	07859559.2	EP2070258	FR	Pluggable Node	31.07.2007
150289	ALU	07859559.2	EP2070258	DE	Pluggable Node	31.07.2007
150289	ALU	07859559.2	EP2070258	GB	Pluggable Node	31.07.2007
815148	ALU	14305363.5		EP	Method For Transparent Transfer Of PTP Event Messages Across An Medium With Asymmetrical Transfer Delay In Both Directions	13.03.2014
815341	ALU	14305473.2		EP	HomePlug Interference Detection Method For DSL Lines	01.04.2014
814889	ALU	14290318.6		EP	Content-based Buffer Management And Inter-stream Synchronization For Interactive Audio/video Communication Over The Web	21.10.2014
815178	ALU	14305259.5		EP	Prediction of video decoding duration for real-time encoding adaptation	25.02.2014
809234	ALU	14/350388	US9438394	US	Adaptive DSL	09.10.2012
815462	ALU	13306783.5		EP	Call Report Abuse	19.12.2013
815579	ALU	14305286.8		EP	Half Bandwidth Demultiplexing Duobinary Receiver Architecture	27.02.2014
812206	ALU	201380044903.3		CN	Direct Electronic Mail	15.08.2013
812206	ALU	2015529847		JP	Direct Electronic Mail	15.08.2013
Ma 29-67 (Z)	ALU	2014000292	JP5770867	JP	Method To Support User Location In In-Structure Coverage Systems	26.01.2009
815634	ALU	14/197307		US	Access Control Design For A Secure And Efficient RFID Data Communication	05.03.2014
809481	ALU	14/183646	US9185047	US	Hierarchical Profiled Scheduling And Shaping	19.02.2014
805187	ALU	10763807.4	EP2486701	FR	Control and Use things through a video interaction	03.09.2010
805187	ALU	10763807.4	EP2486701	DE	Control and Use things through a video interaction	03.09.2010
805187	ALU	10763807.4	EP2486701	IT	Control and Use things through a video interaction	03.09.2010
805187	ALU	10763807.4	EP2486701	NL	Control and Use things through a video interaction	03.09.2010
805187	ALU	10763807.4	EP2486701	ES	Control and Use things through a video interaction	03.09.2010
805187	ALU	10763807.4	EP2486701	GB	Control and Use things through a video interaction	03.09.2010
807067	ALU	10305791.5	EP2410698	FR	Self-cleaning Rules	19.07.2010
807067	ALU	10305791.5	EP2410698	DE	Self-cleaning Rules	19.07.2010
807067	ALU	10305791.5	EP2410698	GB	Self-cleaning Rules	19.07.2010
808178	ALU	2014535751	JP5828533	JP	Networks And Methods For Paging Message Control	04.10.2012
808178	ALU	20147012367	KR101595758	KR	Networks And Methods For Paging Message Control	04.10.2012
Cai 127-43 (Y)	ALU	09708336.4	EP2241122	FR	A Method And Apparatus For Virtual WiFi Service With Authentication And Accounting Control	16.01.2009
Cai 127-43 (Y)	ALU	09708336.4	EP2241122	DE	A Method And Apparatus For Virtual WiFi Service With Authentication And Accounting Control	16.01.2009
Cai 127-43 (Y)	ALU	09708336.4	EP2241122	GB	A Method And Apparatus For Virtual WiFi Service With Authentication And Accounting Control	16.01.2009
815688	ALU	14305323.9		EP	System and Method For Improvement of User Loyalty During Video Watching	06.03.2014
121066	ALU	04293078.4	EP1675305	FR	META SIGNALLING FOR MULTI-RADIO TECHNOLOGIES	22.12.2004
121066	ALU	04293078.4	EP1675305	DE	META SIGNALLING FOR MULTI-RADIO TECHNOLOGIES	22.12.2004
121066	ALU	04293078.4	EP1675305	GB	META SIGNALLING FOR MULTI-RADIO TECHNOLOGIES	22.12.2004
808452	ALU	2014-528930	JP5886431	JP	Sound Continuity in Web TV and Home Video Applications	27.08.2012
809363	ALU	12778919.6		EP	Method For Selectively Exposing Subscriber Data	16.10.2012
809363	ALU	2014538833	JP6072051	JP	Method For Selectively Exposing Subscriber Data	16.10.2012
810606	ALU	12772683.4		EP	Providing Dynamic Reliability And Security In Communications Environments	01.10.2012
810606	ALU	20147009686	KR101513408	KR	Providing Dynamic Reliability And Security In Communications Environments	01.10.2012
810743	ALU	201280051261.5		CN	LTE Subscriber Identity Correlation Service	17.10.2012
806935	ALU	11717328.6	EP2537300	FR	Method And System For Common Group Action Filtering In Telecom Network Environments	07.02.2011
806935	ALU	11717328.6	EP2537300	DE	Method And System For Common Group Action Filtering In Telecom Network Environments	07.02.2011
806935	ALU	11717328.6	EP2537300	GB	Method And System For Common Group Action Filtering In Telecom Network Environments	07.02.2011
Bachl 7-27-23-11 (RW)	ALU	06788633.3	EP1913722	FR	Dedicated Control Channel Detection For Enhanced Dedicated Channel	28.07.2006
Bachl 7-27-23-11 (RW)	ALU	06788633.3	EP1913722	DE	Dedicated Control Channel Detection For Enhanced Dedicated Channel	28.07.2006
Bachl 7-27-23-11 (RW)	ALU	06788633.3	EP1913722	GB	Dedicated Control Channel Detection For Enhanced Dedicated Channel	28.07.2006
139250	ALU	05010934.7	EP1608106	FR	ALTERNATIVE BPON VIDEO OVERLAY USING PACKET VIDEO OVER GIGABIT ETHERNET	20.05.2005
139250	ALU	05010934.7	EP1608106	DE	ALTERNATIVE BPON VIDEO OVERLAY USING PACKET VIDEO OVER GIGABIT ETHERNET	20.05.2005
139250	ALU	05010934.7	EP1608106	GB	ALTERNATIVE BPON VIDEO OVERLAY USING PACKET VIDEO OVER GIGABIT ETHERNET	20.05.2005
810355	ALU	1020147005423	KR101709932	KR	Incast-avoidance Scheme For Data Center Networks	06.09.2011

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Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
811712	ALU	201380018412.1		CN	System And Method For Implementing LDP LSR Overload Protection	04.04.2013
811712	ALU	13719646.5		EP	System And Method For Implementing LDP LSR Overload Protection	04.04.2013
811712	ALU	20147027870	KR101576412	KR	System And Method For Implementing LDP LSR Overload Protection	04.04.2013
811713	ALU	201380018772.1		CN	System And Method For Routable LDP LSR Identifier In IPv6 Networks	04.04.2013
811714	ALU	13717388.6		EP	System And Method Providing For Multiple LDP Instances	04.04.2013
811714	ALU	2015504736	JP5887460	JP	System And Method Providing For Multiple LDP Instances	04.04.2013
811714	ALU	20147027878	KR101620256	KR	System And Method Providing For Multiple LDP Instances	04.04.2013
811715	ALU	201380018820.7		CN	System And Method For Data-Plane Fate Separation Of LDP LSPs	04.04.2013
811459	ALU	201380028224.7		CN	MPLS-TE Overload	28.05.2013
811459	ALU	13728880.9		EP	MPLS-TE Overload	28.05.2013
811459	ALU	2015515107		JP	MPLS-TE Overload	28.05.2013
808610	ALU	201380009607.X	ZL201380009607.X	CN	Ad-Play Grace Period in Program Switch and Search Modes	11.02.2013
808610	ALU	2014-556997	JP5914700	JP	Ad-Play Grace Period in Program Switch and Search Modes	11.02.2013
808610	ALU	10-2014-7025736	KR10-1624541	KR	Ad-Play Grace Period in Program Switch and Search Modes	11.02.2013
808610	ALU	14/378457	US9462334	US	Ad-Play Grace Period in Program Switch and Search Modes	11.02.2013
815578	ALU	14306455.8		EP	Automatic content filtering for remote conferencing	22.09.2014
809670	ALU	20147009014	KR10-1521839	KR	Node Architecture For Fiber Mesh Networks	14.09.2012
809670	ALU	14/241241	US9203542	US	Node Architecture For Fiber Mesh Networks	14.09.2012
811965	ALU	14/388861		US	Orchestrating Connectivity Services For Maximizing Controlled Network Infrastructure (OCSN)	10.04.2013
115236	ALU	07300737.9	EP1947872	FR	Cognitive Radio Access Network	22.01.2007
115236	ALU	07300737.9	EP1947872	DE	Cognitive Radio Access Network	22.01.2007
115236	ALU	07300737.9	EP1947872	GB	Cognitive Radio Access Network	22.01.2007
805803	ALU	09290976.1	EP2337241	FR	Automatic optimization of carrier phase estimator for non linear impairment mitigation in coherent systems	18.12.2009
805803	ALU	09290976.1	EP2337241	DE	Automatic optimization of carrier phase estimator for non linear impairment mitigation in coherent systems	18.12.2009
805803	ALU	09290976.1	EP2337241	GB	Automatic optimization of carrier phase estimator for non linear impairment mitigation in coherent systems	18.12.2009
804305	ALU	09290325.1	EP2249493	FR	Learning packets to get faster coherent optical packet detectors	05.05.2009
804305	ALU	09290325.1	EP2249493	DE	Learning packets to get faster coherent optical packet detectors	05.05.2009
804305	ALU	09290325.1	EP2249493	GB	Learning packets to get faster coherent optical packet detectors	05.05.2009
802722	ALU	09151555.1	EP2086248	FR	Sequencing line tuning through RSVP	28.01.2009
802722	ALU	09151555.1	EP2086248	DE	Sequencing line tuning through RSVP	28.01.2009
802722	ALU	09151555.1	EP2086248	GB	Sequencing line tuning through RSVP	28.01.2009
806544	ALU	10290092.5	EP2362557	FR	MLSE In Coherent Optical Receiver For Narrow Optical Filtering Tolerance	24.02.2010
806544	ALU	10290092.5	EP2362557	DE	MLSE In Coherent Optical Receiver For Narrow Optical Filtering Tolerance	24.02.2010
806544	ALU	10290092.5	EP2362557	GB	MLSE In Coherent Optical Receiver For Narrow Optical Filtering Tolerance	24.02.2010
806832	ALU	10305699.0	EP2403053	FR	PCB Mounted Microwave Re-Entrant Resonators And Filters Thereof	29.06.2010
806832	ALU	10305699.0	EP2403053	DE	PCB Mounted Microwave Re-Entrant Resonators And Filters Thereof	29.06.2010
806832	ALU	10305699.0	EP2403053	GB	PCB Mounted Microwave Re-Entrant Resonators And Filters Thereof	29.06.2010
815827	ALU	14167163.6		EP	Congestion Avoidance For Packet Switched Network Equipments	06.05.2014
815836	ALU	14305546.5		EP	Method To Achieve 2d Modulation Formats Based On Intensity Modulations In prefixed Non-Orthogonal Directions	14.04.2014
811520	ALU	201380025940.X		CN	Active Queue Management Enhancements For Variable Bottleneck Rates	17.05.2013
811520	ALU	13728580.5		EP	Active Queue Management Enhancements For Variable Bottleneck Rates	17.05.2013
809667	ALU	201280056089.2		CN	System and Method for Interactive Online Video Preview	06.11.2012
809667	ALU	2014-541605	JP6063952	JP	System and Method for Interactive Online Video Preview	06.11.2012
Sydorenko 8-8 (O)	ALU	2014023115	JP5847214	JP	Organic Semiconductor Compositions With Nanoparticles	08.06.2007
Balachandran 45-11 3-36 (K)	ALU	08725430.6	EP2122941	FR	Method Of Providing Feedback To A Media Server In A Wireless Communication System	11.02.2008
Balachandran 45-11 3-36 (K)	ALU	08725430.6	EP2122941	DE	Method Of Providing Feedback To A Media Server In A Wireless Communication System	11.02.2008
Balachandran 45-11 3-36 (K)	ALU	08725430.6	EP2122941	GB	Method Of Providing Feedback To A Media Server In A Wireless Communication System	11.02.2008
810398	ALU	201380012320.2	ZL201380012320.2	CN	Flexible Optical Modulator For Advanced Modulation Formats	05.03.2013

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
810398	ALU	13714054.7		EP	Flexible Optical Modulator For Advanced Modulation Formats	05.03.2013
813718	ALU	201380012482.6		CN	Flexible Optical Modulator For Advanced Modulation Formats	05.03.2013
813718	ALU	13711561.4		EP	Flexible Optical Modulator For Advanced Modulation Formats	05.03.2013
813718	ALU	2014561038	JP6109860	JP	Flexible Optical Modulator For Advanced Modulation Formats	05.03.2013
811418	ALU	2014557694	JP6110882	JP	Method And Apparatus For Interference Cancellation In Hybrid Satellite-Terrestrial Network	07.02.2013
811418	ALU	20147022396	KR101593353	KR	Method And Apparatus For Interference Cancellation In Hybrid Satellite-Terrestrial Network	07.02.2013
815665	ALU	14305603.4	EP2937933	EP	Low-Profile Wideband Radiating Antenna Element With Circumferential Topology	24.04.2014
815677	ALU	14305800.6		EP	High Dynamic Range Attenuator	28.05.2014
810947	ALU	12290031.9	EP2621208	FR	Generic Technique To Predict System Performance And Energy Consumption In Cellular Networks For Self-Configuration+Optimization Of Many Coupled+Interacting Parameters	27.01.2012
810947	ALU	12290031.9	EP2621208	DE	Generic Technique To Predict System Performance And Energy Consumption In Cellular Networks For Self-Configuration+Optimization Of Many Coupled+Interacting Parameters	27.01.2012
810947	ALU	12290031.9	EP2621208	GB	Generic Technique To Predict System Performance And Energy Consumption In Cellular Networks For Self-Configuration+Optimization Of Many Coupled+Interacting Parameters	27.01.2012
809733	ALU	2012800596733	ZL2012800596733	CN	Packet-Based Propagation Of Testing Information	21.09.2012
815726	ALU	14290123.0		EP	Method To Mimic Load On Mobile Radio Installations	28.04.2014
809339	ALU	11306177.4	EP2571190	FR	Exploiting Selective Flows Protection In Adaptive Code Modulation Radio System	19.09.2011
809339	ALU	11306177.4	EP2571190	DE	Exploiting Selective Flows Protection In Adaptive Code Modulation Radio System	19.09.2011
809339	ALU	11306177.4	EP2571190	GB	Exploiting Selective Flows Protection In Adaptive Code Modulation Radio System	19.09.2011
809339	ALU	2014530135	JP6141849	JP	Exploiting Selective Flows Protection In Adaptive Code Modulation Radio System	14.08.2012
809339	ALU	20147010254	KR101699270	KR	Exploiting Selective Flows Protection In Adaptive Code Modulation Radio System	14.08.2012
808210	ALU	11189088.5	EP2458757	FR	Link by Link Transparent Clock (LILi)	15.11.2011
808210	ALU	11189088.5	EP2458757	DE	Link by Link Transparent Clock (LILi)	15.11.2011
808210	ALU	11189088.5	EP2458757	GB	Link by Link Transparent Clock (LILi)	15.11.2011
810152	ALU	CN2012800582938	ZL201280058293.8	CN	Photonics Integrated Circuit Mode Splitter For MMF Mode Multiplexing	06.11.2012
810152	ALU	2014-542756	JP5878985	JP	Photonics Integrated Circuit Mode Splitter For MMF Mode Multiplexing	06.11.2012
811548	ALU	2013800110715		CN	Clustering Of Transmission Points With Reduced Complexity And Signalling Overhead	21.02.2013
811548	ALU	6364/CHENP/2014		IN	Clustering Of Transmission Points With Reduced Complexity And Signalling Overhead	21.02.2013
811548	ALU	2014559153	JP6082408	JP	Clustering Of Transmission Points With Reduced Complexity And Signalling Overhead	21.02.2013
811548	ALU	20147023736	KR101588991	KR	Clustering Of Transmission Points With Reduced Complexity And Signalling Overhead	21.02.2013
811548	ALU	14/381700		US	Clustering Of Transmission Points With Reduced Complexity And Signalling Overhead	21.02.2013
Anderson 11-6-8 (TW)	ALU	07750675.6	EP1989842	FR	Method And Apparatus For Real-Time Application-Driven Resource Management In Next Generation Networks	12.02.2007
Anderson 11-6-8 (TW)	ALU	07750675.6	EP1989842	DE	Method And Apparatus For Real-Time Application-Driven Resource Management In Next Generation Networks	12.02.2007
Anderson 11-6-8 (TW)	ALU	07750675.6	EP1989842	GB	Method And Apparatus For Real-Time Application-Driven Resource Management In Next Generation Networks	12.02.2007
805480	ALU	10788094.0	EP2522091	DE	Optical network exploiting adaptive bit-rate Transponders for "soft" protection	16.12.2010
805480	ALU	10788094.0	EP2522091	GB	Optical network exploiting adaptive bit-rate Transponders for "soft" protection	16.12.2010
815593	ALU	14/480976	US9425493	US	Inverted Pedestal Dielectric Resonator Filters With Transmission Zeros	09.09.2014
815487	ALU	14305985.5	EP2961113	EP	Avoiding deadlock condition in MPLS-TP Ring Protection Switching (MRPS)	24.06.2014
810948	ALU	12290033.5	EP2621211	FR	Self Learning Techniques For SON Entities In Basestations	27.01.2012
810948	ALU	12290033.5	EP2621211	DE	Self Learning Techniques For SON Entities In Basestations	27.01.2012
810948	ALU	12290033.5	EP2621211	GB	Self Learning Techniques For SON Entities In Basestations	27.01.2012
810535	ALU	11306208.7	EP2573946	FR	Bit Swap Reject, Forcing Bi Swap Only	23.09.2011

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0398

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
810535	ALU	11306208.7	EP2573946	DE	Bit Swap Reject, Forcing Bi Swap Only	23.09.2011
810535	ALU	11306208.7	EP2573946	GB	Bit Swap Reject, Forcing Bi Swap Only	23.09.2011
809841	ALU	2012800624358	ZL2012800624358	CN	Non-disruptive, DELT-based Localization And Identification Of Impairments	19.11.2012
809841	ALU	2014-550659	JP5881863	JP	Non-disruptive, DELT-based Localization And Identification Of Impairments	19.11.2012
809841	ALU	20147018918	KR101624819	KR	Non-disruptive, DELT-based Localization And Identification Of Impairments	19.11.2012
809841	ALU	14/357617	US9178986	US	Non-disruptive, DELT-based Localization And Identification Of Impairments	19.11.2012
810912	ALU	2012800657756	ZL201280065775.6	CN	Non-disruptive Detection, Identification And Localization Of Impairments On Vectored Lines	12.09.2012
811449	ALU	2013800308533	ZL2013800308533	CN	Detection And Identification Of Single-wire Bridged-taps On Transmission Lines	22.05.2013
811449	ALU	2015516536	JP5913744	JP	Detection And Identification Of Single-wire Bridged-taps On Transmission Lines	22.05.2013
811449	ALU	20157000455	KR10-1629618	KR	Detection And Identification Of Single-wire Bridged-taps On Transmission Lines	22.05.2013
806401	ALU	10306298.0	EP2458923	FR	MDC Video Services Usage For Efficient Green Transmission	26.11.2010
806401	ALU	10306298.0	EP2458923	DE	MDC Video Services Usage For Efficient Green Transmission	26.11.2010
806401	ALU	10306298.0	EP2458923	GB	MDC Video Services Usage For Efficient Green Transmission	26.11.2010
815091	ALU	14/305774		US	A Method Of Cross-Media Unified Targeted Advertisement	16.06.2014
815631	ALU	14306019.2		EP	Assisted Navigation For Uhdv Interactive Consumption	27.06.2014
Cai 55-2-2-4-1-10 (Y)	ALU	07762569.7	EP1977554	FR	IMS Budget Control For A Media Change During An IMS Session	23.01.2007
Cai 55-2-2-4-1-10 (Y)	ALU	07762569.7	EP1977554	DE	IMS Budget Control For A Media Change During An IMS Session	23.01.2007
Cai 55-2-2-4-1-10 (Y)	ALU	07762569.7	EP1977554	GB	IMS Budget Control For A Media Change During An IMS Session	23.01.2007
Feder 21-7-18-17-25 (PM)	ALU	14/256514	US9544809	US	Triggering Migration Of A Network Access Agent Associated With An Access Terminal	18.04.2014
807153	ALU	11183709.2	EP2579655	FR	Self adaptation power for Broadcast area in 3GPP networks	03.10.2011
807153	ALU	11183709.2	EP2579655	DE	Self adaptation power for Broadcast area in 3GPP networks	03.10.2011
807153	ALU	11183709.2	EP2579655	GB	Self adaptation power for Broadcast area in 3GPP networks	03.10.2011
811077	ALU	201380013321.9	ZL201380013321.9	CN	Method And Apparatus For Identifying An Application Associated With An IP Flow Using DNS Data	25.02.2013
811077	ALU	13708321.8	EP2823624	EP	Method And Apparatus For Identifying An Application Associated With An IP Flow Using DNS Data	25.02.2013
811077	ALU	2014560943	JP5889445	JP	Method And Apparatus For Identifying An Application Associated With An IP Flow Using DNS Data	25.02.2013
811077	ALU	20147028162	KR101568977	KR	Method And Apparatus For Identifying An Application Associated With An IP Flow Using DNS Data	25.02.2013
815047	ALU	14306953.2		EP	Multicore Amplifier	05.12.2014
815534	ALU	14305635.6		EP	Virtualised Home CDN In Wired Access Node	29.04.2014
810770	ALU	2012800559999	ZL2012800559999	CN	Wideband, Low-Profile, Small-Footprint Antenna Element	05.11.2012
810770	ALU	3515/CHENP/2014		IN	Wideband, Low-Profile, Small-Footprint Antenna Element	05.11.2012
810770	ALU	2014541556	JP5931210	JP	Wideband, Low-Profile, Small-Footprint Antenna Element	05.11.2012
810770	ALU	20137013067	KR101528442	KR	Wideband, Low-Profile, Small-Footprint Antenna Element	05.11.2012
810770	ALU	14/358549	US9287617	US	Wideband, Low-Profile, Small-Footprint Antenna Element	05.11.2012
815698	ALU	14290222.0		EP	Method To Preserve APS Channel Integrity During ODUK Frame Slips	31.07.2014
815764	ALU	14290252.7		EP	Adopting Standard Otuk Containers To Flexible Optical Bandwidth	19.08.2014
809805	ALU	14/370614		US	Automated Pan-Tilt-Zoom Optimization	17.12.2012
815777	ALU	2129/DEL/2014		IN	Intelligent Call Rejection Announcement	28.07.2014
815224	ALU	1919/DEL/2014		IN	Action Triggers Based On Exif Info	09.07.2014
815570	ALU	14/321045	US9474028	US	Battery Based Mptcp Optimization For Wifi / 3gpp Interworking	01.07.2014
807731	ALU	11173824.1	EP2547154	FR	Smart frame filling and composition for Energy Efficient eNodeB	13.07.2011
807731	ALU	11173824.1	EP2547154	DE	Smart frame filling and composition for Energy Efficient eNodeB	13.07.2011
807731	ALU	11173824.1	EP2547154	GB	Smart frame filling and composition for Energy Efficient eNodeB	13.07.2011
808426	ALU	11290176.4	EP2509217	FR	Tunable Reed Resonator Based Rf Power Transmitter	07.04.2011
808426	ALU	11290176.4	EP2509217	DE	Tunable Reed Resonator Based Rf Power Transmitter	07.04.2011
808426	ALU	11290176.4	EP2509217	GB	Tunable Reed Resonator Based Rf Power Transmitter	07.04.2011
809322[1]	ALU	14/269673	US8947766	US	InP-Based Comb Generator For Optical OFDM	05.05.2014
810291	ALU	2014-543819	JP5833253	JP	High-precision OTN Delay Measurement	17.10.2012
809499	ALU	11305776.4	EP2538596	FR	Low complexity iterative de-mapping and FEC Decoding For Differential Encoded Transmission System	21.06.2011
809499	ALU	11305776.4	EP2538596	DE	Low complexity iterative de-mapping and FEC Decoding For Differential Encoded Transmission System	21.06.2011

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PATENT
REEL: 043877 FRAME: 0399

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
809499	ALU	11305776.4	EP2538596	GB	Low complexity iterative de-mapping and FEC Decoding For Differential Encoded Transmission System	21.06.2011
807561	ALU	11306261.6	EP2575342	FR	Diagnostic Engine	30.09.2011
807561	ALU	11306261.6	EP2575342	DE	Diagnostic Engine	30.09.2011
807561	ALU	11306261.6	EP2575342	GB	Diagnostic Engine	30.09.2011
Menten 4 (LE)	ALU	09770506.5	EP2316201	FR	Processing Of Packet Fragments	28.04.2009
Menten 4 (LE)	ALU	09770506.5	EP2316201	DE	Processing Of Packet Fragments	28.04.2009
Menten 4 (LE)	ALU	09770506.5	EP2316201	GB	Processing Of Packet Fragments	28.04.2009
810925	ALU	14/458438		US	Apparatus And Method For Managing Storage Of Data Blocks	13.08.2014
810385	ALU	20147022049	KR101603465	KR	Instantaneous Detection Of Missing POTS Splitter	05.02.2013
810385	ALU	14/371686	US9160841	US	Instantaneous Detection Of Missing POTS Splitter	05.02.2013
816023	ALU	14305727.1	EP2947818	EP	Method For A Fast, Incremental Optimization Of Deployed Photonic Networks	19.05.2014
810326	ALU	12305708.5	EP2677825	FR	Enhanced Scheduler Architecture For Enabling Of Multi Operator Spectrum Sharing/ Virtualization	21.06.2012
810326	ALU	12305708.5	EP2677825	DE	Enhanced Scheduler Architecture For Enabling Of Multi Operator Spectrum Sharing/ Virtualization	21.06.2012
810326	ALU	12305708.5	EP2677825	GB	Enhanced Scheduler Architecture For Enabling Of Multi Operator Spectrum Sharing/ Virtualization	21.06.2012
811055	ALU	201380021916.9		CN	Methods Of Allocating Resources In A System And Systems Implementing The Same	09.04.2013
811055	ALU	13725853.9		EP	Methods Of Allocating Resources In A System And Systems Implementing The Same	09.04.2013
811055	ALU	2015508999	JP6042973	JP	Methods Of Allocating Resources In A System And Systems Implementing The Same	09.04.2013
811055	ALU	20147029598	KR101595689	KR	Methods Of Allocating Resources In A System And Systems Implementing The Same	09.04.2013
808214	ALU	11306489.3	EP2595426	FR	WIFI mobility handover controlled by DECT mobility handover	15.11.2011
808214	ALU	11306489.3	EP2595426	DE	WIFI mobility handover controlled by DECT mobility handover	15.11.2011
808214	ALU	11306489.3	EP2595426	GB	WIFI mobility handover controlled by DECT mobility handover	15.11.2011
Kramer 9-16-6 (GG)	ALU	11171128.9	EP2385672	FR	Determining A Channel Matrix By Measuring Interference	23.06.2011
Kramer 9-16-6 (GG)	ALU	11171128.9	EP2385672	DE	Determining A Channel Matrix By Measuring Interference	23.06.2011
Kramer 9-16-6 (GG)	ALU	11171128.9	EP2385672	GB	Determining A Channel Matrix By Measuring Interference	23.06.2011
Balachandran 47-12-4-42 (K)	ALU	14/300790	US9203886	US	Content Rate Control For Streaming Media Servers	10.06.2014
104082	ALU	03290721.4	EP1347592	FR	FULLY TRANSPARENT HIERARCHICAL RING NETWORK	21.03.2003
104082	ALU	03290721.4	EP1347592	DE	FULLY TRANSPARENT HIERARCHICAL RING NETWORK	21.03.2003
104082	ALU	03290721.4	EP1347592	GB	FULLY TRANSPARENT HIERARCHICAL RING NETWORK	21.03.2003
812035	ALU	12306150.9	EP2712160	FR	Method For Remote Detection Of Reversed POTS Splitters	24.09.2012
812035	ALU	12306150.9	EP2712160	DE	Method For Remote Detection Of Reversed POTS Splitters	24.09.2012
812035	ALU	12306150.9	EP2712160	GB	Method For Remote Detection Of Reversed POTS Splitters	24.09.2012
807856	ALU	11305210.4	EP2496019	FR	Flow control of load information exchange between RAT	28.02.2011
807856	ALU	11305210.4	EP2496019	DE	Flow control of load information exchange between RAT	28.02.2011
807856	ALU	11305210.4	EP2496019	GB	Flow control of load information exchange between RAT	28.02.2011
809993	ALU	11306718.5	EP2608410	FR	Baseband Pre-Compensation Of Distortions Introduced By Pulse Width Modulation	21.12.2011
809993	ALU	11306718.5	EP2608410	DE	Baseband Pre-Compensation Of Distortions Introduced By Pulse Width Modulation	21.12.2011
809993	ALU	11306718.5	EP2608410	GB	Baseband Pre-Compensation Of Distortions Introduced By Pulse Width Modulation	21.12.2011
809225	ALU	201380017968.9		CN	IPTV Deadstream Detection	20.02.2013
809225	ALU	1020147030075	KR101521840	KR	IPTV Deadstream Detection	20.02.2013
814365	ALU	103121722	TW1551072	TW	Stable Vectoring Despite Decision Errors in Error Feedback	24.06.2014
804752	ALU	09789737.5	EP2438708	FR	Notification Of Charging Rate Adjustments In Regions Of A Mobile Network To Control Bandwidth Usage In The Regions	01.06.2009
804752	ALU	09789737.5	EP2438708	DE	Notification Of Charging Rate Adjustments In Regions Of A Mobile Network To Control Bandwidth Usage In The Regions	01.06.2009
810732	ALU	2014-557726	JP5808507	JP	Methods And Systems For Reducing Crosstalk	12.02.2013
810732	ALU	20147022878	KR101579398	KR	Methods And Systems For Reducing Crosstalk	12.02.2013
808353	ALU	11360020.9	EP2528396	FR	Efficient Transmit and Receive Processing With Non-Zero Error Probability	27.05.2011
808353	ALU	11360020.9	EP2528396	DE	Efficient Transmit and Receive Processing With Non-Zero Error Probability	27.05.2011
808353	ALU	11360020.9	EP2528396	GB	Efficient Transmit and Receive Processing With Non-Zero Error Probability	27.05.2011
816274	ALU	14306186.9		EP	Signaling For Packet Switched Network Equipments Handling Coherent Emissions	22.07.2014

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0400

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
816322	ALU	14290275.8		EP	Method And Device For Optimal Bandwidth Reservation For Deadline-Aware Traffic	12.09.2014
816083	ALU	14306083.8		EP	Multi-Band Radiating Element Based On Single Contiguous Radiator	03.07.2014
Halmi-Cohen 16-4 (R)	ALU	10716983.1	EP2430795	GB	Fast Channel Change Handling Of Late Multicast Join	29.04.2010
815996	ALU	14307059.7		EP	Routeable Distributed DataBase (RDDDB)	17.12.2014
137821	ALU	05300047.7	EP1560398	FR	IP Flow Limiting	20.01.2005
137821	ALU	05300047.7	EP1560398	DE	IP Flow Limiting	20.01.2005
137821	ALU	05300047.7	EP1560398	GB	IP Flow Limiting	20.01.2005
808936	ALU	201380006970.6		CN	A Technique For Locating A Lost Or Stolen Mobile Using A Network Initiated Trace	11.01.2013
808936	ALU	2014553657		JP	A Technique For Locating A Lost Or Stolen Mobile Using A Network Initiated Trace	11.01.2013
808936	ALU	20147020711		KR	A Technique For Locating A Lost Or Stolen Mobile Using A Network Initiated Trace	11.01.2013
808936	ALU	14/374801		US	A Technique For Locating A Lost Or Stolen Mobile Using A Network Initiated Trace	11.01.2013
812643	ALU	14305979.8		EP	Printed Circuit Board Skew Control By Local Deposition Of Material With Controlled Dielectric Constant	23.06.2014
804752	ALU	14/302267	US9641696	US	Notification Of Charging Rate Adjustments In Regions Of A Mobile Network To Control Bandwidth Usage In The Regions	11.06.2014
808299	ALU	11305414.2	EP2509245	GB	Adaptive Generation Of Optimal DSLAM Service & Spectrum Profiles	08.04.2011
811750	ALU	201380025236.4	ZL201380025236.4	CN	Deadline Based Priority Mapping For HTTP Adaptive Streaming	06.05.2013
811750	ALU	2015-511987	JP5990640	JP	Deadline Based Priority Mapping For HTTP Adaptive Streaming	06.05.2013
811750	ALU	10-2014-7034775		KR	Deadline Based Priority Mapping For HTTP Adaptive Streaming	06.05.2013
811750	ALU	14/400712	US9723049	US	Deadline Based Priority Mapping For HTTP Adaptive Streaming	06.05.2013
811041	ALU	6159/CHENP/2014		IN	Detachable base station	18.01.2013
811041	ALU	20147022501		KR	Detachable base station	18.01.2013
816527	ALU	14306020.0		EP	Assisted Navigation For Uhdv Interactive Consumption	27.06.2014
816375	ALU	14306493.9		EP	Resource Allocation Methods over Asymmetric Optical Transport Networks (RAMA)	26.09.2014
816124	ALU	14/958422		US	Automated Data Quota Management In Group Plans By Subscribers	03.12.2015
816177	ALU	14/575696	US9585153	US	Method And Apparatus For Improved Carrier Aggregation Access Control	18.12.2014
815602	ALU	201410306788.9		CN	A One-Hand Control Method On Touch Screen Device	30.06.2014
816568	ALU	14177676.5		EP	Presence-based Nested Capability Discovery	18.07.2014
804522	ALU	2014132477		JP	Traffic and Interference Aware Resource Management	20.09.2010
802793	ALU	08305338.9	EP2139186	FR	Multiserver receiver scheme for RDMA (Radial Space Division Multiple Access)	27.06.2008
802793	ALU	08305338.9	EP2139186	DE	Multiserver receiver scheme for RDMA (Radial Space Division Multiple Access)	27.06.2008
802793	ALU	08305338.9	EP2139186	GB	Multiserver receiver scheme for RDMA (Radial Space Division Multiple Access)	27.06.2008
815846	ALU	14/501359		US	Verifying And Troubleshooting Inter-Chassis Optical Connections Using Fiber Loopback Via Optical Crossbars	30.09.2014
811449	ALU	12305672.3	EP2675074	FR	Detection And Identification Of Single-wire Bridged-taps On Transmission Lines	13.06.2012
811449	ALU	12305672.3	EP2675074	DE	Detection And Identification Of Single-wire Bridged-taps On Transmission Lines	13.06.2012
811449	ALU	12305672.3	EP2675074	GB	Detection And Identification Of Single-wire Bridged-taps On Transmission Lines	13.06.2012
807510	ALU	2014136595	JP5791766	JP	Method And Apparatus For Local Gateway Assignment In Wireless Networks	22.11.2011
800972	ALU	03292737.8	EP1528832	FR	Method for distributing a set of data, radiocommunication network and wireless station for implementing the method	03.11.2003
800972	ALU	03292737.8	EP1528832	DE	Method for distributing a set of data, radiocommunication network and wireless station for implementing the method	03.11.2003
800972	ALU	03292737.8	EP1528832	GB	Method for distributing a set of data, radiocommunication network and wireless station for implementing the method	03.11.2003
811701	ALU	12305674.9	EP2690420	FR	eOTDR Crosstalk Mitigation Through Digital Signal Processing	14.06.2012
811701	ALU	12305674.9	EP2690420	DE	eOTDR Crosstalk Mitigation Through Digital Signal Processing	14.06.2012
811701	ALU	12305674.9	EP2690420	GB	eOTDR Crosstalk Mitigation Through Digital Signal Processing	14.06.2012
816608	ALU	14/478406	US9525661	US	Efficient Method Of NAT Without Reassembling IPV4 Fragments	05.09.2014
810733	ALU	201380009662.9	ZL201380009662.9	CN	Methods And Systems For Reducing Crosstalk	11.02.2013
810733	ALU	13705701.4		EP	Methods And Systems For Reducing Crosstalk	11.02.2013
810733	ALU	2014-557711	JP6014686	JP	Methods And Systems For Reducing Crosstalk	11.02.2013

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0401

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
813719	ALU	14723625.1		EP	System And Method For Improving Network Efficiency Using MVPN Site-Type Attribute	07.04.2014
813719	ALU	2016507581		JP	System And Method For Improving Network Efficiency Using MVPN Site-Type Attribute	07.04.2014
805928	ALU	1020147021770	KR101517746	KR	Monitoring Of IEEE 1588V2 Transparent Clock Failure/ Degradation: Architecture And Implementation (M.L.T.)	09.02.2011
802519	ALU	08170415.7	EP2079179	FR	Optical network with self learning of its quality	02.12.2008
802519	ALU	08170415.7	EP2079179	DE	Optical network with self learning of its quality	02.12.2008
802519	ALU	08170415.7	EP2079179	GB	Optical network with self learning of its quality	02.12.2008
807367	ALU	2014155944	JP5992476	JP	Event Based Social Networking Application	02.05.2011
811063	ALU	12290153.1	EP2661096	FR	Failure detection of an optical packet switching node	04.05.2012
811063	ALU	12290153.1	EP2661096	DE	Failure detection of an optical packet switching node	04.05.2012
811063	ALU	12290153.1	EP2661096	GB	Failure detection of an optical packet switching node	04.05.2012
809388	ALU	2013800262667	ZL2013800262667	CN	Mixed POADM-ROADM Optical Transport System	20.02.2013
809388	ALU	8431/DELNP/2014		IN	Mixed POADM-ROADM Optical Transport System	20.02.2013
809388	ALU	2015503794	JP5938516	JP	Mixed POADM-ROADM Optical Transport System	20.02.2013
Guo 16-83-66 (KH)	ALU	07753388.3	EP2002599	FR	Method And Apparatus For Improved Multicast Streaming In Wireless Networks	19.03.2007
815719[1]	ALU	14/502239	US9578099	US	Network-Coded Caching-Aided Multicast For Efficient Content Delivery	30.09.2014
Bosch 29-1 (P)	ALU	201410515543.7		CN	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
811771	ALU	12360041.3	EP2667507	FR	Novel Linearisation Scheme For Cost Reduced Digital Doherty Applications	21.05.2012
811771	ALU	12360041.3	EP2667507	DE	Novel Linearisation Scheme For Cost Reduced Digital Doherty Applications	21.05.2012
811771	ALU	12360041.3	EP2667507	GB	Novel Linearisation Scheme For Cost Reduced Digital Doherty Applications	21.05.2012
808769	ALU	11305827.5	EP2541810	FR	Digital post compensation of local oscillator phase noise for coherent receivers.	29.06.2011
808769	ALU	11305827.5	EP2541810	DE	Digital post compensation of local oscillator phase noise for coherent receivers.	29.06.2011
808769	ALU	11305827.5	EP2541810	GB	Digital post compensation of local oscillator phase noise for coherent receivers.	29.06.2011
816886	ALU	14/492049		US	A Method Of Streaming Multimedia Content On Internet Of Things (IoT) Devices With Limited Memory	21.09.2014
816923	ALU	14306439.2		EP	Fast Start and Zap For HTTP Adaptive Streaming	18.09.2014
808435	ALU	10306358.2	EP2464034	FR	Correcting Artefacts In Embedded OTDR	06.12.2010
808435	ALU	10306358.2	EP2464034	DE	Correcting Artefacts In Embedded OTDR	06.12.2010
808435	ALU	10306358.2	EP2464034	GB	Correcting Artefacts In Embedded OTDR	06.12.2010
809989	ALU	12305931.3	EP2693769	FR	Petabit-class packet switch architecture	30.07.2012
804683	ALU	10727629.7	EP2449733	DE	Linking Inner and Outer MPLS Labels	22.06.2010
804683	ALU	10727629.7	EP2449733	GB	Linking Inner and Outer MPLS Labels	22.06.2010
105478	ALU	05300858.7	EP1657865	FR	Sanity Proved BGP-update message	26.10.2005
105478	ALU	05300858.7	EP1657865	DE	Sanity Proved BGP-update message	26.10.2005
105478	ALU	05300858.7	EP1657865	IT	Sanity Proved BGP-update message	26.10.2005
105478	ALU	05300858.7	EP1657865	ES	Sanity Proved BGP-update message	26.10.2005
105752	ALU	05300180.6	EP1701488	FR	ROUTING USING DE-CORRELATED ADD DROP ADVERTISEMENT	11.03.2005
105752	ALU	05300180.6	EP1701488	DE	ROUTING USING DE-CORRELATED ADD DROP ADVERTISEMENT	11.03.2005
105752	ALU	05300180.6	EP1701488	GB	ROUTING USING DE-CORRELATED ADD DROP ADVERTISEMENT	11.03.2005
121312	ALU	07290716.5	EP2001153	DE	DYNAMIC CODE MANAGEMENT BASED ON INTERPOLATED OR EXTRAPOLATED IMPULSE NOISE MEASUREMENTS.	08.06.2007
121312	ALU	07290716.5	EP2001153	GB	DYNAMIC CODE MANAGEMENT BASED ON INTERPOLATED OR EXTRAPOLATED IMPULSE NOISE MEASUREMENTS.	08.06.2007
807675	ALU	11290224.2	EP2523344	FR	Power Amplifier as a DAC (PADAC)	12.05.2011
807675	ALU	11290224.2	EP2523344	DE	Power Amplifier as a DAC (PADAC)	12.05.2011
807675	ALU	11290224.2	EP2523344	GB	Power Amplifier as a DAC (PADAC)	12.05.2011
816836	ALU	14306712.2		EP	QoE Based SCAP Scheduling Control	28.10.2014
816545	ALU	201410659201.2		CN	Method And System To Support Instant Advertisement	18.11.2014
816774	ALU	14/884362		US	Dynamic Selection Of Supported Band Combinations In Carrier Aggregation Capable Ues	15.10.2015
816867	ALU	15306495.1		EP	Polarization Diversity Semiconductor Optical Amplifier Module With Automatic Power Control	25.09.2015
816414	ALU	14197026.9		EP	Reliability Management Of Green Transmission Interfaces	09.12.2014
816488	ALU	14307076.1		EP	FESLA (FEC Extensions For Storage Label Allocation)	18.12.2014
817078	ALU	14/573861		US	Using Global Variables To Data-Drive Rule Engine Evaluation	17.12.2014
809557	ALU	11177478.2	EP2562978	FR	Design Of A Content Router	12.08.2011
809557	ALU	11177478.2	EP2562978	DE	Design Of A Content Router	12.08.2011

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
804722	ALU	2014209060	JP5953354	JP	Techniques for Caching and Pre-fetching of Mobile Content At the Network Edge Based on Prediction of Users' Locations and Content Demands	14.10.2014
811474	ALU	12305887.7	EP2688217	FR	Iterative Multi-Channel Multi-Tone Crosstalk Acquisition And Compensation	20.07.2012
811474	ALU	12305887.7	EP2688217	DE	Iterative Multi-Channel Multi-Tone Crosstalk Acquisition And Compensation	20.07.2012
811474	ALU	12305887.7	EP2688217	GB	Iterative Multi-Channel Multi-Tone Crosstalk Acquisition And Compensation	20.07.2012
815909	ALU	201410693536.6		CN	A Policy And Charging Control Solution For Sponsored Data In LTE Data Network	26.11.2014
805660	ALU	09306266.9	EP2337278	FR	IP-only or CLNP-only links in a dual environment	18.12.2009
805660	ALU	09306266.9	EP2337278	DE	IP-only or CLNP-only links in a dual environment	18.12.2009
805660	ALU	09306266.9	EP2337278	GB	IP-only or CLNP-only links in a dual environment	18.12.2009
Hofmann 19-7 (MA)	ALU	06845467.7	EP1961190	FR	Method And Network For Providing Service Blending To A Subscriber	14.12.2006
Hofmann 19-7 (MA)	ALU	06845467.7	EP1961190	DE	Method And Network For Providing Service Blending To A Subscriber	14.12.2006
Hofmann 19-7 (MA)	ALU	06845467.7	EP1961190	GB	Method And Network For Providing Service Blending To A Subscriber	14.12.2006
812223	ALU	2015-527876	JP6133986	JP	Reverse Hold-Over Detection	19.08.2013
812223	ALU	14/416467	US9537446	US	Reverse Hold-Over Detection	19.08.2013
817108	ALU	15151496.5		EP	Efficient Spatially Coupled Coding with Minimal Rate Loss	16.01.2015
810997	ALU	201380040955.3		CN	Cell Phone Enabled Visual Mute	30.07.2013
810997	ALU	2015524764		JP	Cell Phone Enabled Visual Mute	30.07.2013
810997	ALU	10-2015-7003790		KR	Cell Phone Enabled Visual Mute	30.07.2013
810997	ALU	14/416913		US	Cell Phone Enabled Visual Mute	30.07.2013
816930	ALU	15152524.3		EP	LTE Diversity Synchronisation	26.01.2015
					Petabit-class packet switch architecture	
809989	ALU	20157005359	KR101730885	KR	Petabit-class packet switch architecture	25.04.2013
					Petabit-class packet switch architecture	
809989	ALU	14/400704	US9531495	US	Petabit-class packet switch architecture	25.04.2013
Claussen 13-10-17-46 (H)	ALU	14/589408	US9215722	US	Method And Apparatus For Managing Interference In A Wireless Communication System	05.01.2015
811450	ALU	201380042827.2		CN	Targeted Advertisement Board	08.08.2013
811450	ALU	2015526938		JP	Targeted Advertisement Board	08.08.2013
811450	ALU	14/421370		US	Targeted Advertisement Board	08.08.2013
812529	ALU	201380062211.1		CN	HAS Client Procedure To Learn The Network Behaviour	25.11.2013
812529	ALU	2015544425	JP6147866	JP	HAS Client Procedure To Learn The Network Behaviour	25.11.2013
812529	ALU	14/648441	US9357273	US	HAS Client Procedure To Learn The Network Behaviour	25.11.2013
812035	ALU	14/418225	US9312916	US	Method For Remote Detection Of Reversed POTS Splitters	24.07.2013
812534	ALU	2013800481537		CN	Diagnostic Of Bad Configuration Of DPBO Parameters	23.07.2013
812534	ALU	2015531500	JP6063574	JP	Diagnostic Of Bad Configuration Of DPBO Parameters	23.07.2013
812534	ALU	14/419473	US9300358	US	Diagnostic Of Bad Configuration Of DPBO Parameters	23.07.2013
812555	ALU	201380072510.3		CN	Out Of Path Transparent Caching	21.11.2013
812555	ALU	2015545729		JP	Out Of Path Transparent Caching	21.11.2013
812555	ALU	14/650105		US	Out Of Path Transparent Caching	21.11.2013
					Efficient Setup For Privacy-Preserving Database System	
812433	ALU	201380073289.3		CN	Efficient Setup For Privacy-Preserving Database System	18.12.2013
					Efficient Setup For Privacy-Preserving Database System	
812433	ALU	13821286.5		EP	Efficient Setup For Privacy-Preserving Database System	18.12.2013
Bosch 29-1 (P)	ALU	12197969.4	EP2574139	FR	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	12197969.4	EP2574139	DE	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	12197969.4	EP2574139	GB	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
139048	ALU	201410741257.2		CN	LAYER 4 THROUGH 7 SERVER CARD HOSTED BY THE DSLAM	15.12.2003
811448	ALU	12306034.5	EP2704331	FR	Automatic Optimization Of VCE Parameters In DSL Vectored Systems	30.08.2012
811448	ALU	12306034.5	EP2704331	DE	Automatic Optimization Of VCE Parameters In DSL Vectored Systems	30.08.2012
811448	ALU	12306034.5	EP2704331	GB	Automatic Optimization Of VCE Parameters In DSL Vectored Systems	30.08.2012
807985	ALU	12701194.8	EP2664110	FR	Single Early Discard for Reduced Delay in Network Buffers	05.01.2012
807985	ALU	12701194.8	EP2664110	DE	Single Early Discard for Reduced Delay in Network Buffers	05.01.2012
807985	ALU	12701194.8	EP2664110	GB	Single Early Discard for Reduced Delay in Network Buffers	05.01.2012
812114	ALU	2015550091		JP	Packet reflective optical Selector & Detector	27.12.2013
812114	ALU	14/654935	US9537597	US	Packet reflective optical Selector & Detector	27.12.2013

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
802031	ALU	07291609.1	EP2073462	GB	Service Layer Contract ID in the pathkey extension	21.12.2007
811895	ALU	201380048445.0		CN	Improved Administration Approval Process For Critical Operations In Computer Systems	13.09.2013
811895	ALU	2015532324		JP	Improved Administration Approval Process For Critical Operations In Computer Systems	13.09.2013
811895	ALU	20157006909		KR	Improved Administration Approval Process For Critical Operations In Computer Systems	13.09.2013
811895	ALU	14/423967		US	Improved Administration Approval Process For Critical Operations In Computer Systems	13.09.2013
812037	ALU	201380065435.8		CN	Performance enhancement of video surveillance systems using mobile devices	08.11.2013
812037	ALU	2015546910	JP6125035	JP	Performance enhancement of video surveillance systems using mobile devices	08.11.2013
812037	ALU	20157016024	KR101716070	KR	Performance enhancement of video surveillance systems using mobile devices	08.11.2013
812037	ALU	14/442796		US	Performance enhancement of video surveillance systems using mobile devices	08.11.2013
812096	ALU	2013800505052		CN	Macro Antenna Feeder Network - Optimal Design, Architecture And Instantiation	14.08.2013
812096	ALU	845/CHENP//2015		IN	Macro Antenna Feeder Network - Optimal Design, Architecture And Instantiation	14.08.2013
812096	ALU	2015526895	JP6009079	JP	Macro Antenna Feeder Network - Optimal Design, Architecture And Instantiation	02.08.2013
817344	ALU	15305029.9		EP	Prioritized Congestion Control For Deadline-Aware Traffic Delivery With EDF Scheduling	15.01.2015
106137	ALU	07113763.2	EP1890366	FR	INTEGRATED AND TUNABLE FILTER TO ENLARGE THE OPTICAL BANDWIDTH OF SEMICONDUCTOR OPTICAL AMPLIFIERS	03.08.2007
106137	ALU	07113763.2	EP1890366	DE	INTEGRATED AND TUNABLE FILTER TO ENLARGE THE OPTICAL BANDWIDTH OF SEMICONDUCTOR OPTICAL AMPLIFIERS	03.08.2007
106137	ALU	07113763.2	EP1890366	GB	INTEGRATED AND TUNABLE FILTER TO ENLARGE THE OPTICAL BANDWIDTH OF SEMICONDUCTOR OPTICAL AMPLIFIERS	03.08.2007
805937	ALU	2014245447	JP6066980	JP	Photonic Match Filter	30.11.2010
817305	ALU	14/580756	US9560742	US	Backdrill Reliability Anchors	23.12.2014
812346	ALU	2013800364459		CN	Method For Achieving End-To-End Path Diversity For Dual-Homed UNI-Clients	17.06.2013
812346	ALU	2015-520873	JP6087433	JP	Method For Achieving End-To-End Path Diversity For Dual-Homed UNI-Clients	17.06.2013
812346	ALU	10-2015-7003125	KR10-101643911	KR	Method For Achieving End-To-End Path Diversity For Dual-Homed UNI-Clients	17.06.2013
812346	ALU	14/406829	US9559944	US	Method For Achieving End-To-End Path Diversity For Dual-Homed UNI-Clients	17.06.2013
817390	ALU	15305041.4		EP	Queue Management With Future Traffic Detection For Consistent Low-Latency Provisioning	16.01.2015
811701	ALU	9668/DELNP/2014		IN	eOTDR Crosstalk Mitigation Through Digital Signal Processing	30.04.2013
811701	ALU	2015-516521	JP5890940	JP	eOTDR Crosstalk Mitigation Through Digital Signal Processing	30.04.2013
811701	ALU	10-2015-7000826	KR101613868	KR	eOTDR Crosstalk Mitigation Through Digital Signal Processing	30.04.2013
811701	ALU	14/400935		US	eOTDR Crosstalk Mitigation Through Digital Signal Processing	30.04.2013
817266	ALU	14/610236		US	Keyhole-Mount Locking Mechanism	30.01.2015
121208	ALU	07291612.5	EP2073422	DE	FORWARD ERROR CORRECTION FOR VIDEO CONTENT IN THE ACCESS NODE.	21.12.2007
121208	ALU	07291612.5	EP2073422	GB	FORWARD ERROR CORRECTION FOR VIDEO CONTENT IN THE ACCESS NODE.	21.12.2007
Zarrabizadeh 23 (MH)	ALU	201525895	JP6162734	JP	Watermarking Scheme For Digital Video	29.09.2004
815852	ALU	14/626040		US	Extending The Functionality Of An Existing LED Display Interface	19.02.2015
812879	ALU	1020157013989	KR101719133	KR	Seamless communication application shift	21.10.2013
812879	ALU	14/648377	US9661140	US	Seamless communication application shift	21.10.2013
812159	ALU	2015546920	JP5947468	JP	Method For WIFI Connectivity Loss Anticipation	26.11.2013
812159	ALU	14/651822	US9648530	US	Method For WIFI Connectivity Loss Anticipation	26.11.2013
811974	ALU	2015548337	JP6034510	JP	Green Comb for WiFi	04.12.2013
811974	ALU	14/652994	US9577851	US	Green Comb for WiFi	04.12.2013
Bu 6-6-40 (T)	ALU	14/596758		US	Methods And Devices For Defending A 3G Wireless Network Against Malicious Attacks	14.01.2015
806349	ALU	201080050923.8		CN	Antenna Apparatus and Antenna Selection Method	21.09.2010
813668	ALU	14714451.3		EP	End To End Video Latency In A Realtime Video Conversation	03.03.2014
813668	ALU	2016500536		JP	End To End Video Latency In A Realtime Video Conversation	03.03.2014
801369	ALU	08755435.8	EP2149225	GB	Dual OSS Management of an Ethernet Access Network	14.05.2008

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
813172	ALU	201380067108.6		CN	Robust Content-Based Solution For Dynamically Optimizing Multi-User Wireless Multimedia Transmission	20.12.2013
813172	ALU	2015548612	JP6019250	JP	Robust Content-Based Solution For Dynamically Optimizing Multi-User Wireless Multimedia Transmission	20.12.2013
813172	ALU	14/649833	US9660921	US	Robust Content-Based Solution For Dynamically Optimizing Multi-User Wireless Multimedia Transmission	20.12.2013
811362	ALU	201380054589.7		CN	Group Data Plan Quota Allocation For Mobile Devices	08.10.2013
811362	ALU	13779494.7		EP	Group Data Plan Quota Allocation For Mobile Devices	08.10.2013
Yang 12-14-9 (Y)	ALU	06739696.0	EP1869940	FR	Method For Reverse Link Congestion Overload Control In Wireless High Speed Data Applications	28.03.2006
817376	ALU	15305408.5		EP	Control Of Spectral Contributions Of Resonators For HARP Transmitter	20.03.2015
Doerr 28-48 (CR)	ALU	00308091.8	EP1089479	FR	Wavelength Division Add/Drop Multiplexer	18.09.2000
Doerr 28-48 (CR)	ALU	00308091.8	EP1089479	DE	Wavelength Division Add/Drop Multiplexer	18.09.2000
Doerr 28-48 (CR)	ALU	00308091.8	EP1089479	GB	Wavelength Division Add/Drop Multiplexer	18.09.2000
809019	ALU	12750935.4	EP2742724	FR	Method And Apparatus For Controlling Wireless Uplink Sessions	08.08.2012
809019	ALU	12750935.4	EP2742724	DE	Method And Apparatus For Controlling Wireless Uplink Sessions	08.08.2012
809019	ALU	12750935.4	EP2742724	GB	Method And Apparatus For Controlling Wireless Uplink Sessions	08.08.2012
809893[1]	ALU	14/624087		US	Privacy And Security Control Of SMS Archiving	17.02.2015
803348	ALU	09162898.2	EP2139198	FR	Trusted plane for routing equipment embedding a tamper resistant device	17.06.2009
803348	ALU	09162898.2	EP2139198	DE	Trusted plane for routing equipment embedding a tamper resistant device	17.06.2009
803348	ALU	09162898.2	EP2139198	GB	Trusted plane for routing equipment embedding a tamper resistant device	17.06.2009
812014	ALU	12182267.0	EP2704429	FR	Learning enabler for automatic video orchestration in the context of video-conferences	29.08.2012
812014	ALU	12182267.0	EP2704429	DE	Learning enabler for automatic video orchestration in the context of video-conferences	29.08.2012
812014	ALU	12182267.0	EP2704429	GB	Learning enabler for automatic video orchestration in the context of video-conferences	29.08.2012
816006	ALU	14/693383		US	HIGH POWER PHASOR	22.04.2015
807262	ALU	201549120	JP5898351	JP	System, Apparatus And Method For Address Management In A Distributed Mobile Core Network	03.05.2012
808849	ALU	11400030.0	EP2525184	FR	Radio Controlled Bullet	18.05.2011
808849	ALU	11400030.0	EP2525184	DE	Radio Controlled Bullet	18.05.2011
808849	ALU	11400030.0	EP2525184	GB	Radio Controlled Bullet	18.05.2011
812679	ALU	2013800547712	ZL2013800547712	CN	Feed-Forward Filter With Broad Transmission Zero	23.10.2013
812679	ALU	2706/CHENP/2015		IN	Feed-Forward Filter With Broad Transmission Zero	23.10.2013
812679	ALU	2015542179	JP6053943	JP	Feed-Forward Filter With Broad Transmission Zero	23.10.2013
812679	ALU	20157012553	KR101631425	KR	Feed-Forward Filter With Broad Transmission Zero	23.10.2013
806876	ALU	11719369.8	EP2540040	FR	Source Based Queue Selection Mechanism In The Routing Environment	07.02.2011
806876	ALU	11719369.8	EP2540040	DE	Source Based Queue Selection Mechanism In The Routing Environment	07.02.2011
806876	ALU	11719369.8	EP2540040	GB	Source Based Queue Selection Mechanism In The Routing Environment	07.02.2011
Beck 7-20-8 (A)	ALU	07751144.2	EP1987655	FR	Method And Network For Providing Service Blending To A Subscriber	20.02.2007
Beck 7-20-8 (A)	ALU	07751144.2	EP1987655	DE	Method And Network For Providing Service Blending To A Subscriber	20.02.2007
Beck 7-20-8 (A)	ALU	07751144.2	EP1987655	GB	Method And Network For Providing Service Blending To A Subscriber	20.02.2007
817695	ALU	15290147.6		EP	Early Congestion Detection And Avoidance In A Deadline-Aware System	04.06.2015
Hermesmyer 2-4-4 (C)	ALU	07852728.0	EP2082557	FR	Method And Apparatus For Controlling Information Available From Content Distribution Points	12.10.2007
Hermesmyer 2-4-4 (C)	ALU	07852728.0	EP2082557	DE	Method And Apparatus For Controlling Information Available From Content Distribution Points	12.10.2007
Hermesmyer 2-4-4 (C)	ALU	07852728.0	EP2082557	GB	Method And Apparatus For Controlling Information Available From Content Distribution Points	12.10.2007
817470	ALU	PCT/EP2016/055909		WO	Timeserv: Mechanism For Providing Latency-Controlled Services	18.03.2016
817843	ALU	15/047821		US	Maximum Fill Link In Case Of Bonded Session (Two Access Connection Sharing Same IP Address)	19.02.2016
817321	ALU	15306299.7		EP	Backpropagation-less fiber nonlinearity compensator	19.08.2015
817684	ALU	15305986.0		EP	Self-heating mitigation for burst mode lasers	25.06.2015
120460	ALU	15162596.9		EP	EFFICIENT METHOD FOR COMPUTATION AND TRANSMISSION OF BIGI	28.01.2000
809434	ALU	12735869.5	EP2754311	FR	Protection against robbery of mobile	13.07.2012
807599	ALU	12709368.0	EP2661709	FR	Efficient Video Duplication Detection	04.01.2012

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
807599	ALU	12709368.0	EP2661709	DE	Efficient Video Duplication Detection	04.01.2012
807599	ALU	12709368.0	EP2661709	GB	Efficient Video Duplication Detection	04.01.2012
Kroupenkine 4 (TN)	ALU	05018133.8	EP1607779	FR	MicroLens	08.05.2002
Kroupenkine 4 (TN)	ALU	05018133.8	EP1607779	DE	MicroLens	08.05.2002
Kroupenkine 4 (TN)	ALU	05018133.8	EP1607779	GB	MicroLens	08.05.2002
810028	ALU	12751226.7	EP2745595	FR	Method And Apparatus For Controlling Buffer Status Report Messaging	14.08.2012
810028	ALU	12751226.7	EP2745595	DE	Method And Apparatus For Controlling Buffer Status Report Messaging	14.08.2012
810028	ALU	12751226.7	EP2745595	GB	Method And Apparatus For Controlling Buffer Status Report Messaging	14.08.2012
812688	ALU	2013800526082		CN	Apparatus, Method and Computer Program Operable to Determine Estimates	08.10.2013
812688	ALU	2015-536085	JP6080962	JP	Apparatus, Method and Computer Program Operable to Determine Estimates	08.10.2013
812688	ALU	14/431032	US9490905	US	Apparatus, Method and Computer Program Operable to Determine Estimates	08.10.2013
812531	ALU	12306438.8	EP2733858	FR	Automatic DPBO Configuration For VDSL2 Lines	19.11.2012
812531	ALU	12306438.8	EP2733858	DE	Automatic DPBO Configuration For VDSL2 Lines	19.11.2012
812531	ALU	12306438.8	EP2733858	GB	Automatic DPBO Configuration For VDSL2 Lines	19.11.2012
811818	ALU	12306019.6	EP2701438	FR	Method For Using ABS Resources With Reduced Transmit Power	24.08.2012
811818	ALU	12306019.6	EP2701438	DE	Method For Using ABS Resources With Reduced Transmit Power	24.08.2012
811818	ALU	12306019.6	EP2701438	GB	Method For Using ABS Resources With Reduced Transmit Power	24.08.2012
808728	ALU	11305305.2	EP2503720	FR	Polar Domain Compression And Decompression Of Crosstalk-cancellation Coefficients	18.03.2011
808728	ALU	11305305.2	EP2503720	DE	Polar Domain Compression And Decompression Of Crosstalk-cancellation Coefficients	18.03.2011
808728	ALU	11305305.2	EP2503720	GB	Polar Domain Compression And Decompression Of Crosstalk-cancellation Coefficients	18.03.2011
803003	ALU	09714520.5	EP2250764	FR	In-Bound Mechanism That Monitors End-To-End QOE Of Services With Application Awareness	17.02.2009
803003	ALU	09714520.5	EP2250764	DE	In-Bound Mechanism That Monitors End-To-End QOE Of Services With Application Awareness	17.02.2009
803003	ALU	09714520.5	EP2250764	GB	In-Bound Mechanism That Monitors End-To-End QOE Of Services With Application Awareness	17.02.2009
Bosch 9-1-41 (P)	ALU	06845006.3	EP1961246	FR	Method Of Downlink Rate Control	08.12.2006
Bosch 9-1-41 (P)	ALU	06845006.3	EP1961246	DE	Method Of Downlink Rate Control	08.12.2006
Bosch 9-1-41 (P)	ALU	06845006.3	EP1961246	GB	Method Of Downlink Rate Control	08.12.2006
810997	ALU	12305965.1	EP2693746	FR	Cell Phone Enabled Visual Mute	03.08.2012
810997	ALU	12305965.1	EP2693746	DE	Cell Phone Enabled Visual Mute	03.08.2012
810997	ALU	12305965.1	EP2693746	GB	Cell Phone Enabled Visual Mute	03.08.2012
815091	ALU	2015108227	JP6033917	JP	A Method Of Cross-Media Unified Targeted Advertisement	28.05.2015
806254	ALU	11702553.6	EP2529570	FR	Method And Apparatus For Tracing Mobile Sessions	21.01.2011
806254	ALU	11702553.6	EP2529570	DE	Method And Apparatus For Tracing Mobile Sessions	21.01.2011
804774	ALU	09167021.6	EP2282427	FR	PTP (Message) Frequency Field (PFF)	31.07.2009
804774	ALU	09167021.6	EP2282427	DE	PTP (Message) Frequency Field (PFF)	31.07.2009
804774	ALU	09167021.6	EP2282427	GB	PTP (Message) Frequency Field (PFF)	31.07.2009
808610	ALU	12305173.2	EP2629546	GB	Ad-Play Grace Period in Program Switch and Search Modes	16.02.2012
808610	ALU	12305173.2	EP2629546	DE	Ad-Play Grace Period in Program Switch and Search Modes	16.02.2012
811784	ALU	12185080.4	EP2712099	FR	DEgraded P2P Transparent Clock (DEPP)	19.09.2012
811784	ALU	12185080.4	EP2712099	DE	DEgraded P2P Transparent Clock (DEPP)	19.09.2012
811784	ALU	12185080.4	EP2712099	GB	DEgraded P2P Transparent Clock (DEPP)	19.09.2012
812159	ALU	12306590.6	EP2744267	FR	Method For WIFI Connectivity Loss Anticipation	14.12.2012
812159	ALU	12306590.6	EP2744267	DE	Method For WIFI Connectivity Loss Anticipation	14.12.2012
812159	ALU	12306590.6	EP2744267	GB	Method For WIFI Connectivity Loss Anticipation	14.12.2012
804823	ALU	10720699.7	EP2436147	FR	Convert Unicast Client Requests to Multicast for Load Balancing and High Availability	19.05.2010
804823	ALU	10720699.7	EP2436147	DE	Convert Unicast Client Requests to Multicast for Load Balancing and High Availability	19.05.2010
804823	ALU	10720699.7	EP2436147	GB	Convert Unicast Client Requests to Multicast for Load Balancing and High Availability	19.05.2010
Srivastava 16 (A)	ALU	07754616.6	EP2005746	FR	Method And Apparatus For Delivering Subscription Service Content To Roaming Users	30.03.2007
Srivastava 16 (A)	ALU	07754616.6	EP2005746	DE	Method And Apparatus For Delivering Subscription Service Content To Roaming Users	30.03.2007

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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Srivastava 16 (A)	ALU	07754616.6	EP2005746	GB	Method And Apparatus For Delivering Subscription Service Content To Roaming Users	30.03.2007
Dominique 19-15-9 (F)	ALU	201510387344.7		CN	Method Of Estimating A Current Channel Condition In A Wireless Communications Network	05.05.2006
802666	ALU	08290432.7	EP2117129	FR	CROSSTALK ANOMALY DETECTOR	07.05.2008
802666	ALU	08290432.7	EP2117129	DE	CROSSTALK ANOMALY DETECTOR	07.05.2008
802666	ALU	08290432.7	EP2117129	GB	CROSSTALK ANOMALY DETECTOR	07.05.2008
817788	ALU	15306374.8		EP	Method For Efficient Selective Retransmission Protocol For Multicast/Broadcast Services	09.09.2015
813144	ALU	13305002.1	EP2752853	FR	Distributed and Sustainable Video Editing System in the Cloud	03.01.2013
813144	ALU	13305002.1	EP2752853	DE	Distributed and Sustainable Video Editing System in the Cloud	03.01.2013
813144	ALU	13305002.1	EP2752853	GB	Distributed and Sustainable Video Editing System in the Cloud	03.01.2013
					CROSSTALK CHANNEL ESTIMATION BEFORE MODEM INITIALIZATION	
801048	ALU	201510550118.6		CN		01.09.2015
804528	ALU	10710628.8	EP2392100	FR	Scaled Ethernet OAM For Mesh And Hub-And-Spoke Networks	15.01.2010
804528	ALU	10710628.8	EP2392100	DE	Scaled Ethernet OAM For Mesh And Hub-And-Spoke Networks	15.01.2010
804528	ALU	10710628.8	EP2392100	GB	Scaled Ethernet OAM For Mesh And Hub-And-Spoke Networks	15.01.2010
801841	ALU	201510427668.9		CN	Dynamic preemption	06.05.2009
106330	ALU	07115744.0	EP1901099	FR	SPEED-UP OF TRANSPARENT OPTICAL NODES PROTECTION BASED ON WAVELENGTH SELECTIVE SWITCHES	05.09.2007
106330	ALU	07115744.0	EP1901099	DE	SPEED-UP OF TRANSPARENT OPTICAL NODES PROTECTION BASED ON WAVELENGTH SELECTIVE SWITCHES	05.09.2007
106330	ALU	07115744.0	EP1901099	GB	SPEED-UP OF TRANSPARENT OPTICAL NODES PROTECTION BASED ON WAVELENGTH SELECTIVE SWITCHES	05.09.2007
805459	ALU	10305008.4	EP2341642	FR	Polarization-based coded modulation in optical transmission systems with coherent detection	05.01.2010
805459	ALU	10305008.4	EP2341642	DE	Polarization-based coded modulation in optical transmission systems with coherent detection	05.01.2010
805459	ALU	10305008.4	EP2341642	GB	Polarization-based coded modulation in optical transmission systems with coherent detection	05.01.2010
811970	ALU	14/808133	US9569742	US	Reducing Costs Related To Use Of Networks Based On Pricing Heterogeneity	24.07.2015
800008	ALU	07290252.1	EP1965504	FR	Multi-band Low Noise Amplifier RF IC Module including electronic for digital control, for diversity antenna systems	27.02.2007
800008	ALU	07290252.1	EP1965504	DE	Multi-band Low Noise Amplifier RF IC Module including electronic for digital control, for diversity antenna systems	27.02.2007
800008	ALU	07290252.1	EP1965504	GB	Multi-band Low Noise Amplifier RF IC Module including electronic for digital control, for diversity antenna systems	27.02.2007
817978	ALU	201510567579.4		CN	Hybrid Analog/Digital Beamforming Based On Pattern Reconfigurable Antennas	08.09.2015
Mooney 9-42-27 (CF)	ALU	08726935.3	EP2130395	FR	Low Cost End To End Solution For Multicast Short Messaging	18.03.2008
Mooney 9-42-27 (CF)	ALU	08726935.3	EP2130395	DE	Low Cost End To End Solution For Multicast Short Messaging	18.03.2008
Mooney 9-42-27 (CF)	ALU	08726935.3	EP2130395	GB	Low Cost End To End Solution For Multicast Short Messaging	18.03.2008
817915	ALU	201510535938.8		CN	An Throughput Optimal Mimo Modes Switch For Beamforming Systems	27.08.2015
812235	ALU	13305513.7	EP2793455	FR	Peak Amplitude Equalization	19.04.2013
812235	ALU	13305513.7	EP2793455	DE	Peak Amplitude Equalization	19.04.2013
812235	ALU	13305513.7	EP2793455	GB	Peak Amplitude Equalization	19.04.2013
818198	ALU	201510586086.5		CN	Common Beamforming In High-Speed Rail Mobile Systems	15.09.2015
Zarrabizadeh 23 (MH)	ALU	04255628.2	EP1519312	FR	Watermarking Scheme For Digital Video	16.09.2004
Zarrabizadeh 23 (MH)	ALU	04255628.2	EP1519312	DE	Watermarking Scheme For Digital Video	16.09.2004
Zarrabizadeh 23 (MH)	ALU	04255628.2	EP1519312	GB	Watermarking Scheme For Digital Video	16.09.2004
134177	ALU	05026930.7	EP1670205	FR	SECURE AUTHENTICATION ADVERTISEMENT PROTOCOL	09.12.2005
134177	ALU	05026930.7	EP1670205	DE	SECURE AUTHENTICATION ADVERTISEMENT PROTOCOL	09.12.2005
134177	ALU	05026930.7	EP1670205	GB	SECURE AUTHENTICATION ADVERTISEMENT PROTOCOL	09.12.2005
137518	ALU	04300801.0	EP1533954	FR	Coherent Counters for Cell Loss Detection and Fault Isolation	19.11.2004
137518	ALU	04300801.0	EP1533954	DE	Coherent Counters for Cell Loss Detection and Fault Isolation	19.11.2004
137518	ALU	04300801.0	EP1533954	GB	Coherent Counters for Cell Loss Detection and Fault Isolation	19.11.2004
801461	ALU	08305281.1	EP2136445	FR	Fabrication of polarization insensitive quantum dots based devices for optical fiber communications	19.06.2008
801461	ALU	08305281.1	EP2136445	DE	Fabrication of polarization insensitive quantum dots based devices for optical fiber communications	19.06.2008

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Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
801461	ALU	08305281.1	EP2136445	GB	Fabrication of polarization insensitive quantum dots based devices for optical fiber communications	19.06.2008
808826	ALU	10290663.3	EP2466810	DE	Method For Routing In Name Based Networking	17.12.2010
808826	ALU	10290663.3	EP2466810	GB	Method For Routing In Name Based Networking	17.12.2010
801433	ALU	09721326.8	EP2281366	FR	MPLS LSP Automation Engine For Ring Topologies	12.03.2009
801433	ALU	09721326.8	EP2281366	DE	MPLS LSP Automation Engine For Ring Topologies	12.03.2009
801433	ALU	09721326.8	EP2281366	GB	MPLS LSP Automation Engine For Ring Topologies	12.03.2009
805955	ALU	10795118.8	EP2510651	FR	CFM Timeout Interval Control To Support Hitless Software Upgrades	02.12.2010
805955	ALU	10795118.8	EP2510651	DE	CFM Timeout Interval Control To Support Hitless Software Upgrades	02.12.2010
805955	ALU	10795118.8	EP2510651	GB	CFM Timeout Interval Control To Support Hitless Software Upgrades	02.12.2010
814303	ALU	13290231.3	EP2854338	FR	Flexibly Configurable Traffic Generator With Minimal Resource Consumption	27.09.2013
814303	ALU	13290231.3	EP2854338	DE	Flexibly Configurable Traffic Generator With Minimal Resource Consumption	27.09.2013
814303	ALU	13290231.3	EP2854338	GB	Flexibly Configurable Traffic Generator With Minimal Resource Consumption	27.09.2013
804426	ALU	10725274.4	EP2406932	FR	Intrusion Detection For Virtual Layer-2 Services	11.03.2010
804426	ALU	10725274.4	EP2406932	DE	Intrusion Detection For Virtual Layer-2 Services	11.03.2010
804426	ALU	10725274.4	EP2406932	GB	Intrusion Detection For Virtual Layer-2 Services	11.03.2010
811316	ALU	12382224.9	EP2670110	FR	Rules Based Media Transformation For Multi-Destination Content Delivery	01.06.2012
811316	ALU	12382224.9	EP2670110	DE	Rules Based Media Transformation For Multi-Destination Content Delivery	01.06.2012
811316	ALU	12382224.9	EP2670110	GB	Rules Based Media Transformation For Multi-Destination Content Delivery	01.06.2012
804522	ALU	09290715.3	EP2299753	FR	Traffic and Interference Aware Resource Management	18.09.2009
804522	ALU	09290715.3	EP2299753	DE	Traffic and Interference Aware Resource Management	18.09.2009
804522	ALU	09290715.3	EP2299753	GB	Traffic and Interference Aware Resource Management	18.09.2009
Feder 20-6 (PM)	ALU	14/919947	US9392575	US	QoS-Aware Paging In A Wireless Communication System	22.10.2015
817864	ALU	201510718707.0		CN	An Indoor Coverage System Design For Distributed MIMO	29.10.2015
Fischer 39-1 (G)	ALU	07863098.5	EP2100374	FR	Current Switched Circuit For Switch Mode Power Amplifiers	18.12.2007
Fischer 39-1 (G)	ALU	07863098.5	EP2100374	DE	Current Switched Circuit For Switch Mode Power Amplifiers	18.12.2007
Fischer 39-1 (G)	ALU	07863098.5	EP2100374	GB	Current Switched Circuit For Switch Mode Power Amplifiers	18.12.2007
818393	ALU	15290331.6		EP	Utility-Based Congestion Control On The Transport Layer	24.12.2015
810839	ALU	12186744.4	EP2713593	FR	Immersive system with dynamic staging based on 3D positions of participants	28.09.2012
810839	ALU	12186744.4	EP2713593	DE	Immersive system with dynamic staging based on 3D positions of participants	28.09.2012
810839	ALU	12186744.4	EP2713593	GB	Immersive system with dynamic staging based on 3D positions of participants	28.09.2012
811439	ALU	12382223.1	EP2670109	FR	Applying Intelligent Multicast Distribution For Cache Pre-Filling In A Content Delivery Network	01.06.2012
811439	ALU	12382223.1	EP2670109	DE	Applying Intelligent Multicast Distribution For Cache Pre-Filling In A Content Delivery Network	01.06.2012
811439	ALU	12382223.1	EP2670109	GB	Applying Intelligent Multicast Distribution For Cache Pre-Filling In A Content Delivery Network	01.06.2012
811965	ALU	12305571.7	EP2667541	FR	Orchestrating Connectivity Services For Maximizing Controlled Network Infrastructure (OCSN)	23.05.2012
811965	ALU	12305571.7	EP2667541	DE	Orchestrating Connectivity Services For Maximizing Controlled Network Infrastructure (OCSN)	23.05.2012
811965	ALU	12305571.7	EP2667541	GB	Orchestrating Connectivity Services For Maximizing Controlled Network Infrastructure (OCSN)	23.05.2012
Zarrabizadeh 22 (MH)	ALU	04255616.7	EP1519311	FR	Watermarking Scheme For Digital Video	16.09.2004
Zarrabizadeh 22 (MH)	ALU	04255616.7	EP1519311	DE	Watermarking Scheme For Digital Video	16.09.2004
Zarrabizadeh 22 (MH)	ALU	04255616.7	EP1519311	GB	Watermarking Scheme For Digital Video	16.09.2004
137646	ALU	04300610.5	EP1519594	FR	Network Element Resource Utilization Tracking	17.09.2004
137646	ALU	04300610.5	EP1519594	DE	Network Element Resource Utilization Tracking	17.09.2004
137646	ALU	04300610.5	EP1519594	GB	Network Element Resource Utilization Tracking	17.09.2004
805442	ALU	09290945.6	EP2337240	FR	Multichannel WDM-PON module with integrated OTDR function	15.12.2009
805442	ALU	09290945.6	EP2337240	DE	Multichannel WDM-PON module with integrated OTDR function	15.12.2009
805442	ALU	09290945.6	EP2337240	GB	Multichannel WDM-PON module with integrated OTDR function	15.12.2009
806233	ALU	11705846.1	EP2537313	FR	Service level Distributed Denial of Service attacks detection and mitigation	15.02.2011
806233	ALU	11705846.1	EP2537313	DE	Service level Distributed Denial of Service attacks detection and mitigation	15.02.2011

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Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
808309	ALU	11305138.7	EP2487819	FR	IEEE 1588V2 Transparent clock On-Demand (TOD)	10.02.2011
105488	ALU	05108435.8	EP1646262	GB	WAVELENGTH-SWITCH-BASED MODULAR PATCH-PANELS	14.09.2005
803745	ALU	09179288.7	EP2200193	FR	Supervised polarization demultiplexing algorithm in polarization division multiplexed optical systems with coherent detection	15.12.2009
803745	ALU	09179288.7	EP2200193	DE	Supervised polarization demultiplexing algorithm in polarization division multiplexed optical systems with coherent detection	15.12.2009
803745	ALU	09179288.7	EP2200193	GB	Supervised polarization demultiplexing algorithm in polarization division multiplexed optical systems with coherent detection	15.12.2009
814385	ALU	14823601.1		EP	Alcatel-Lucent Service Portal - Security Encryption Management	23.06.2014
814385	ALU	2016524638		JP	Alcatel-Lucent Service Portal - Security Encryption Management	23.06.2014
812732	ALU	14742642.3		EP	Dynamic And Quasi-Dynamic Group Data Plan Quota Allocation For Mobile Devices	26.06.2014
812732	ALU	2016524190	JP6159884	JP	Dynamic And Quasi-Dynamic Group Data Plan Quota Allocation For Mobile Devices	26.06.2014
812583	ALU	12306526.0	EP2741495	FR	Self Adapting VideoConference User Interface for Maximized Immersion	06.12.2012
812583	ALU	12306526.0	EP2741495	DE	Self Adapting VideoConference User Interface for Maximized Immersion	06.12.2012
812583	ALU	12306526.0	EP2741495	GB	Self Adapting VideoConference User Interface for Maximized Immersion	06.12.2012
814365	ALU	13306127.5	EP2835911	FR	Stable Vectoring Despite Decision Errors in Error Feedback	06.08.2013
814365	ALU	13306127.5	EP2835911	DE	Stable Vectoring Despite Decision Errors in Error Feedback	06.08.2013
814365	ALU	13306127.5	EP2835911	IT	Stable Vectoring Despite Decision Errors in Error Feedback	06.08.2013
814365	ALU	13306127.5	EP2835911	PL	Stable Vectoring Despite Decision Errors in Error Feedback	06.08.2013
814365	ALU	13306127.5	EP2835911	ES	Stable Vectoring Despite Decision Errors in Error Feedback	06.08.2013
814435	ALU	201480053233.6		CN	Social Hint-based Caching	23.09.2014
814435	ALU	2016517372		JP	Social Hint-based Caching	23.09.2014
814435	ALU	10-2016-7010777		KR	Social Hint-based Caching	23.09.2014
814435	ALU	15/023874		US	Social Hint-based Caching	23.09.2014
817843	ALU	PCT/US2016/020608		WO	Maximum Fill Link In Case Of Bonded Session (Two Access Connection Sharing Same IP Address)	03.03.2016
817847	ALU	PCT/EP2016/055812		WO	Congestion Controlled Priority Scheduler	17.03.2016
816094	ALU	PCT/IB2016/000518		WO	Simplified Method To Enhance Real-Time QoE In E-FACH (Or In LTE)	24.03.2016
814365	ALU	201480044364.8		CN	Stable Vectoring Despite Decision Errors in Error Feedback	31.07.2014
814365	ALU	2016-532331		JP	Stable Vectoring Despite Decision Errors in Error Feedback	31.07.2014
814035	ALU	10-2016-7005100	KR101759040	KR	Using POTS To Startup A Reversed Powered Device	28.08.2014
814035	ALU	14/910790	US9560218	US	Using POTS To Startup A Reversed Powered Device	28.08.2014
808693	ALU	10306390.5	EP2464026	FR	Optimized Parallel Initialization Of G.vector Lines By Handshake Prolongation	10.12.2010
808693	ALU	10306390.5	EP2464026	DE	Optimized Parallel Initialization Of G.vector Lines By Handshake Prolongation	10.12.2010
808693	ALU	10306390.5	EP2464026	GB	Optimized Parallel Initialization Of G.vector Lines By Handshake Prolongation	10.12.2010
815064	ALU	13306413.9	EP2863646	FR	Flexnode Slice Management	15.10.2013
815064	ALU	13306413.9	EP2863646	DE	Flexnode Slice Management	15.10.2013
813581	ALU	201480049101.6		CN	Small Cell DCCH Diversity To Improve Handover Success Rates	18.08.2014
813581	ALU	15/022679		US	Small Cell DCCH Diversity To Improve Handover Success Rates	18.08.2014
139407	ALU	06019959.3	EP1786190	FR	PRESENCE BASED WHISPER CALLS	23.09.2006
139407	ALU	06019959.3	EP1786190	DE	PRESENCE BASED WHISPER CALLS	23.09.2006
139407	ALU	06019959.3	EP1786190	GB	PRESENCE BASED WHISPER CALLS	23.09.2006
810743	ALU	20157036726	KR101611149	KR	LTE Subscriber Identity Correlation Service	17.10.2012
800271	ALU	08163744.9	EP2053788	GB	SYSTEM TO PROVIDE SCALABLE TV/VIDEO FLOWS IN DISCONTINUOUS COVERAGE ENVIRONMENT	05.09.2008
813555	ALU	13306184.6	EP2843845	FR	Reducing Offset Effects While Iteratively Estimating Precoder And Postcoder Structure	30.08.2013
813555	ALU	13306184.6	EP2843845	DE	Reducing Offset Effects While Iteratively Estimating Precoder And Postcoder Structure	30.08.2013
813555	ALU	13306184.6	EP2843845	GB	Reducing Offset Effects While Iteratively Estimating Precoder And Postcoder Structure	30.08.2013
Gill 26-4-17-10-8 (DM)	ALU	07839857.5	EP2132595	FR	A High Speed Semiconductor Optical Modulator	30.10.2007
Gill 26-4-17-10-8 (DM)	ALU	07839857.5	EP2132595	DE	A High Speed Semiconductor Optical Modulator	30.10.2007
Gill 26-4-17-10-8 (DM)	ALU	07839857.5	EP2132595	GB	A High Speed Semiconductor Optical Modulator	30.10.2007
135959	ALU	03004243.6	EP1343287	FR	GRAPHICAL SIP PROXY	26.02.2003
135959	ALU	03004243.6	EP1343287	DE	GRAPHICAL SIP PROXY	26.02.2003
135959	ALU	03004243.6	EP1343287	GB	GRAPHICAL SIP PROXY	26.02.2003

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0409

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
139157	ALU	04005495.9	EP1460808	FR	INTER-DOMAIN CSPF ALGORITHM FOR SUPPORTING HIERARCHICAL ROUTING IN INTERCONNECTED MULTI-DOMAIN OPTICAL TRANSPORT NETWORKS	08.03.2004
139157	ALU	04005495.9	EP1460808	DE	INTER-DOMAIN CSPF ALGORITHM FOR SUPPORTING HIERARCHICAL ROUTING IN INTERCONNECTED MULTI-DOMAIN OPTICAL TRANSPORT NETWORKS	08.03.2004
806478	ALU	20167002532	KR101663062	KR	Automatic adaptation of antenna tilt angle in mobile radio networks	20.05.2011
814843	ALU	201480058032.5		CN	Orderly Line Leaving In Vectored G.fast	14.10.2014
814843	ALU	2016525576		JP	Orderly Line Leaving In Vectored G.fast	14.10.2014
814843	ALU	10-20167010224		KR	Orderly Line Leaving In Vectored G.fast	14.10.2014
814843	ALU	15/026025		US	Orderly Line Leaving In Vectored G.fast	14.10.2014
814876	ALU	201480058031.0		CN	Configurable Output Impedance For G.fast Line Driver In Power Down Mode	14.10.2014
814876	ALU	15/026164		US	Configurable Output Impedance For G.fast Line Driver In Power Down Mode	14.10.2014
139305	ALU	05753119.6	EP1810495	FR	CYCLED SEALING CURRENT	19.05.2005
139305	ALU	05753119.6	EP1810495	DE	CYCLED SEALING CURRENT	19.05.2005
139305	ALU	05753119.6	EP1810495	GB	CYCLED SEALING CURRENT	19.05.2005
817654	ALU	PCT/EP2016/063058		WO	Assembly Level Re-Configurable Miniaturized Coaxial Cavity Resonators	08.06.2016
Leven 3 (A)	ALU	04250126.2	EP1962444	DE	Direct Optical N-State Phase Shift Keying	13.01.2004
Leven 3 (A)	ALU	04250126.2	EP1962444	GB	Direct Optical N-State Phase Shift Keying	13.01.2004
809388	ALU	12290124.2	EP2648352	FR	Mixed POADM-ROADM Optical Transport System	05.04.2012
809388	ALU	12290124.2	EP2648352	DE	Mixed POADM-ROADM Optical Transport System	05.04.2012
809388	ALU	12290124.2	EP2648352	GB	Mixed POADM-ROADM Optical Transport System	05.04.2012
805367	ALU	20127025411	KR101434332	KR	Speed-up end-to-end switching time delay for wavelength connection activations (SSTD)	25.02.2011
805367	ALU	13/580425	US9647963	US	Speed-up end-to-end switching time delay for wavelength connection activations (SSTD)	25.02.2011
806820	ALU	201180017202.1	ZL201180017202.1	CN	Non-coherent OTDR using Golay sequences in Multi-channel environment	17.03.2011
814365	ALU	10-2016-7005667		KR	Stable Vectoring Despite Decision Errors in Error Feedback	31.07.2014
814365	ALU	14/904579	US9722664	US	Stable Vectoring Despite Decision Errors in Error Feedback	31.07.2014
813555	ALU	2016-537256		JP	Reducing Offset Effects While Iteratively Estimating Precoder And Postcoder Structure	26.08.2014
813555	ALU	14/910073		US	Reducing Offset Effects While Iteratively Estimating Precoder And Postcoder Structure	26.08.2014
814035	ALU	2016-539478	JP6147936	JP	Using POTS To Startup A Reversed Powered Device	28.08.2014
818070	ALU	15/096754		US	Digitally Tunable Hybrid III/Silicon Laser	12.04.2016
814523	ALU	201480055041.9		CN	Method and Apparatus to automatically associate social interactions to the related TV programme	24.09.2014
814523	ALU	2016521308	JP61584435	JP	Method and Apparatus to automatically associate social interactions to the related TV programme	24.09.2014
814523	ALU	1020167009073		KR	Method and Apparatus to automatically associate social interactions to the related TV programme	24.09.2014
814523	ALU	15/026517		US	Method and Apparatus to automatically associate social interactions to the related TV programme	24.09.2014
Cai 134-37 (Y)	ALU	09733839.6	EP2289254	FR	Charging In LTE/EPC Communication Networks	26.03.2009
Cai 134-37 (Y)	ALU	09733839.6	EP2289254	DE	Charging In LTE/EPC Communication Networks	26.03.2009
Cai 134-37 (Y)	ALU	09733839.6	EP2289254	GB	Charging In LTE/EPC Communication Networks	26.03.2009
803458	ALU	08425465.5	EP2141860	FR	Methods for real-time data streaming in a network management system	04.07.2008
803458	ALU	08425465.5	EP2141860	DE	Methods for real-time data streaming in a network management system	04.07.2008
803458	ALU	08425465.5	EP2141860	GB	Methods for real-time data streaming in a network management system	04.07.2008
808675	ALU	201280014632.2		CN	Open UICC framework	21.03.2012
808675	ALU	14/006264		US	Open UICC framework	21.03.2012
810535	ALU	2012800462122	ZL2012800462122	CN	Bit Swap Reject, Forcing Bi Swap Only	27.08.2012
810535	ALU	14/241119	US9374251	US	Bit Swap Reject, Forcing Bi Swap Only	27.08.2012
811715	ALU	13717389.4		EP	System And Method For Data-Plane Fate Separation Of LDP LSPs	04.04.2013
811715	ALU	2015504737	JP5934836	JP	System And Method For Data-Plane Fate Separation Of LDP LSPs	04.04.2013
811715	ALU	20147027866	KR1576411	KR	System And Method For Data-Plane Fate Separation Of LDP LSPs	04.04.2013
815688	ALU	201580011873.5		CN	System and Method For Improvement of User Loyalty During Video Watching	03.03.2015
815688	ALU	10-20167027544		KR	System and Method For Improvement of User Loyalty During Video Watching	03.03.2015

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PATENT
REEL: 043877 FRAME: 0410

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
803780	ALU	08305566.5	EP2166579	FR	Photonic Power Switch And Method Of Controlling Current Flow In The Photonic Power Switch And Use Of Such Photonic Power Switch	18.09.2008
803780	ALU	08305566.5	EP2166579	DE	Photonic Power Switch And Method Of Controlling Current Flow In The Photonic Power Switch And Use Of Such Photonic Power Switch	18.09.2008
803780	ALU	08305566.5	EP2166579	GB	Photonic Power Switch And Method Of Controlling Current Flow In The Photonic Power Switch And Use Of Such Photonic Power Switch	18.09.2008
817321	ALU	PCT/EP2016/066315		WO	Backpropagation-less fiber nonlinearity compensator	08.07.2016
810912	ALU	2014-556932	JP5856694	JP	Non-disruptive Detection, Identification And Localization Of Impairments On Vectored Lines	12.09.2012
810912	ALU	20147019468	KR10-1622062	KR	Non-disruptive Detection, Identification And Localization Of Impairments On Vectored Lines	12.09.2012
810912	ALU	14/358564	US9608694	US	Non-disruptive Detection, Identification And Localization Of Impairments On Vectored Lines	12.09.2012
809209	ALU	12735737.4		EP	Content Popularity Extraction In Distributed Hash Table Peer-To-Peer Networks	02.07.2012
813679	ALU	13175360.0	EP2822246	FR	Method to include any video stream in a video conference	05.07.2013
811041	ALU	1120140199043		BR	Detachable base station	18.01.2013
811041	ALU	2013800094248		CN	Detachable base station	18.01.2013
805367	ALU	11704639.1	EP2553884	FR	Speed-up end-to-end switching time delay for wavelength connection activations (SSTD)	25.02.2011
805367	ALU	11704639.1	EP2553884	DE	Speed-up end-to-end switching time delay for wavelength connection activations (SSTD)	25.02.2011
805367	ALU	11704639.1	EP2553884	GB	Speed-up end-to-end switching time delay for wavelength connection activations (SSTD)	25.02.2011
814365	ALU	13306127.5	EP2835911	GB	Stable Vectoring Despite Decision Errors in Error Feedback	06.08.2013
814365	ALU	13306127.5	EP2835911	NL	Stable Vectoring Despite Decision Errors in Error Feedback	06.08.2013
813005	ALU	201480044148.3		CN	Including video mixing based systems in routed video sessions	10.07.2014
813005	ALU	2016533851		JP	Including video mixing based systems in routed video sessions	10.07.2014
813005	ALU	1020167003420		KR	Including video mixing based systems in routed video sessions	10.07.2014
813005	ALU	14/911527	US9571792	US	Including video mixing based systems in routed video sessions	10.07.2014
815064	ALU	201480056720.8		CN	Flexnode Slice Management	24.09.2014
814356	ALU	201480059154.6		CN	Combined Ethernet Interface Protection And OTH/SDH Path Protection Mechanism	24.09.2014
814356	ALU	2016-526819		JP	Combined Ethernet Interface Protection And OTH/SDH Path Protection Mechanism	27.04.2016
814356	ALU	15/025335		US	Combined Ethernet Interface Protection And OTH/SDH Path Protection Mechanism	24.09.2014
800304	ALU	08832451.2	EP2193636	FR	RSVP-TE Enhancements For MPLS/FRR Bandwidth Optimization	31.07.2008
800304	ALU	08832451.2	EP2193636	DE	RSVP-TE Enhancements For MPLS/FRR Bandwidth Optimization	31.07.2008
800304	ALU	08832451.2	EP2193636	GB	RSVP-TE Enhancements For MPLS/FRR Bandwidth Optimization	31.07.2008
817695	ALU	PCT/EP2016/062145		WO	Early Congestion Detection And Avoidance In A Deadline-Aware System	30.05.2016
818007	ALU	PCT/US2016/025791		WO	A Method On Preferential Selection Of Evolved Packet Gateway For Maximum Service Enablement	02.04.2016
815318	ALU	2016537565		JP	Method For Priority Scheduling Of Notification And Ad Messages For Efficient Network Communication	19.11.2014
815318	ALU	15/037173		US	Method For Priority Scheduling Of Notification And Ad Messages For Efficient Network Communication	19.11.2014
809312	ALU	11170777.4	EP2538592	FR	Protection Mechanism For Optical Packet Switched Networks	21.06.2011
809312	ALU	11170777.4	EP2538592	DE	Protection Mechanism For Optical Packet Switched Networks	21.06.2011
809312	ALU	11170777.4	EP2538592	GB	Protection Mechanism For Optical Packet Switched Networks	21.06.2011
806233	ALU	11705846.1	EP2537313	GB	Service level Distributed Denial of Service attacks detection and mitigation	15.02.2011
121270	ALU	06290318.2	EP1826981	FR	DEDICATED ADVERTISEMENT CHANNEL.	22.02.2006
121270	ALU	06290318.2	EP1826981	DE	DEDICATED ADVERTISEMENT CHANNEL.	22.02.2006
121270	ALU	06290318.2	EP1826981	GB	DEDICATED ADVERTISEMENT CHANNEL.	22.02.2006
818509	ALU	201510961030.3		CN	Method For Avoiding DC Short Circuit At RRU Antenna Port	18.12.2015
805290	ALU	09290451.5	EP2264913	FR	Dual beam active antenna	15.06.2009
805290	ALU	09290451.5	EP2264913	DE	Dual beam active antenna	15.06.2009
805290	ALU	09290451.5	EP2264913	GB	Dual beam active antenna	15.06.2009
805181	ALU	10791013.5	EP2514109	FR	Crosstalk Control Method And Apparatus Using A Bandwidth-Adaptive Precoder Interface	23.11.2010
805181	ALU	10791013.5	EP2514109	DE	Crosstalk Control Method And Apparatus Using A Bandwidth-Adaptive Precoder Interface	23.11.2010

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PATENT
REEL: 043877 FRAME: 0411

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
805181	ALU	10791013.5	EP2514109	GB	Crosstalk Control Method And Apparatus Using A Bandwidth-Adaptive Precoder Interface	23.11.2010
810839	ALU	2013800507236	ZL2013800507236	CN	Immersive system with dynamic staging based on 3D positions of participants	03.09.2013
810839	ALU	14/431101	US9432625	US	Immersive system with dynamic staging based on 3D positions of participants	03.09.2013
817684	ALU	PCT/EP2016/051244		WO	Self-heating mitigation for burst mode lasers	21.01.2016
813957	ALU	201480054393.2		CN	Low Power CTS-To-Sell To Prevent Starvation In WIFI Networks	30.09.2014
813957	ALU	2016519803		JP	Low Power CTS-To-Sell To Prevent Starvation In WIFI Networks	30.09.2014
813957	ALU	20167008298		KR	Low Power CTS-To-Sell To Prevent Starvation In WIFI Networks	30.09.2014
816679	ALU	14/456136	US9300348	US	10/100/1000basel Compact Small Form-Factor Pluggable Module	11.08.2014
814579	ALU	13306602.7	EP2876863	FR	Transparent Cache Efficiency In IP Networks	22.11.2013
814579	ALU	13306602.7	EP2876863	DE	Transparent Cache Efficiency In IP Networks	22.11.2013
814579	ALU	13306602.7	EP2876863	GB	Transparent Cache Efficiency In IP Networks	22.11.2013
814843	ALU	13306451.9	EP2866353	FR	Orderly Line Leaving In Vectored G.fast	22.10.2013
814843	ALU	13306451.9	EP2866353	DE	Orderly Line Leaving In Vectored G.fast	22.10.2013
814843	ALU	13306451.9	EP2866353	GB	Orderly Line Leaving In Vectored G.fast	22.10.2013
812511	ALU	14/648474		US	Dynamic Meta multimedia analyser based on Social interaction Analysis	11.10.2013
807433	ALU	10306190.9	EP2383900	FR	Phantom-mode reflectometry	29.10.2010
807433	ALU	10306190.9	EP2383900	DE	Phantom-mode reflectometry	29.10.2010
807433	ALU	10306190.9	EP2383900	GB	Phantom-mode reflectometry	29.10.2010
804594	ALU	09305182.9	EP2224671	FR	Software architecture to merge telephony services over heterogeneous network	27.02.2009
804594	ALU	09305182.9	EP2224671	DE	Software architecture to merge telephony services over heterogeneous network	27.02.2009
804594	ALU	09305182.9	EP2224671	GB	Software architecture to merge telephony services over heterogeneous network	27.02.2009
806569	ALU	11712711.8	EP2543170	FR	Feature For Secure Session Initiation With Hosts Behind Firewalls	02.03.2011
806569	ALU	11712711.8	EP2543170	DE	Feature For Secure Session Initiation With Hosts Behind Firewalls	02.03.2011
806569	ALU	11712711.8	EP2543170	GB	Feature For Secure Session Initiation With Hosts Behind Firewalls	02.03.2011
139157	ALU	04005495.9	EP1460808	GB	INTER-DOMAIN CSPF ALGORITHM FOR SUPPORTING HIERARCHICAL ROUTING IN INTERCONNECTED MULTI-DOMAIN OPTICAL TRANSPORT NETWORKS	08.03.2004
809388	ALU	1020147030857	KR101641070	KR	Mixed POADM-ROADM Optical Transport System	20.02.2013
809388	ALU	14/387295	US9331783	US	Mixed POADM-ROADM Optical Transport System	20.02.2013
102902	ALU	01403150.4	EP1225655	FR	Patch antenna with band matching by additional load radiotelephone terminals.	06.12.2001
102902	ALU	01403150.4	EP1225655	DE	Patch antenna with band matching by additional load radiotelephone terminals.	06.12.2001
102902	ALU	01403150.4	EP1225655	GB	Patch antenna with band matching by additional load radiotelephone terminals.	06.12.2001
813957	ALU	14782067.4		EP	Low Power CTS-To-Sell To Prevent Starvation In WIFI Networks	30.09.2014
150029	ALU	06301053.2	EP1775910	FR	Application Layer Ingress Filtering	16.10.2006
150029	ALU	06301053.2	EP1775910	DE	Application Layer Ingress Filtering	16.10.2006
150029	ALU	06301053.2	EP1775910	GB	Application Layer Ingress Filtering	16.10.2006
810976	ALU	201380012454.4	ZL201380012454.4	CN	Increase SP subscribers privacy, while monetizing geolocation services in Distributed CG-NAT for IPv4	13.02.2013
810976	ALU	14/380221		US	Increase SP subscribers privacy, while monetizing geolocation services in Distributed CG-NAT for IPv4	13.02.2013
803810	ALU	08290890.6	EP2166806	FR	Dynamic Management of OVSF codes	19.09.2008
803810	ALU	08290890.6	EP2166806	DE	Dynamic Management of OVSF codes	19.09.2008
803810	ALU	08290890.6	EP2166806	GB	Dynamic Management of OVSF codes	19.09.2008
810398	ALU	2014561060	JP6117253	JP	Flexible Optical Modulator For Advanced Modulation Formats	05.03.2013
810398	ALU	20147025011	KR101716556	KR	Flexible Optical Modulator For Advanced Modulation Formats	05.03.2013
806008	ALU	10757684.5		EP	Digital Coherent Detection Of Multi-Carrier Optical Signal	16.09.2010
806008	ALU	2012530938	JP5916611	JP	Digital Coherent Detection Of Multi-Carrier Optical Signal	16.09.2010
806008	ALU	20127007281	KR101402641	KR	Digital Coherent Detection Of Multi-Carrier Optical Signal	16.09.2010
811448	ALU	2013800390716	ZL201380039071.6	CN	Automatic Optimization Of VCE Parameters In DSL Vectored Systems	24.07.2013
811448	ALU	2015-528924	JP5955464	JP	Automatic Optimization Of VCE Parameters In DSL Vectored Systems	24.07.2013
811448	ALU	14/407444	US9509368	US	Automatic Optimization Of VCE Parameters In DSL Vectored Systems	24.07.2013
Kamel 1-2-14-15 (RE)	ALU	99303870.2	EP0961513	DE	Wireless CDMA System Having A Unique Forward Configuration Control Channel	18.05.1999

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0412

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Kamel 1-2-14-15 (RE)	ALU	99303870.2	EP0961513	GB	Wireless CDMA System Having A Unique Forward Configuration Control Channel	18.05.1999
807255	ALU	10290550.2	EP2442440	GB	Envelope Tracking Transmitter Architectures for coverage of Fragmented Frequency Bands	13.10.2010
Rao 4-34 (SA)	ALU	09729162.9	EP2263413	FR	Method For Routing Via Access Terminals	18.03.2009
Rao 4-34 (SA)	ALU	09729162.9	EP2263413	DE	Method For Routing Via Access Terminals	18.03.2009
Rao 4-34 (SA)	ALU	09729162.9	EP2263413	GB	Method For Routing Via Access Terminals	18.03.2009
815148	ALU	15/119610		US	Method For Transparent Transfer Of PTP Event Messages Across An Medium With Asymmetrical Transfer Delay In Both Directions	09.03.2015
806994	ALU	11785833.2		EP	Content Based VLAN Classification And Framework For Ethernet Network To Support Content Based Bridging	26.10.2011
806994	ALU	20137013906	KR101458779	KR	Content Based VLAN Classification And Framework For Ethernet Network To Support Content Based Bridging	26.10.2011
Kamel 1-2-14-15 (RE)	ALU	99303870.2	EP0961513	FR	Wireless CDMA System Having A Unique Forward Configuration Control Channel	18.05.1999
812999	ALU	14/903638	US9729825	US	Dynamic and context based distribution of Immersive Video conference processing	20.06.2014
807602	ALU	20137002567	KR101519895	KR	"Mobile Touch" - A Cellular Short Range Mobile Phone Sensor System	16.06.2011
807672	ALU	201180043962.X	ZL201180043962.X	CN	Method for Efficient Implementation of Phantom Mode	16.08.2011
800817	ALU	14/628597	US9363161	US	Mechanism To Dynamically Optimize Psdowires Based On The Collected End-to-End Cost	23.02.2015
813016	ALU	14/430383	US9549342	US	A Method of HAS Congestion Management In Wireless Network	25.10.2013
816955	ALU	14/607772		US	A System And Apparatus For High Capacity Mobile Wireless Hotspot Service Using Lte In The Unlicensed Spectrum	28.01.2015
801849	ALU	07291582.0	EP2073309	FR	Diversity bROADBAND rADIATING eLEMENT	21.12.2007
801849	ALU	07291582.0	EP2073309	DE	Diversity bROADBAND rADIATING eLEMENT	21.12.2007
801849	ALU	07291582.0	EP2073309	GB	Diversity bROADBAND rADIATING eLEMENT	21.12.2007
808309	ALU	11305138.7	EP2487819	DE	IEEE 1588V2 Transparent clock On-Demand (TOD)	10.02.2011
808309	ALU	11305138.7	EP2487819	GB	IEEE 1588V2 Transparent clock On-Demand (TOD)	10.02.2011
105488	ALU	05108435.8	EP1646262	FR	WAVELENGTH-SWITCH-BASED MODULAR PATCH-PANELS	14.09.2005
105488	ALU	05108435.8	EP1646262	DE	WAVELENGTH-SWITCH-BASED MODULAR PATCH-PANELS	14.09.2005
810750	ALU	201380013687.6	ZL201380013687.6	CN	Face Orientation-based Scene Interaction For Immersive Video Conferences	05.03.2013
810750	ALU	14/384883	US9402053	US	Face Orientation-based Scene Interaction For Immersive Video Conferences	05.03.2013
120216	ALU	11/442539	US7218725	US	INTERFACE BETWEEN IN AND CTL	30.05.2006
811482	ALU	12290203.4	EP2677814	FR	Efficient Control Of Mobile Communications In Selected Areas	22.06.2012
811482	ALU	12290203.4	EP2677814	DE	Efficient Control Of Mobile Communications In Selected Areas	22.06.2012
811482	ALU	12290203.4	EP2677814	GB	Efficient Control Of Mobile Communications In Selected Areas	22.06.2012
814782	ALU	13306710.8	EP2884742	FR	System for video quality based control of example-based SR	12.12.2013
814782	ALU	13306710.8	EP2884742	DE	System for video quality based control of example-based SR	12.12.2013
814782	ALU	13306710.8	EP2884742	GB	System for video quality based control of example-based SR	12.12.2013
810152	ALU	11290543.5	EP2597792	FR	Photonics Integrated Circuit Mode Splitter For MMF Mode Multiplexing	28.11.2011
810152	ALU	11290543.5	EP2597792	DE	Photonics Integrated Circuit Mode Splitter For MMF Mode Multiplexing	28.11.2011
810152	ALU	11290543.5	EP2597792	GB	Photonics Integrated Circuit Mode Splitter For MMF Mode Multiplexing	28.11.2011
813530	ALU	13306670.4	EP2882108	FR	Power Convertors Synchronised To DMT Frequency	05.12.2013
813530	ALU	13306670.4	EP2882108	DE	Power Convertors Synchronised To DMT Frequency	05.12.2013
Bejerano 20-13 (Y)	ALU	08770027.4	EP2297880	FR	Method And Apparatus For Reducing Channel Change Response Times For IPTV	03.06.2008
Bejerano 20-13 (Y)	ALU	08770027.4	EP2297880	DE	Method And Apparatus For Reducing Channel Change Response Times For IPTV	03.06.2008
Bejerano 20-13 (Y)	ALU	08770027.4	EP2297880	GB	Method And Apparatus For Reducing Channel Change Response Times For IPTV	03.06.2008
810622	ALU	12290076.4	EP2637353	FR	Collaborative Whiteboard With Paper-and-pencil And A Camera.	06.03.2012
810622	ALU	12290076.4	EP2637353	DE	Collaborative Whiteboard With Paper-and-pencil And A Camera.	06.03.2012
810622	ALU	12290076.4	EP2637353	GB	Collaborative Whiteboard With Paper-and-pencil And A Camera.	06.03.2012
811449	ALU	14/399109	US9485353	US	Detection And Identification Of Single-wire Bridged-taps On Transmission Lines	22.05.2013
814725	ALU	14/902627		US	Method For Congestion Control	29.07.2014
Kisel 7-7-2 (A)	ALU	07291319.7	EP2056562	FR	Resilient Service Quality In A Managed Multimedia Delivery Network	02.11.2007

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0413

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Kisel 7-7-2 (A)	ALU	07291319.7	EP2056562	DE	Resilient Service Quality In A Managed Multimedia Delivery Network	02.11.2007
Kisel 7-7-2 (A)	ALU	07291319.7	EP2056562	GB	Resilient Service Quality In A Managed Multimedia Delivery Network	02.11.2007
814314	ALU	2016544814		JP	A Method Of Selecting And Searching The Objects And Images Related Information On Pause Screen	18.11.2014
814314	ALU	15/110105		US	A Method Of Selecting And Searching The Objects And Images Related Information On Pause Screen	18.11.2014
815172	ALU	2016546455		JP	Crowd Region Of Interest Selector For Ultra Hd Video Stream Management	05.12.2014
815172	ALU	15/111342		US	Crowd Region Of Interest Selector For Ultra Hd Video Stream Management	05.12.2014
813679	ALU	13175360.0	EP2822246	DE	Method to include any video stream in a video conference	05.07.2013
813679	ALU	13175360.0	EP2822246	GB	Method to include any video stream in a video conference	05.07.2013
813005	ALU	13306152.3	EP2838257	FR	Including video mixing based systems in routed video sessions	15.08.2013
813005	ALU	13306152.3	EP2838257	DE	Including video mixing based systems in routed video sessions	15.08.2013
813005	ALU	13306152.3	EP2838257	GB	Including video mixing based systems in routed video sessions	15.08.2013
810918	ALU	201380025330X		CN	Optical packet multi-ring architecture	24.04.2013
810918	ALU	2015511974	JP5919435	JP	Optical packet multi-ring architecture	24.04.2013
810918	ALU	1020147031831	KR101657956	KR	Optical packet multi-ring architecture	24.04.2013
810918	ALU	14/394424	US9509408	US	Optical packet multi-ring architecture	24.04.2013
815324	ALU	13306681.1	EP2882212	FR	Blue Cube With Analogue Carrier Recovery Using A Duplex Filter And Optimized LO/RF Power Levels	09.12.2013
815324	ALU	13306681.1	EP2882212	DE	Blue Cube With Analogue Carrier Recovery Using A Duplex Filter And Optimized LO/RF Power Levels	09.12.2013
815324	ALU	13306681.1	EP2882212	GB	Blue Cube With Analogue Carrier Recovery Using A Duplex Filter And Optimized LO/RF Power Levels	09.12.2013
810725	ALU	12290030.1	EP2621188	FR	VoIP Client Control Via In-band Video Signalling	25.01.2012
810725	ALU	12290030.1	EP2621188	DE	VoIP Client Control Via In-band Video Signalling	25.01.2012
810725	ALU	12290030.1	EP2621188	GB	VoIP Client Control Via In-band Video Signalling	25.01.2012
809759	ALU	11290257.2	EP2530871	FR	QoE Method (QApp) Supporting S Dynamic Tariff Option	03.06.2011
809759	ALU	11290257.2	EP2530871	DE	QoE Method (QApp) Supporting S Dynamic Tariff Option	03.06.2011
809759	ALU	11290257.2	EP2530871	GB	QoE Method (QApp) Supporting S Dynamic Tariff Option	03.06.2011
802031	ALU	07291609.1	EP2073462	FR	Service Layer Contract ID in the pathkey extension	21.12.2007
802031	ALU	07291609.1	EP2073462	DE	Service Layer Contract ID in the pathkey extension	21.12.2007
810743	ALU	12842302.7	EP2769569	EP	LTE Subscriber Identity Correlation Service	17.10.2012
810743	ALU	2554/CHENP/2014		IN	LTE Subscriber Identity Correlation Service	17.10.2012
810743	ALU	2014536073	JP5878240	JP	LTE Subscriber Identity Correlation Service	17.10.2012
810743	ALU	20147010327	KR101611110	KR	LTE Subscriber Identity Correlation Service	17.10.2012
816876	ALU	201580005372.6		CN	Greedy Randomized Algorithm Search Procedure (GRASP) For Caching-Aided Coded Multicasting	12.01.2015
816876	ALU	15702867.1		EP	Greedy Randomized Algorithm Search Procedure (GRASP) For Caching-Aided Coded Multicasting	12.01.2015
816876	ALU	2016548012		JP	Greedy Randomized Algorithm Search Procedure (GRASP) For Caching-Aided Coded Multicasting	12.01.2015
816876	ALU	20167019630		KR	Greedy Randomized Algorithm Search Procedure (GRASP) For Caching-Aided Coded Multicasting	12.01.2015
816877	ALU	201580005361.8		CN	HgC (Hierarchical Greedy Coloring) For Caching As Bandwidth Multiplier	12.01.2015
816877	ALU	15701632.0		EP	HgC (Hierarchical Greedy Coloring) For Caching As Bandwidth Multiplier	12.01.2015
807255	ALU	10290550.2	EP2442440	FR	Envelope Tracking Transmitter Architectures for coverage of Fragmented Frequency Bands	13.10.2010
807255	ALU	10290550.2	EP2442440	DE	Envelope Tracking Transmitter Architectures for coverage of Fragmented Frequency Bands	13.10.2010
803277	ALU	2011-541150	JP5312608	JP	PREJOINING: ANTICIPATING THE ACTIVATION OF A DSL LINE	01.12.2009
810152	ALU	10-2014-7017701	KR1620879	KR	Photonics Integrated Circuit Mode Splitter For MMF Mode Multiplexing	06.11.2012
810152	ALU	14/356214	US9231702	US	Photonics Integrated Circuit Mode Splitter For MMF Mode Multiplexing	06.11.2012
812178	ALU	201380033139.X		CN	Manipulation And Restoration Of Authentication Challenge Parameters In Network Authentication Procedures	18.06.2013
812178	ALU	13734239.0	EP2865155	EP	Manipulation And Restoration Of Authentication Challenge Parameters In Network Authentication Procedures	18.06.2013
812178	ALU	20147035413	KR101632946	KR	Manipulation And Restoration Of Authentication Challenge Parameters In Network Authentication Procedures	18.06.2013
Leven 3 (A)	ALU	04250126.2	EP1962444	FR	Direct Optical N-State Phase Shift Keying	13.01.2004
816220	ALU	14290297.2		EP	High Speed Routing Module	12.09.2014
Kisel 3-3 (A)	ALU	07291307.2	EP2053831	FR	Method For Caching Content Data Packages In Caching Nodes	26.10.2007
812260	ALU	201380060322.9		CN	Diverting Attention From Video Quality Problems	18.11.2013
812260	ALU	2015542282	JP6076494	JP	Diverting Attention From Video Quality Problems	18.11.2013

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PATENT
REEL: 043877 FRAME: 0414

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
812260	ALU	10-2015-7016382	KR101726586	KR	Diverting Attention From Video Quality Problems	18.11.2013
812260	ALU	14/442834	US9380098	US	Diverting Attention From Video Quality Problems	18.11.2013
816893	ALU	15181663.4		EP	Optical Slot Switching Node With Embedded Monitoring	20.08.2015
817045	ALU	14306625.6		EP	Realtime Communication System Using Call Metrics To Improve End-To-End Service Quality	14.10.2014
812014	ALU	14/424683	US9369666	US	Learning enabler for automatic video orchestration in the context of video-conferences	05.06.2013
804752	ALU	09789737.5	EP2438708	GB	Notification Of Charging Rate Adjustments In Regions Of A Mobile Network To Control Bandwidth Usage In The Regions	01.06.2009
810732	ALU	201380009783.3	ZL201380009783.3	CN	Methods And Systems For Reducing Crosstalk	12.02.2013
809487	ALU	201380032300.1		CN	Method Of Connecting Boards At High Frequency	14.06.2013
809487	ALU	13732042.0		EP	Method Of Connecting Boards At High Frequency	14.06.2013
815602	ALU	15/322564		US	A One-Hand Control Method On Touch Screen Device	25.06.2015
815456	ALU	14/264194	US9728009	US	Process For Augmented Reality Based Provisioning Of 3D Models Of Indoor Internet Of Things Environment	29.04.2014
816524	ALU	14/484903	US9507932	US	Methods For Policy Enforcement In A Topology Abstraction System	12.09.2014
809694	ALU	11290281.2	EP2538635	FR	Method To Steer A HTTP To SCAP Gateway From An HTTP Server	21.06.2011
809694	ALU	11290281.2	EP2538635	DE	Method To Steer A HTTP To SCAP Gateway From An HTTP Server	21.06.2011
809694	ALU	11290281.2	EP2538635	GB	Method To Steer A HTTP To SCAP Gateway From An HTTP Server	21.06.2011
134247	ALU	07843575.7	EP2082555	DE	INTELLIGENCE NETWORK ANOMALY DETECTION USING FUZZY SET CLASSIFICATION	29.09.2007
134247	ALU	07843575.7	EP2082555	IT	INTELLIGENCE NETWORK ANOMALY DETECTION USING FUZZY SET CLASSIFICATION	29.09.2007
134247	ALU	07843575.7	EP2082555	ES	INTELLIGENCE NETWORK ANOMALY DETECTION USING FUZZY SET CLASSIFICATION	29.09.2007
134247	ALU	07843575.7	EP2082555	GB	INTELLIGENCE NETWORK ANOMALY DETECTION USING FUZZY SET CLASSIFICATION	29.09.2007
813653	ALU	13305678.8	EP2806594	FR	Optimal Stability Metrics Computation For DLM Performances Optimization	24.05.2013
813653	ALU	13305678.8	EP2806594	DE	Optimal Stability Metrics Computation For DLM Performances Optimization	24.05.2013
813653	ALU	13305678.8	EP2806594	GB	Optimal Stability Metrics Computation For DLM Performances Optimization	24.05.2013
Ranka 2-9 (JK)	ALU	00303895.7	EP1054273	FR	Article Utilizing Optical Waveguides With Anomalous Dispersion At Vis-Nir Wavelengths	09.05.2000
Ranka 2-9 (JK)	ALU	00303895.7	EP1054273	DE	Article Utilizing Optical Waveguides With Anomalous Dispersion At Vis-Nir Wavelengths	09.05.2000
Ranka 2-9 (JK)	ALU	00303895.7	EP1054273	GB	Article Utilizing Optical Waveguides With Anomalous Dispersion At Vis-Nir Wavelengths	09.05.2000
810524	ALU	11290453.7	EP2575276	FR	Integrated node architecture for optical packet rings	30.09.2011
810524	ALU	11290453.7	EP2575276	DE	Integrated node architecture for optical packet rings	30.09.2011
121333	ALU	07290776.9	EP2007114	FR	INTERACTIVE EXPERIENCES FOR GEOGRAPHIC DISPERSED NOMADIC GROUPS	22.06.2007
121333	ALU	07290776.9	EP2007114	DE	INTERACTIVE EXPERIENCES FOR GEOGRAPHIC DISPERSED NOMADIC GROUPS	22.06.2007
121333	ALU	07290776.9	EP2007114	GB	INTERACTIVE EXPERIENCES FOR GEOGRAPHIC DISPERSED NOMADIC GROUPS	22.06.2007
106371	ALU	07115737.4	EP1898573	FR	COLLABORATIVE QoS IN WLAN	05.09.2007
106371	ALU	07115737.4	EP1898573	DE	COLLABORATIVE QoS IN WLAN	05.09.2007
106371	ALU	07115737.4	EP1898573	GB	COLLABORATIVE QoS IN WLAN	05.09.2007
810732	ALU	13706848.2	EP2815516	FR	Methods And Systems For Reducing Crosstalk	12.02.2013
810732	ALU	13706848.2	EP2815516	DE	Methods And Systems For Reducing Crosstalk	12.02.2013
810732	ALU	13706848.2	EP2815516	GB	Methods And Systems For Reducing Crosstalk	12.02.2013
809989	ALU	2013800315378		CN	Petabit-class packet switch architecture	25.04.2013
809989	ALU	2015524682	JP5932153	JP	Petabit-class packet switch architecture	25.04.2013
808529	ALU	11305751.7	EP2536176	FR	Transforming Text Into Voice Messages During a Telephone Call	16.06.2011
808529	ALU	11305751.7	EP2536176	DE	Transforming Text Into Voice Messages During a Telephone Call	16.06.2011
808529	ALU	11305751.7	EP2536176	GB	Transforming Text Into Voice Messages During a Telephone Call	16.06.2011
816877	ALU	2016548053		JP	HgC (Hierarchical Greedy Coloring) For Caching As Bandwidth Multiplier	12.01.2015
816877	ALU	20167019627		KR	HgC (Hierarchical Greedy Coloring) For Caching As Bandwidth Multiplier	12.01.2015
121208	ALU	07291612.5	EP2073422	FR	FORWARD ERROR CORRECTION FOR VIDEO CONTENT IN THE ACCESS NODE.	21.12.2007
809667	ALU	14/358484		US	System and Method for Interactive Online Video Preview	06.11.2012
812346	ALU	12305817.4	EP2685685	DE	Method For Achieving End-To-End Path Diversity For Dual-Homed UNI-Clients	09.07.2012

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0415

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
812346	ALU	12305817.4	EP2685685	GB	Method For Achieving End-To-End Path Diversity For Dual-Homed UNI-Clients	09.07.2012
800271	ALU	08163744.9	EP2053788	FR	SYSTEM TO PROVIDE SCALABLE TV/VIDEO FLOWS IN DISCONTINUOUS COVERAGE ENVIRONMENT	05.09.2008
800271	ALU	08163744.9	EP2053788	DE	SYSTEM TO PROVIDE SCALABLE TV/VIDEO FLOWS IN DISCONTINUOUS COVERAGE ENVIRONMENT	05.09.2008
818491	ALU	15307149.3		EP	Flexible Polyimide-(B N) Composite Substrate For Vetically Configured Bi2-Te3 Thermoelectric Modules	24.12.2015
812679	ALU	14/442776		US	Feed-Forward Filter With Broad Transmission Zero	23.10.2013
818499	ALU	15306736.8		EP	QoS Tunneling In Packet Switched Networks	30.10.2015
812096	ALU	20157006297	KR101669775	KR	Macro Antenna Feeder Network - Optimal Design, Architecture And Instantiation	02.08.2013
812096	ALU	14/421339		US	Macro Antenna Feeder Network - Optimal Design, Architecture And Instantiation	14.08.2013
816673	ALU	14193710.2		EP	Compression by rotation indexing	18.11.2014
815534	ALU	201580023232.1		CN	Virtualised Home CDN In Wired Access Node	22.04.2015
809330	ALU	201380061991.8		CN	Non-TCP Push Server In Cellular Network	08.11.2013
809330	ALU	13795384.0		EP	Non-TCP Push Server In Cellular Network	08.11.2013
809330	ALU	2015545063	JP6091644	JP	Non-TCP Push Server In Cellular Network	08.11.2013
809330	ALU	20157013427	KR101697080	KR	Non-TCP Push Server In Cellular Network	08.11.2013
809234	ALU	11306381.2	EP2587754	FR	Adaptive DSL	25.10.2011
809234	ALU	11306381.2	EP2587754	DE	Adaptive DSL	25.10.2011
809234	ALU	11306381.2	EP2587754	GB	Adaptive DSL	25.10.2011
802829	ALU	09158733.7	EP2112792	FR	Anticipated resource scheduling for interactive traffic schemes	24.04.2009
802829	ALU	09158733.7	EP2112792	DE	Anticipated resource scheduling for interactive traffic schemes	24.04.2009
802829	ALU	09158733.7	EP2112792	GB	Anticipated resource scheduling for interactive traffic schemes	24.04.2009
812418	ALU	201380059948.8		CN	Multi-Sector Antenna Structure	08.11.2013
812418	ALU	13796189.2		EP	Multi-Sector Antenna Structure	08.11.2013
812418	ALU	3343/CHENP/2015		IN	Multi-Sector Antenna Structure	08.11.2013
812418	ALU	2015542711		JP	Multi-Sector Antenna Structure	08.11.2013
812418	ALU	20157012620		KR	Multi-Sector Antenna Structure	08.11.2013
812206	ALU	20157005147	KR101642665	KR	Direct Electronic Mail	15.08.2013
811785	ALU	201380060095.X		CN	One-Way/Two-Way Mode Switching (OTS)	27.08.2013
811785	ALU	2015532357	JP5973672	JP	One-Way/Two-Way Mode Switching (OTS)	27.08.2013
811785	ALU	20157010017	KR101646889	KR	One-Way/Two-Way Mode Switching (OTS)	27.08.2013
811785	ALU	14/429539		US	One-Way/Two-Way Mode Switching (OTS)	27.08.2013
818628	ALU	15/355753		US	Sparse Dispersion Compensation For Heterogeneous-Spans Networks And Span-Skipping Dispersion Mapping	18.11.2016
809850	ALU	2012800419546	ZL2012800419546	CN	Passive cache-based tracking	24.08.2012
808214	ALU	20147012899	KR101514955	KR	WIFI mobility handover controlled by DECT mobility handover	26.10.2012
808214	ALU	14/358523	US9241288	US	WIFI mobility handover controlled by DECT mobility handover	26.10.2012
812433	ALU	2015550487	JP5997851	JP	Efficient Setup For Privacy-Preserving Database System	18.12.2013
812433	ALU	20157017104	KR101699192	KR	Efficient Setup For Privacy-Preserving Database System	18.12.2013
Gill 21-14-5 (DM)	ALU	07750498.3	EP2038702	FR	Optical Modulator	13.02.2007
Gill 21-14-5 (DM)	ALU	07750498.3	EP2038702	DE	Optical Modulator	13.02.2007
Gill 21-14-5 (DM)	ALU	07750498.3	EP2038702	GB	Optical Modulator	13.02.2007
816870	ALU	14/713295	US9584230	US	Methods For PA Output Power Detection And Return-Loss Measurements	15.05.2015
814135	ALU	15/253292		US	Method Of Providing Services Only To Service Provider Certified Devices	31.08.2016
804201	ALU	2012-515434	JP5372247	JP	CHOKING-BASED CONGESTION CONTROL RELYING ON LEARNED TRAFFIC CHARACTERISTICS	10.06.2010
804201	ALU	2011-7030123	KR101318020	KR	CHOKING-BASED CONGESTION CONTROL RELYING ON LEARNED TRAFFIC CHARACTERISTICS	10.06.2010
804201	ALU	13/378901	US8867347	US	CHOKING-BASED CONGESTION CONTROL RELYING ON LEARNED TRAFFIC CHARACTERISTICS	10.06.2010
815602	ALU	15777730.1		EP	A One-Hand Control Method On Touch Screen Device	25.06.2015
807562	ALU	201180058914.8	ZL201180058914.8	CN	Broken Analogue-Front-End Detection via Reflectometry	30.11.2011
807562	ALU	2013-542464	JP5711823	JP	Broken Analogue-Front-End Detection via Reflectometry	30.11.2011
807562	ALU	10-2013-7017494	KR101520312	KR	Broken Analogue-Front-End Detection via Reflectometry	30.11.2011
807562	ALU	13/884111	US9008280	US	Broken Analogue-Front-End Detection via Reflectometry	30.11.2011
810941	ALU	201380034008.3		CN	Increased Connector Port Density Via Extending Faceplate	25.06.2013
810941	ALU	13809926.2		EP	Increased Connector Port Density Via Extending Faceplate	25.06.2013
810941	ALU	2015518742	JP6054525	JP	Increased Connector Port Density Via Extending Faceplate	25.06.2013
806254	ALU	11702553.6	EP2529570	GB	Method And Apparatus For Tracing Mobile Sessions	21.01.2011
Li 13-33-55 (L)	ALU	08779826.0	EP2174449	FR	Routing Protocol For A Network Employing Multi-User Wireless Channels	26.06.2008

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
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EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Li 13-33-55 (L)	ALU	08779826.0	EP2174449	DE	Routing Protocol For A Network Employing Multi-User Wireless Channels	26.06.2008
Li 13-33-55 (L)	ALU	08779826.0	EP2174449	GB	Routing Protocol For A Network Employing Multi-User Wireless Channels	26.06.2008
804890	ALU	201180010889.6	ZL201180010889.6	CN	Wireless Human Interface Device Creation Module With Storage Device Formfactor	16.02.2011
804890	ALU	2012-554293	JP5698768	JP	Wireless Human Interface Device Creation Module With Storage Device Formfactor	16.02.2011
804890	ALU	2012-7025332	KR10-1534906	KR	Wireless Human Interface Device Creation Module With Storage Device Formfactor	16.02.2011
810524	ALU	11290453.7	EP2575276	GB	Integrated node architecture for optical packet rings	30.09.2011
809339	ALU	2012800547756		CN	Exploiting Selective Flows Protection In Adaptive Code Modulation Radio System	14.08.2012
809339	ALU	14/344672	US9668150	US	Exploiting Selective Flows Protection In Adaptive Code Modulation Radio System	14.08.2012
814468	ALU	13306398.2	EP2860933	FR	Method and apparatus for optimizing the personalized delivery of multiple media by maximizing the value of the pool of contents	10.10.2013
814468	ALU	13306398.2	EP2860933	DE	Method and apparatus for optimizing the personalized delivery of multiple media by maximizing the value of the pool of contents	10.10.2013
814468	ALU	13306398.2	EP2860933	GB	Method and apparatus for optimizing the personalized delivery of multiple media by maximizing the value of the pool of contents	10.10.2013
806478	ALU	10290380.4	EP2405686	FR	Automatic adaptation of antenna tilt angle in mobile radio networks	09.07.2010
806478	ALU	10290380.4	EP2405686	DE	Automatic adaptation of antenna tilt angle in mobile radio networks	09.07.2010
806478	ALU	10290380.4	EP2405686	GB	Automatic adaptation of antenna tilt angle in mobile radio networks	09.07.2010
811572	ALU	12305675.6		EP	Network Topology Aware Streaming Analytics System	14.06.2012
815456	ALU	201580023595.5		CN	Process For Augmented Reality Based Provisioning Of 3D Models Of Indoor Internet Of Things Environment	10.04.2015
815456	ALU	15756976.5		EP	Process For Augmented Reality Based Provisioning Of 3D Models Of Indoor Internet Of Things Environment	10.04.2015
808322	ALU	11290214.3	EP2521227	DE	Semiconductor Optical Amplifier Device And Optical Matrix Switch	04.05.2011
808322	ALU	11290214.3	EP2521227	GB	Semiconductor Optical Amplifier Device And Optical Matrix Switch	04.05.2011
813530	ALU	13306670.4	EP2882108	GB	Power Convertors Synchronised To DMT Frequency	05.12.2013
811750	ALU	12290161.4	EP2665239	FR	Deadline Based Priority Mapping For HTTP Adaptive Streaming	14.05.2012
811750	ALU	12290161.4	EP2665239	DE	Deadline Based Priority Mapping For HTTP Adaptive Streaming	14.05.2012
811750	ALU	12290161.4	EP2665239	GB	Deadline Based Priority Mapping For HTTP Adaptive Streaming	14.05.2012
139250	ALU	15/232634		US	ALTERNATIVE BPON VIDEO OVERLAY USING PACKET VIDEO OVER GIGABIT ETHERNET	09.08.2016
809363	ALU	201280053187.0		CN	Method For Selectively Exposing Subscriber Data	16.10.2012
809989	ALU	12305931.3	EP2693769	DE	Petabit-class packet switch architecture	30.07.2012
809989	ALU	12305931.3	EP2693769	GB	Petabit-class packet switch architecture	30.07.2012
804683	ALU	10727629.7	EP2449733	FR	Linking Inner and Outer MPLS Labels	22.06.2010
808209	ALU	11776774.9	EP2641348	FR	Multi-link (delay) Asymmetry Monitoring (MAM)	27.10.2011
808209	ALU	11776774.9	EP2641348	DE	Multi-link (delay) Asymmetry Monitoring (MAM)	27.10.2011
808209	ALU	11776774.9	EP2641348	GB	Multi-link (delay) Asymmetry Monitoring (MAM)	27.10.2011
134247	ALU	07843575.7	EP2082555	FR	INTELLIGENCE NETWORK ANOMALY DETECTION USING FUZZY SET CLASSIFICATION	29.09.2007
811416	ALU	12305202.9	EP2632072	FR	Remote Transmission Selection Unit For A Latency Tolerant C-RAN Architecture	22.02.2012
811416	ALU	12305202.9	EP2632072	DE	Remote Transmission Selection Unit For A Latency Tolerant C-RAN Architecture	22.02.2012
811416	ALU	12305202.9	EP2632072	GB	Remote Transmission Selection Unit For A Latency Tolerant C-RAN Architecture	22.02.2012
800504	ALU	08853651.1	EP2208262	FR	S-band EDFA	07.11.2008
800504	ALU	08853651.1	EP2208262	DE	S-band EDFA	07.11.2008
800504	ALU	08853651.1	EP2208262	GB	S-band EDFA	07.11.2008

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PATENT
REEL: 043877 FRAME: 0417

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
810385	ALU	2013800086608	ZL201380008660.8	CN	Instantaneous Detection Of Missing POTS Splitter	05.02.2013
810385	ALU	2014556021	JP5948441	JP	Instantaneous Detection Of Missing POTS Splitter	05.02.2013
Li 10-31-52 (L)	ALU	08794382.5	EP2174452	FR	Superposition Coding For Wireless Mesh Networks	26.06.2008
Li 10-31-52 (L)	ALU	08794382.5	EP2174452	DE	Superposition Coding For Wireless Mesh Networks	26.06.2008
Li 10-31-52 (L)	ALU	08794382.5	EP2174452	GB	Superposition Coding For Wireless Mesh Networks	26.06.2008
815064	ALU	13306413.9	EP2863646	GB	Flexnode Slice Management	15.10.2013
K V M 3-71-2-3 (N)[1]	ALU	14/870305		US	Mobile Station With Expanded Storage Space And Method Of Retrieving Files By the Mobile Station	28.09.2015
818316	ALU	15306910.9		EP	Local Advertisement Of Smart-Environment Operators (Laseo)	02.12.2015
807593	ALU	13/995621	US9674250	US	Automatic Video Image Annotation	14.12.2011
808959	ALU	201180061749.1	ZL201180061749.1	CN	Integrated Video Monitoring Planning, Camera Configuration & Calibration For CCTV Deployment	21.12.2011
808959	ALU	2013-545369	JP5806331	JP	Integrated Video Monitoring Planning, Camera Configuration & Calibration For CCTV Deployment	21.12.2011
806401	ALU	201180056751.X	ZL201180056751.X	CN	MDC Video Services Usage For Efficient Green Transmission	13.10.2011
806401	ALU	2013540281	JP5567746	JP	MDC Video Services Usage For Efficient Green Transmission	13.10.2011
806401	ALU	20137016454	KR101521838	KR	MDC Video Services Usage For Efficient Green Transmission	13.10.2011
806401	ALU	13/989349	US9491629	US	MDC Video Services Usage For Efficient Green Transmission	13.10.2011
813708	ALU	13305970.9	EP2824844	FR	Method For The Detection Of Line Unbalance, Based On Hlog Measurement	08.07.2013
813708	ALU	13305970.9	EP2824844	DE	Method For The Detection Of Line Unbalance, Based On Hlog Measurement	08.07.2013
813708	ALU	13305970.9	EP2824844	GB	Method For The Detection Of Line Unbalance, Based On Hlog Measurement	08.07.2013
814435	ALU	13306341.2	EP2860940	FR	Social Hint-based Caching	27.09.2013
806478	ALU	13/809235	US9408089	US	Automatic adaptation of antenna tilt angle in mobile radio networks	20.05.2011
815634	ALU	201580011507.X		CN	Access Control Design For A Secure And Efficient RFID Data Communication	11.02.2015
815634	ALU	15730834.7		EP	Access Control Design For A Secure And Efficient RFID Data Communication	11.02.2015
815634	ALU	2016555533		JP	Access Control Design For A Secure And Efficient RFID Data Communication	11.02.2015
815634	ALU	20167024320		KR	Access Control Design For A Secure And Efficient RFID Data Communication	11.02.2015
811950	ALU	14/717378		US	System And Method Implementing FEC Route Reflector	20.05.2015
812120	ALU	2016504562	JP6171082	JP	ASE-based Loading channel for stream of optical packets	17.03.2014
812120	ALU	20157030894	KR101757660	KR	ASE-based Loading channel for stream of optical packets	17.03.2014
812120	ALU	14/766822		US	ASE-based Loading channel for stream of optical packets	17.03.2014
807752	ALU	11305171.8		EP	Packet Shaping & DDR Scheduling with Dynamic Range Compression	18.02.2011
813354	ALU	14/606286		US	High Availability Online Charging Solution For Always On IP Connectivity	27.01.2015
816023	ALU	14305727.1	EP2947818	FR	Method For A Fast, Incremental Optimization Of Deployed Photonic Networks	19.05.2014
816023	ALU	14305727.1	EP2947818	DE	Method For A Fast, Incremental Optimization Of Deployed Photonic Networks	19.05.2014
816023	ALU	14305727.1	EP2947818	GB	Method For A Fast, Incremental Optimization Of Deployed Photonic Networks	19.05.2014
105478	ALU	05300858.7	EP1657865	GB	Sanity Proved BGP-update message	26.10.2005
Yang 12-14-9 (Y)	ALU	06739696.0	EP1869940	DE	Method For Reverse Link Congestion Overload Control In Wireless High Speed Data Applications	28.03.2006
Yang 12-14-9 (Y)	ALU	06739696.0	EP1869940	GB	Method For Reverse Link Congestion Overload Control In Wireless High Speed Data Applications	28.03.2006
811893	ALU	12290265.3	EP2698961	FR	Cloud Security	01.08.2012
811893	ALU	12290265.3	EP2698961	DE	Cloud Security	01.08.2012
811893	ALU	12290265.3	EP2698961	GB	Cloud Security	01.08.2012
817603	ALU	15290223.5		EP	Explicit Congestion Duration Provisioning In A Deadline-Aware System	26.08.2015
121022	ALU	201410124290.0		CN	HOME IP PLUG CONTROLLER.	28.03.2014
809557	ALU	11177478.2	EP2562978	GB	Design Of A Content Router	12.08.2011
803112	ALU	08290804.7	EP2159974	DE	DANTE - Distributed Ant algorithm for end-to-end quality of service Negotiation and Traffic Engineering	27.08.2008
803112	ALU	08290804.7	EP2159974	GB	DANTE - Distributed Ant algorithm for end-to-end quality of service Negotiation and Traffic Engineering	27.08.2008
815751	ALU	14/502628	US9369379	US	Method And System For Secured Contexts In MPLS LFIB	30.09.2014
804501	ALU	09290683.3	EP2293493	FR	Core Network Native Multicast (CNNM)	08.09.2009

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REEL: 043877 FRAME: 0418

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
804501	ALU	09290683.3	EP2293493	DE	Core Network Native Multicast (CNNM)	08.09.2009
804501	ALU	09290683.3	EP2293493	GB	Core Network Native Multicast (CNNM)	08.09.2009
818255	ALU	PCT/US2017/013606		WO	0204 Shifted Vias With Merge Pads	14.01.2017
802718	ALU	08305215.9	EP2131614	GB	Broadcast services and DSL backhauled Femto Base Stations	30.05.2008
814827	ALU	14/083723	US9535837	US	An Efficient Decentralized Online Cache Management Algorithm	19.11.2013
802611	ALU	0760073	FR2925821	FR	Shared-Meshed acceleration based on pre-tuning savings	20.12.2007
802611	ALU	08170414.0	EP2073566	EP	Shared-Meshed acceleration based on pre-tuning savings	02.12.2008
808758	ALU	13/983857	US9418012	US	Dynamic HAS Caching Algorithms	02.02.2012
818255	ALU	15/000941	US9635760	US	0204 Shifted Vias With Merge Pads	19.01.2016
813688	ALU	13/887746	US9560172	US	Method And Apparatus For Statelessly Filtering TCP Keep-Alive Packets	06.05.2013
810148	ALU	14/489110		US	De-Pop On-Device Decoupling For BGA	17.09.2014
Bu 9-8-29 (T)	ALU	14/534469		US	Methods And Systems For Providing Controlled Access To The Internet	06.11.2014
811497	ALU	14/600737		US	Apparatus And Method For Meeting Performance Metrics For Users In File Systems	20.01.2015
Guo 16-83-66 (KH)	ALU	07753388.3	EP2002599	DE	Method And Apparatus For Improved Multicast Streaming In Wireless Networks	19.03.2007
Guo 16-83-66 (KH)	ALU	07753388.3	EP2002599	GB	Method And Apparatus For Improved Multicast Streaming In Wireless Networks	19.03.2007
814696	ALU	14/193215		US	IP TV Application For Public WIFI Network	28.02.2014
811548	ALU	12306010.5	EP2635088	EP	Clustering Of Transmission Points With Reduced Complexity And Signalling Overhead	20.08.2012
801907	ALU	07291342.9	EP2058960	FR	General broadcasting of fake channels	08.11.2007
801907	ALU	07291342.9	EP2058960	DE	General broadcasting of fake channels	08.11.2007
801907	ALU	07291342.9	EP2058960	GB	General broadcasting of fake channels	08.11.2007
809733	ALU	12766053.8		EP	Packet-Based Propagation Of Testing Information	21.09.2012
809733	ALU	3228/DELNP/2014		IN	Packet-Based Propagation Of Testing Information	21.09.2012
809733	ALU	2014533828	JP6012739	JP	Packet-Based Propagation Of Testing Information	21.09.2012
809733	ALU	20147011724	KR101549426	KR	Packet-Based Propagation Of Testing Information	21.09.2012
817068	ALU	15305524.9		EP	Harmonic Suppression At The Excitation Ports In Coaxial Cavity Filters	09.04.2015
815534	ALU	2016-565328		JP	Virtualised Home CDN In Wired Access Node	22.04.2015
815534	ALU	15/300591		US	Virtualised Home CDN In Wired Access Node	22.04.2015
137875	ALU	05783746.0	EP1774750	FR	A Mechanism To Reduce Signaling Latencies For Offering Real-Time Services To Roaming Mobile Corporate Users	22.07.2005
137875	ALU	05783746.0	EP1774750	DE	A Mechanism To Reduce Signaling Latencies For Offering Real-Time Services To Roaming Mobile Corporate Users	22.07.2005
137875	ALU	05783746.0	EP1774750	GB	A Mechanism To Reduce Signaling Latencies For Offering Real-Time Services To Roaming Mobile Corporate Users	22.07.2005
817377	ALU	15305451.5		EP	Digital Iq Pulse Width Modulation For Switch Mode Amplifier	27.03.2015
808232	ALU	2013-7026619	KR10-1513386	KR	Automated video "tweeting"	08.03.2012
808232	ALU	14/004328	US9560268	US	Automated video "tweeting"	08.03.2012
810133	ALU	201280039012.4	ZL201280039012.4	CN	Method And Apparatus For Comparing Videos	31.07.2012
810133	ALU	12751642.5		EP	Method And Apparatus For Comparing Videos	31.07.2012
809487	ALU	13/526817	US9627739	US	Method Of Connecting Boards At High Frequency	19.06.2012
Bu 6-6-40 (T)	ALU	06845546.8	EP1964366	EP	Methods And Devices For Defending A 3G Wireless Network Against Malicious Attacks	15.12.2006
Bu 6-6-40 (T)	ALU	3087/CENP/2008	IN281622	IN	Methods And Devices For Defending A 3G Wireless Network Against Malicious Attacks	15.12.2006
Bude 7-21-24 (JD)	ALU	09/616569	US6528845	US	Non-Volatile Semiconductor Memory Cell Utilizing Trapped Charge Generated By Channel-Initiated Secondary Electron Injection	14.07.2000
816876	ALU	14/514938	US9509774	US	Greedy Randomized Algorithm Search Procedure (GRASP) For Caching-Aided Coded Multicasting	15.10.2014
816877	ALU	14/514905	US9503525	US	HgC (Hierarchical Greedy Coloring) For Caching As Bandwidth Multiplier	15.10.2014
802096	ALU	08748457.2	EP2278782	FR	Query waiting queue position by using SIP SUBSCRIBE/NOTIFY message	05.05.2008
802096	ALU	08748457.2	EP2278782	DE	Query waiting queue position by using SIP SUBSCRIBE/NOTIFY message	05.05.2008
802096	ALU	08748457.2	EP2278782	GB	Query waiting queue position by using SIP SUBSCRIBE/NOTIFY message	05.05.2008
815456	ALU	2016565302		JP	Process For Augmented Reality Based Provisioning Of 3D Models Of Indoor Internet Of Things Environment	10.04.2015
814295	ALU	201580035906.X		CN	Customizable collaboration background	21.04.2015
814295	ALU	20167033749		KR	Customizable collaboration background	21.04.2015
814295	ALU	15/308158		US	Customizable collaboration background	21.04.2015
804002	ALU	10713711.9	EP2396957	FR	Synchronizing Packet Sequence Number In TDM-PW Service For Line Card Redundancy	10.02.2010

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PATENT
REEL: 043877 FRAME: 0419

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
804002	ALU	10713711.9	EP2396957	DE	Synchronizing Packet Sequence Number In TDM-PW Service For Line Card Redundancy	10.02.2010
813768	ALU	201480062234.7		CN	Transparent Content Origin	17.09.2014
813768	ALU	20167012759		KR	Transparent Content Origin	17.09.2014
813768	ALU	15/036323		US	Transparent Content Origin	17.09.2014
814579	ALU	201480063514.X		CN	Transparent Cache Efficiency In IP Networks	17.09.2014
814579	ALU	1020167013415		KR	Transparent Cache Efficiency In IP Networks	17.09.2014
812819	ALU	201380052817.7		CN	Method For Deploying Geographically-Distributed Applications Within A Distributed Cloud	30.09.2013
812819	ALU	13844529.1		EP	Method For Deploying Geographically-Distributed Applications Within A Distributed Cloud	30.09.2013
812819	ALU	2015536234	JP6113849	JP	Method For Deploying Geographically-Distributed Applications Within A Distributed Cloud	30.09.2013
809893	ALU	12759596.5		EP	Archive Control For Text Messages	05.09.2012
809893	ALU	1949/DELNP/2014		IN	Archive Control For Text Messages	05.09.2012
809893	ALU	2014531846	JP6000359	JP	Archive Control For Text Messages	05.09.2012
817293	ALU	15290094.0		EP	Colourless Add/Drop Dwdm System Using Novel Monitoring And N+1 Protection	09.04.2015
809293	ALU	10-2013-7026168	KR10-1547046	KR	Remote Coupling of Phantom Signals (inclusive implementation schemes and optimisations)	03.04.2012
816923	ALU	15/512259		US	Fast Start and Zap For HTTP Adaptive Streaming	15.09.2015
815445	ALU	14305279.3		EP	Method To Send In-Network Based Congestion/Packet Drop Indication	27.02.2014
810895	ALU	12306429.7		EP	Accurate selection and interaction with connected real world object (RWO) in mobile Augmented Reality	16.11.2012
Bachl 29-10 (RW)	ALU	08713122.3	EP2127464	FR	Dynamic Power Allocation For Unicast-Multicast Superposition In Wireless Broadcasting	14.01.2008
Bachl 29-10 (RW)	ALU	08713122.3	EP2127464	DE	Dynamic Power Allocation For Unicast-Multicast Superposition In Wireless Broadcasting	14.01.2008
Bachl 29-10 (RW)	ALU	08713122.3	EP2127464	GB	Dynamic Power Allocation For Unicast-Multicast Superposition In Wireless Broadcasting	14.01.2008
106264	ALU	07731545.5	EP1982465	FR	MBMS CONTROL CHANNEL MONITORING WITHOUT MBMS INDICATION CHANNEL	31.01.2007
106264	ALU	07731545.5	EP1982465	DE	MBMS CONTROL CHANNEL MONITORING WITHOUT MBMS INDICATION CHANNEL	31.01.2007
106264	ALU	07731545.5	EP1982465	GB	MBMS CONTROL CHANNEL MONITORING WITHOUT MBMS INDICATION CHANNEL	31.01.2007
Acharya 31-14-18 (S)	ALU	08768261.3	EP2168342	FR	Targeted Advertisement Insertion With Interface Device Assisted Switching	09.06.2008
Acharya 31-14-18 (S)	ALU	08768261.3	EP2168342	DE	Targeted Advertisement Insertion With Interface Device Assisted Switching	09.06.2008
Acharya 31-14-18 (S)	ALU	08768261.3	EP2168342	GB	Targeted Advertisement Insertion With Interface Device Assisted Switching	09.06.2008
811495	ALU	12290126.7	EP2651123	FR	Implementation Of A Network PVR	10.04.2012
811495	ALU	12290126.7	EP2651123	DE	Implementation Of A Network PVR	10.04.2012
811495	ALU	12290126.7	EP2651123	GB	Implementation Of A Network PVR	10.04.2012
816568	ALU	15736302.9		EP	Presence-based Nested Capability Discovery	16.07.2015
816568	ALU	15/326253		US	Presence-based Nested Capability Discovery	16.07.2015
811713	ALU	13716707.8		EP	System And Method For Routable LDP LSR Identifier In IPv6 Networks	04.04.2013
811713	ALU	2015504739	JP5992602	JP	System And Method For Routable LDP LSR Identifier In IPv6 Networks	04.04.2013
811713	ALU	20147027896	KR101593356	KR	System And Method For Routable LDP LSR Identifier In IPv6 Networks	04.04.2013
811714	ALU	201380018768.5		CN	System And Method Providing For Multiple LDP Instances	04.04.2013
812178	ALU	13734239.0	EP2865155	FR	Manipulation And Restoration Of Authentication Challenge Parameters In Network Authentication Procedures	18.06.2013
812178	ALU	13734239.0	EP2865155	DE	Manipulation And Restoration Of Authentication Challenge Parameters In Network Authentication Procedures	18.06.2013
812178	ALU	13734239.0	EP2865155	GB	Manipulation And Restoration Of Authentication Challenge Parameters In Network Authentication Procedures	18.06.2013
814472	ALU	14305147.2	EP2903185	FR	Optical amplifier architecture for spatial division multiplexing	03.02.2014
814472	ALU	14305147.2	EP2903185	DE	Optical amplifier architecture for spatial division multiplexing	03.02.2014
814472	ALU	14305147.2	EP2903185	GB	Optical amplifier architecture for spatial division multiplexing	03.02.2014
139279	ALU	201410464353.7		CN	A ROBUST ADAPTIVE SLIDING WINDOW SCHEME FOR MAC TABLE OVERFLOW IN AN AUTHENTICATION ENABLED ETHERNET NETWORK	13.10.2005
806261	ALU	13/637479		US	System and Method for Transforming Web from 2D into 3D	08.03.2011
131326	ALU	07008293.8	EP1850423	FR	GIG-Array Connectors unhooking device	24.04.2007
131326	ALU	07008293.8	EP1850423	DE	GIG-Array Connectors unhooking device	24.04.2007

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PATENT
REEL: 043877 FRAME: 0420

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
805480	ALU	10788094.0	EP2522091	FR	Optical network exploiting adaptive bit-rate Transponders for "soft" protection	16.12.2010
812879	ALU	2013800583352		CN	Seamless communication application shift	21.10.2013
812879	ALU	3798/DELNP/2015		IN	Seamless communication application shift	21.10.2013
812879	ALU	2015544392	JP5989917	JP	Seamless communication application shift	21.10.2013
808988	ALU	11290069.1	EP2485467	GB	An Innovative Way Of Making Your Friends Listen To The Music Via Cellphones	31.01.2011
809434	ALU	12735869.5	EP2754311	DE	Protection against robbery of mobile	13.07.2012
809434	ALU	12735869.5	EP2755411	GB	Protection against robbery of mobile	13.07.2012
801470	ALU	09703949.9	EP2260628	FR	MAC ADDRESS FLOODING DEFENCE	08.01.2009
812260	ALU	12306443.8	EP2733903	FR	Diverting Attention From Video Quality Problems	20.11.2012
812260	ALU	12306443.8	EP2733903	DE	Diverting Attention From Video Quality Problems	20.11.2012
812260	ALU	12306443.8	EP2733903	GB	Diverting Attention From Video Quality Problems	20.11.2012
804108	ALU	09305363.5	EP2247004	FR	Class-O LINC Transmitter	28.04.2009
804108	ALU	09305363.5	EP2247004	DE	Class-O LINC Transmitter	28.04.2009
804108	ALU	09305363.5	EP2247004	GB	Class-O LINC Transmitter	28.04.2009
804183	ALU	09305402.1	EP2249525	DE	Stitching of Labels for Inter-Carrier service Enforcement (SLICE)	06.05.2009
804183	ALU	09305402.1	EP2249525	GB	Stitching of Labels for Inter-Carrier service Enforcement (SLICE)	06.05.2009
813699	ALU	13290227.1	EP2852067	FR	Successive Distributed Vectoring	23.09.2013
813699	ALU	13290227.1	EP2852067	DE	Successive Distributed Vectoring	23.09.2013
813699	ALU	13290227.1	EP2852067	GB	Successive Distributed Vectoring	23.09.2013
817847	ALU	15305405.1		EP	Congestion Controlled Priority Scheduler	20.03.2015
105318	ALU	05300451.1	EP1612979	FR	DISTRIBUTED RE-SYNCHRONISATION POINTS FOR CIRCUIT EMULATION SERVICES	03.06.2005
105318	ALU	05300451.1	EP1612979	DE	DISTRIBUTED RE-SYNCHRONISATION POINTS FOR CIRCUIT EMULATION SERVICES	03.06.2005
105318	ALU	05300451.1	EP1612979	GB	DISTRIBUTED RE-SYNCHRONISATION POINTS FOR CIRCUIT EMULATION SERVICES	03.06.2005
815570	ALU	201580035495.4		CN	Battery Based Mptcp Optimization For Wifi / 3gpp Interworking	24.06.2015
815570	ALU	15739702.7		EP	Battery Based Mptcp Optimization For Wifi / 3gpp Interworking	24.06.2015
815570	ALU	2016575793		JP	Battery Based Mptcp Optimization For Wifi / 3gpp Interworking	24.06.2015
809746	ALU	13/608531	US8903238	US	Ultra Dense WDM With Agile And Flexible DSP Add-Drop	10.09.2012
808769	ALU	2014517598	JP5890015	JP	Digital post compensation of local oscillator phase noise for coherent receivers.	20.06.2012
808769	ALU	14/122332	US9219551	US	Digital post compensation of local oscillator phase noise for coherent receivers.	20.06.2012
810404	ALU	12150879.0	EP2615755	FR	Super "Multicast switch"-based A/D block for transparent WDM node	12.01.2012
810404	ALU	12150879.0	EP2615755	DE	Super "Multicast switch"-based A/D block for transparent WDM node	12.01.2012
810404	ALU	12150879.0	EP2615755	GB	Super "Multicast switch"-based A/D block for transparent WDM node	12.01.2012
801741	ALU	07291440.1	EP2066103	FR	SIS SPLITTER	30.11.2007
801741	ALU	07291440.1	EP2066103	DE	SIS SPLITTER	30.11.2007
801741	ALU	07291440.1	EP2066103	GB	SIS SPLITTER	30.11.2007
808936	ALU	12360005.8	EP2621202	FR	A Technique For Locating A Lost Or Stolen Mobile Using A Network Initiated Trace	27.01.2012
808936	ALU	12360005.8	EP2621202	DE	A Technique For Locating A Lost Or Stolen Mobile Using A Network Initiated Trace	27.01.2012
808936	ALU	12360005.8	EP2621202	GB	A Technique For Locating A Lost Or Stolen Mobile Using A Network Initiated Trace	27.01.2012
800503	ALU	08747142.1	EP2153650	FR	New Mechanisms for Commerical Insertion	30.04.2008
800503	ALU	08747142.1	EP2153650	DE	New Mechanisms for Commerical Insertion	30.04.2008
800503	ALU	08747142.1	EP2153650	GB	New Mechanisms for Commerical Insertion	30.04.2008
812260	ALU	12306443.8	EP2733903	EP	Diverting Attention From Video Quality Problems	20.11.2012
817470	ALU	15305416.8		EP	Timeserv: Mechanism For Providing Latency-Controlled Services	23.03.2015
Xie 19 (C)	ALU	09788933.1	EP2329609	FR	PMDC Feedback Signal For Alternate Polarization DPSK System	17.07.2009
Xie 19 (C)	ALU	09788933.1	EP2329609	DE	PMDC Feedback Signal For Alternate Polarization DPSK System	17.07.2009
Xie 19 (C)	ALU	09788933.1	EP2329609	GB	PMDC Feedback Signal For Alternate Polarization DPSK System	17.07.2009
808797	ALU	14/110612	US9282464	US	A Novel QoS Aware Multi-radio Access Point over TV Whitespaces.	08.04.2011
809293	ALU	2012800168938	ZL201280016893.8	CN	Remote Coupling of Phantom Signals (inclusive implementation schemes and optimisations)	03.04.2012
809293	ALU	2014-503108	JP5670599	JP	Remote Coupling of Phantom Signals (inclusive implementation schemes and optimisations)	03.04.2012
809293	ALU	14/005087	US9124429	US	Remote Coupling of Phantom Signals (inclusive implementation schemes and optimisations)	03.04.2012
817150	ALU	14/561029	US9414386	US	A System And Method For User Equipment Initiated Unlicensed Secondary Carrier Activation/Deactivation Mechanism	04.12.2014
807872	ALU	10306291.5	EP2458793	FR	Dynamic Metric Calculation In IP Over CLNP Tunnels	24.11.2010
807872	ALU	10306291.5	EP2458793	DE	Dynamic Metric Calculation In IP Over CLNP Tunnels	24.11.2010

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0421

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
807872	ALU	10306291.5	EP2458793	GB	Dynamic Metric Calculation In IP Over CLNP Tunnels	24.11.2010
812346	ALU	12305817.4	EP2685685	FR	Method For Achieving End-To-End Path Diversity For Dual-Homed UNI-Clients	09.07.2012
812035	ALU	13170561.8	EP2712161	FR	Method For Remote Detection Of Reversed POTS Splitters	05.06.2013
812035	ALU	13170561.8	EP2712161	DE	Method For Remote Detection Of Reversed POTS Splitters	05.06.2013
812035	ALU	13170561.8	EP2712161	GB	Method For Remote Detection Of Reversed POTS Splitters	05.06.2013
Batni 18-18 (RP)	ALU	14/595329	US9699321	US	Method And Apparatus For Providing Customized Ring Back To Calling Terminals In A Cable Network	13.01.2015
811105	ALU	201380017737.8		CN	Method And Apparatus For Authenticating Video Content	15.03.2013
811105	ALU	13714117.2	EP2832110	EP	Method And Apparatus For Authenticating Video Content	15.03.2013
811105	ALU	2015503324	JP5937270	JP	Method And Apparatus For Authenticating Video Content	15.03.2013
810912	ALU	12305179.9	EP2629435	FR	Non-disruptive Detection, Identification And Localization Of Impairments On Vectored Lines	16.02.2012
810912	ALU	12305179.9	EP2629435	DE	Non-disruptive Detection, Identification And Localization Of Impairments On Vectored Lines	16.02.2012
810912	ALU	12305179.9	EP2629435	GB	Non-disruptive Detection, Identification And Localization Of Impairments On Vectored Lines	16.02.2012
814499	ALU	14305398.1	EP2922226	FR	Packet power and phase detector for slotted rings	20.03.2014
814499	ALU	14305398.1	EP2922226	DE	Packet power and phase detector for slotted rings	20.03.2014
816518	ALU	14306277.6		EP	Undersampled Dsm-Pwm Hybrid	14.08.2014
803671	ALU	200880131572.6	ZL200880131572.6	CN	Generation of a simple feedback signal for optical PMDC	07.11.2008
803671	ALU	12/998133	US8958704	US	Generation of a simple feedback signal for optical PMDC	07.11.2008
804775	ALU	10761047.9	EP2471274	FR	Criteria for the selection of physical parameters of bi-directional links	12.08.2010
804775	ALU	10761047.9	EP2471274	DE	Criteria for the selection of physical parameters of bi-directional links	12.08.2010
804775	ALU	10761047.9	EP2471274	GB	Criteria for the selection of physical parameters of bi-directional links	12.08.2010
811970	ALU	15/407459		US	Reducing Costs Related To Use Of Networks Based On Pricing Heterogeneity	17.01.2017
810652	ALU	11306687.2	EP2605453	FR	Multimedia RTMP Streaming Real-time Up- And Downstream Quality Of Service Characterisation For Immersive Communications	16.12.2011
810652	ALU	11306687.2	EP2605453	DE	Multimedia RTMP Streaming Real-time Up- And Downstream Quality Of Service Characterisation For Immersive Communications	16.12.2011
810652	ALU	11306687.2	EP2605453	GB	Multimedia RTMP Streaming Real-time Up- And Downstream Quality Of Service Characterisation For Immersive Communications	16.12.2011
804722	ALU	10773628.2		EP	Techniques for Caching and Pre-fetching of Mobile Content At the Network Edge Based on Prediction of Users' Locations and Content Demands	04.11.2010
804722	ALU	2012537402		JP	Techniques for Caching and Pre-fetching of Mobile Content At the Network Edge Based on Prediction of Users' Locations and Content Demands	04.11.2010
811548	ALU	12306010.5	EP2635088	DE	Clustering Of Transmission Points With Reduced Complexity And Signalling Overhead	20.08.2012
811548	ALU	12306010.5	EP2635088	GB	Clustering Of Transmission Points With Reduced Complexity And Signalling Overhead	20.08.2012
807268	ALU	201180036306.7	ZL201180036306.7	CN	Synchronous Ethernet ESMC and SDH/SONET Time Inter-Working Function (EST-IWF)	30.06.2011
807268	ALU	11729113.8		EP	Synchronous Ethernet ESMC and SDH/SONET Time Inter-Working Function (EST-IWF)	30.06.2011
807268	ALU	2013517299	JP5653518	JP	Synchronous Ethernet ESMC and SDH/SONET Time Inter-Working Function (EST-IWF)	30.06.2011
807268	ALU	20137002409	KR101492747	KR	Synchronous Ethernet ESMC and SDH/SONET Time Inter-Working Function (EST-IWF)	30.06.2011
807268	ALU	13/806212	US9264212	US	Synchronous Ethernet ESMC and SDH/SONET Time Inter-Working Function (EST-IWF)	30.06.2011
810918	ALU	12305545.1	EP2665212	FR	Optical packet multi-ring architecture	16.05.2012
810918	ALU	12305545.1	EP2665212	DE	Optical packet multi-ring architecture	16.05.2012
810918	ALU	12305545.1	EP2665212	GB	Optical packet multi-ring architecture	16.05.2012
809234	ALU	2012800524203	ZL2012800524203	CN	Adaptive DSL	09.10.2012
809234	ALU	2014-537550	JP5758551	JP	Adaptive DSL	09.10.2012
809234	ALU	10-2014-7010747	KR10-1558828	KR	Adaptive DSL	09.10.2012

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PATENT
REEL: 043877 FRAME: 0422

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
807363	ALU	201010503247.7	ZL201010503247.7	CN	QoS-Oriented Scheduling Mechanisms For ATCA Based Products	28.09.2010
816197	ALU	14306402.0		EP	System For Block-based TV	12.09.2014
807440	ALU	13/007883	US9667539	US	Transparency Of Customer QoS Indication Through A PBB Backbone	17.01.2011
815487	ALU	201580032752.9		CN	Avoiding deadlock condition in MPLS-TP Ring Protection Switching (MRPS)	23.06.2015
815487	ALU	20177002071		JP	Avoiding deadlock condition in MPLS-TP Ring Protection Switching (MRPS)	23.06.2015
815487	ALU	PCT/EP2015/064044		KR	Avoiding deadlock condition in MPLS-TP Ring Protection Switching (MRPS)	23.06.2015
815487	ALU	15/320565		US	Avoiding deadlock condition in MPLS-TP Ring Protection Switching (MRPS)	23.06.2015
810133	ALU	13/206856	US8639040	US	Method And Apparatus For Comparing Videos	10.08.2011
103728	ALU	01403147.0	EP1237381	FR	SIGNALLING LINK FOR AERONAUTICAL GSM	06.12.2001
103728	ALU	01403147.0	EP1237381	DE	SIGNALLING LINK FOR AERONAUTICAL GSM	06.12.2001
103728	ALU	01403147.0	EP1237381	GB	SIGNALLING LINK FOR AERONAUTICAL GSM	06.12.2001
115006	ALU	06291267.0	EP1884758	FR	Control loop for an integrated measurement procedure	03.08.2006
115006	ALU	06291267.0	EP1884758	DE	Control loop for an integrated measurement procedure	03.08.2006
810732	ALU	13/399515	US8817903	US	Methods And Systems For Reducing Crosstalk	17.02.2012
810733	ALU	13/399479	US8761294	US	Methods And Systems For Reducing Crosstalk	17.02.2012
808988	ALU	11290069.1	EP2485467	FR	An Innovative Way Of Making Your Friends Listen To The Music Via Cellphones	31.01.2011
808988	ALU	11290069.1	EP2485467	DE	An Innovative Way Of Making Your Friends Listen To The Music Via Cellphones	31.01.2011
814473	ALU	13/911816		US	Method And Apparatus For Improved Multicast Rate Control Using Feedback Mobiles	06.06.2013
809355	ALU	20137026992	KR101474186	KR	Condensed Core-Energy-Efficient Architecture For Wan IP Backbones	11.04.2012
809322	ALU	12755638.9		EP	A Tubable Optical Frequency Comb Generator	06.03.2012
815166	ALU	14307056.3		EP	Method of operating two-section (R)SOA for 10 Gbit/s transmission	16.12.2014
813667	ALU	14/501628	US9491675	US	Policy Engine In Mobile Unit For Enhanced Femtocell Handover	30.09.2014
805087	ALU	09290882.1	EP2326129	FR	Local Network Access For UE's In Coverage Of Home NodeBs	20.11.2009
805087	ALU	09290882.1	EP2326129	DE	Local Network Access For UE's In Coverage Of Home NodeBs	20.11.2009
805087	ALU	09290882.1	EP2326129	GB	Local Network Access For UE's In Coverage Of Home NodeBs	20.11.2009
811418	ALU	112014020067.0		BR	Method And Apparatus For Interference Cancellation In Hybrid Satellite-Terrestrial Network	07.02.2013
811418	ALU	201380009163.X		CN	Method And Apparatus For Interference Cancellation In Hybrid Satellite-Terrestrial Network	07.02.2013
811418	ALU	13705877.2	EP2815525	EP	Method And Apparatus For Interference Cancellation In Hybrid Satellite-Terrestrial Network	07.02.2013
811418	ALU	6070/CHENP/2014		IN	Method And Apparatus For Interference Cancellation In Hybrid Satellite-Terrestrial Network	07.02.2013
814888	ALU	14290317.8		EP	Content-based Rate Adaptation For Interactive Audio/video Communication Over The Web	21.10.2014
808610	ALU	12305173.2	EP2629546	FR	Ad-Play Grace Period In Program Switch and Search Modes	16.02.2012
137429	ALU	08150988.7	EP1915024	FR	OPTIMIZATION OF REDUNDANT LINK USAGE IN A MULTI-SHELF NE	26.09.2002
137429	ALU	08150988.7	EP1915024	DE	OPTIMIZATION OF REDUNDANT LINK USAGE IN A MULTI-SHELF NE	26.09.2002
137429	ALU	08150988.7	EP1915024	GB	OPTIMIZATION OF REDUNDANT LINK USAGE IN A MULTI-SHELF NE	26.09.2002
814223	ALU	14/512941		US	Adaptive Streaming In Wireless Communication Systems	13.10.2014
121312	ALU	07290716.5	EP2001153	FR	DYNAMIC CODE MANAGEMENT BASED ON INTERPOLATED OR EXTRAPOLATED IMPULSE NOISE MEASUREMENTS.	08.06.2007
817150	ALU	201580065294.9		CN	A System And Method For User Equipment Initiated Unlicensed Secondary Carrier Activation/Deactivation Mechanism	01.12.2015
817150	ALU	15823846.9		EP	A System And Method For User Equipment Initiated Unlicensed Secondary Carrier Activation/Deactivation Mechanism	01.12.2015
817150	ALU	2017529643		JP	A System And Method For User Equipment Initiated Unlicensed Secondary Carrier Activation/Deactivation Mechanism	01.12.2015
817150	ALU	20177015006		KR	A System And Method For User Equipment Initiated Unlicensed Secondary Carrier Activation/Deactivation Mechanism	01.12.2015
814578	ALU	13290270.1		EP	Suspended Stripline Crossover With Capacitively Coupled Groundplane	05.11.2013
811548	ALU	12306010.5	EP2635088	FR	Clustering Of Transmission Points With Reduced Complexity And Signalling Overhead	20.08.2012
808447	ALU	11290181.4		EP	Method For Encoding Content Names	11.04.2011

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PATENT
REEL: 043877 FRAME: 0423

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
806631	ALU	201180020475.1	ZL201180020475.1	CN	Virtual Buffer technique to calculate and compensate node level residence time in nodes with hardware assisted time stamping not embedded in PHY	14.04.2011
812829	ALU	13305341.3	EP2782273	FR	SCHEDULING OF DATA BURSTS IN A BURST SWITCHING COMMUNICATION NETWORK	21.03.2013
812829	ALU	13305341.3	EP2782273	DE	SCHEDULING OF DATA BURSTS IN A BURST SWITCHING COMMUNICATION NETWORK	21.03.2013
812829	ALU	13305341.3	EP2782273	GB	SCHEDULING OF DATA BURSTS IN A BURST SWITCHING COMMUNICATION NETWORK	21.03.2013
813109	ALU	13305215.9	EP2770670	EP	Detection Of Disorderly Leaving Events Impacts On A Victim Line	26.02.2013
811457	ALU	201380034891.6		CN	User-Selectable IEEE1588 Clock Class And Quality Level Mapping	26.06.2013
811457	ALU	13809824.9		EP	User-Selectable IEEE1588 Clock Class And Quality Level Mapping	26.06.2013
811457	ALU	2015518743	JP6033957	JP	User-Selectable IEEE1588 Clock Class And Quality Level Mapping	26.06.2013
814356	ALU	13290258.6	EP2866398	FR	Combined Ethernet Interface Protection And OTH/SDH Path Protection Mechanism	28.10.2013
814356	ALU	13290258.6	EP2866398	DE	Combined Ethernet Interface Protection And OTH/SDH Path Protection Mechanism	28.10.2013
814356	ALU	13290258.6	EP2866398	GB	Combined Ethernet Interface Protection And OTH/SDH Path Protection Mechanism	28.10.2013
814384	ALU	13306305.7	EP2854299	EP	SNR-based bridged-taps and RFI discrimination	25.09.2013
808936	ALU	12360005.8	EP2621202	EP	A Technique For Locating A Lost Or Stolen Mobile Using A Network Initiated Trace	27.01.2012
811974	ALU	12306595.5	EP2744292	DE	Green Comb for WiFi	17.12.2012
811974	ALU	12306595.5	EP2744292	GB	Green Comb for WiFi	17.12.2012
806290	ALU	11710060.2	EP2529519	GB	Method And Apparatus For Managing Mobile Resource Usage	17.01.2011
817305	ALU	201580060937.0		CN	Backdrill Reliability Anchors	04.11.2015
van der Gaast 10 (I)	ALU	201510727455.8		CN	Downloadable Ringtones For Usage In Emergency Situations	19.11.2008
818657	ALU	14/941327		US	Home Plate Design For 0201 Use Between Vias	13.11.2015
815836	ALU	201580019670.0		CN	Method To Achieve 2d Modulation Formats Based On Intensity Modulations In prefixed Non-Orthogonal Directions	13.04.2015
815836	ALU	2016562529		JP	Method To Achieve 2d Modulation Formats Based On Intensity Modulations In prefixed Non-Orthogonal Directions	13.04.2015
815836	ALU	15/300967		US	Method To Achieve 2d Modulation Formats Based On Intensity Modulations In prefixed Non-Orthogonal Directions	13.04.2015
139270	ALU	14/251784		US	ETHERNET ALARM INDICATION SIGNAL (ETHAIS)	14.04.2014
Sharma 22 (A)	ALU	07837741.3	EP2064854	FR	A Method And Apparatus For Concurrent Registration Of Voice And Data Subscribers	05.09.2007
Sharma 22 (A)	ALU	07837741.3	EP2064854	DE	A Method And Apparatus For Concurrent Registration Of Voice And Data Subscribers	05.09.2007
Sharma 22 (A)	ALU	07837741.3	EP2064854	GB	A Method And Apparatus For Concurrent Registration Of Voice And Data Subscribers	05.09.2007
804528	ALU	201080005776.2	ZL201080005776.2	CN	Scaled Ethernet OAM For Mesh And Hub-And-Spoke Networks	15.01.2010
804528	ALU	5469/CHENP/2011		IN	Scaled Ethernet OAM For Mesh And Hub-And-Spoke Networks	15.01.2010
811692	ALU	201380021405.7		CN	Synchronization Management Groups	19.04.2013
811692	ALU	13782635.0		EP	Synchronization Management Groups	19.04.2013
806349	ALU	09290859.9	EP2323216	FR	Antenna Apparatus and Antenna Selection Method	12.11.2009
806349	ALU	09290859.9	EP2323216	DE	Antenna Apparatus and Antenna Selection Method	12.11.2009
806349	ALU	09290859.9	EP2323216	GB	Antenna Apparatus and Antenna Selection Method	12.11.2009
815440	ALU	14305937.6		EP	Wireless - Based Service /Capability Exposition -WAN Focus (WISE-WAN)	18.06.2014
810912	ALU	12305179.9	EP2629435	EP	Non-disruptive Detection, Identification And Localization Of Impairments On Vectored Lines	16.02.2012
811463	ALU	201380033796.4	ZL201380033796.4	CN	Smooth Quality Transitions In Adaptive Streaming	24.06.2013
811463	ALU	2015519022	JP6080951	JP	Smooth Quality Transitions In Adaptive Streaming	24.06.2013
811463	ALU	10-2015-7002232	KR101657073	KR	Smooth Quality Transitions In Adaptive Streaming	24.06.2013
811463	ALU	14/411150		US	Smooth Quality Transitions In Adaptive Streaming	24.06.2013
807337	ALU	11781591.0	EP2599286	FR	Bringing Up IPv6CP Between IP Pseudowire Service Access Point And Customer Equipment (CE) Service Access Point	20.07.2011
807337	ALU	11781591.0	EP2599286	DE	Bringing Up IPv6CP Between IP Pseudowire Service Access Point And Customer Equipment (CE) Service Access Point	20.07.2011
807337	ALU	11781591.0	EP2599286	GB	Bringing Up IPv6CP Between IP Pseudowire Service Access Point And Customer Equipment (CE) Service Access Point	20.07.2011

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0424

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
809182	ALU	201280035589.8	ZL201280035589.8	CN	Interface Between 3GPP Networks And 3GPP2 Networks For WAP Text Messaging	29.06.2012
809182	ALU	10945/DELNP/2013		IN	Interface Between 3GPP Networks And 3GPP2 Networks For WAP Text Messaging	29.06.2012
818786	ALU	15/381086		US	Reduced Size (Compact) High Power Microstrip Line 30db Compensated Coupler With High Directivity For High Efficiency Basestation Power Amplifier Applications	15.12.2016
809434	ALU	201280042921.3		CN	Protection against robbery of mobile	13.07.2012
809434	ALU	2014528910	JP6159725	JP	Protection against robbery of mobile	13.07.2012
809434	ALU	14/131494	US9622082	US	Protection against robbery of mobile	13.07.2012
809391	ALU	13/118772	US9609370	US	Video Delivery Modification Based On Network Availability	31.05.2011
Weaver 48 (CF)	ALU	17152450.7		EP	Frequency Mapping For A Wireless Communication System	24.04.2009
812534	ALU	12306114.5	EP2709345	FR	Diagnostic Of Bad Configuration Of DPBO Parameters	17.09.2012
812534	ALU	12306114.5	EP2709345	DE	Diagnostic Of Bad Configuration Of DPBO Parameters	17.09.2012
812534	ALU	12306114.5	EP2709345	GB	Diagnostic Of Bad Configuration Of DPBO Parameters	17.09.2012
120721	ALU	02360339.2	EP1429497	FR	Per adapter routing table	09.12.2002
120721	ALU	02360339.2	EP1429497	DE	Per adapter routing table	09.12.2002
120721	ALU	02360339.2	EP1429497	GB	Per adapter routing table	09.12.2002
					Dynamic And Quasi-Dynamic Group Data Plan Quota Allocation For Mobile Devices	
812732	ALU	13/932256		US		01.07.2013
806290	ALU	11710060.2	EP2529519	FR	Method And Apparatus For Managing Mobile Resource Usage	17.01.2011
806290	ALU	11710060.2	EP2529519	DE	Method And Apparatus For Managing Mobile Resource Usage	17.01.2011
809227	ALU	2014522851	JP5805318	JP	Bootstrapping Fault Detection Sessions Over A P2MP Tunnel	10.07.2012
809227	ALU	20147001942	KR101488648	KR	Bootstrapping Fault Detection Sessions Over A P2MP Tunnel	10.07.2012
Gill 26-4-17-10-8 (DM)	ALU	2013141219	JP6073753	JP	A High Speed Semiconductor Optical Modulator	30.10.2007
813600	ALU	13305754.7		EP	Centralized HTTP Adaptive Streaming	05.06.2013
813655	ALU	13290163.8		EP	Client Management For HAS Based Panoramic Video	12.07.2013
811701	ALU	2013800305643	ZL2013800305643	CN	eOTDR Crosstalk Mitigation Through Digital Signal Processing	30.04.2013
818499	ALU	PCT/EP2016/075610		WO	QoS Tunneling In Packet Switched Networks	25.10.2016
Kisel 17-18 (A)	ALU	20117018261	KR101284516	KR	Intelligent Bursting - Optimised BW Utilisation In Multimedia Networks with QoS	31.12.2009
Kisel 17-18 (A)	ALU	13/143265	US9325527	US	Intelligent Bursting - Optimised BW Utilisation In Multimedia Networks with QoS	31.12.2009
806290	ALU	201180007724.3	ZL201180007724.3	CN	Method And Apparatus For Managing Mobile Resource Usage	17.01.2011
806290	ALU	11710060.2	EP2529519	EP	Method And Apparatus For Managing Mobile Resource Usage	17.01.2011
808852	ALU	201280011854.9	ZL201280011854.9	CN	Detecting Duplicated Videos With Insertion/Deletion/Substitution By Sequence Matching	04.01.2012
808852	ALU	12711444.5		EP	Detecting Duplicated Videos With Insertion/Deletion/Substitution By Sequence Matching	04.01.2012
808852	ALU	2013547935	JP5685324	JP	Detecting Duplicated Videos With Insertion/Deletion/Substitution By Sequence Matching	04.01.2012
814435	ALU	13306341.2	EP2860940	DE	Social Hint-based Caching	27.09.2013
814435	ALU	13306341.2	EP2860940	GB	Social Hint-based Caching	27.09.2013
Kodialam 52-55-26 (MS)	ALU	201710010792.4		CN	Advertisement Scheduling In A Packet-Based Media-Delivery System	22.03.2010
805508	ALU	20147026757	KR101531919	KR	Immobilization Module For Security On A Communication System	20.09.2010
Alfano 3-16-13-8 (FM)	ALU	07861977.2	EP2087668	FR	Network Controlled Mobility Route Optimization For An IP Base Station Transceiver Architecture	15.11.2007
Alfano 3-16-13-8 (FM)	ALU	07861977.2	EP2087668	DE	Network Controlled Mobility Route Optimization For An IP Base Station Transceiver Architecture	15.11.2007
Alfano 3-16-13-8 (FM)	ALU	07861977.2	EP2087668	GB	Network Controlled Mobility Route Optimization For An IP Base Station Transceiver Architecture	15.11.2007
809005	ALU	201280037795.2	ZL201280037795.2	CN	System And Method For Powering Redundant Components	19.07.2012
809005	ALU	2014524230	JP6000352	JP	System And Method For Powering Redundant Components	19.07.2012
810750	ALU	12290086.3	EP2639674	DE	Face Orientation-based Scene Interaction For Immersive Video Conferences	12.03.2012
810750	ALU	12290086.3	EP2639674	FR	Face Orientation-based Scene Interaction For Immersive Video Conferences	12.03.2012
810750	ALU	12290086.3	EP2639674	GB	Face Orientation-based Scene Interaction For Immersive Video Conferences	12.03.2012
817305	ALU	15825948.1		EP	Backdrill Reliability Anchors	04.11.2015
817305	ALU	2017525363		JP	Backdrill Reliability Anchors	04.11.2015
817305	ALU	20177012547		KR	Backdrill Reliability Anchors	04.11.2015
812418	ALU	20167028361		KR	Multi-Sector Antenna Structure	12.10.2016

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0425

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
807602	ALU	10360030.0	EP2403277	FR	"Mobile Touch" - A Cellular Short Range Mobile Phone Sensor System	01.07.2010
807602	ALU	10360030.0	EP2403277	DE	"Mobile Touch" - A Cellular Short Range Mobile Phone Sensor System	01.07.2010
807602	ALU	10360030.0	EP2403277	GB	"Mobile Touch" - A Cellular Short Range Mobile Phone Sensor System	01.07.2010
137962	ALU	06809258.4	EP1929707	GB	Passive Real-Time Address Space Validation System	22.08.2006
817654	ALU	15306171.8		EP	Assembly Level Re-Configurable Miniaturized Coaxial Cavity Resonators	17.07.2015
809624	ALU	11305593.3	EP2525587	FR	HAS Session Reconstruction (HAS-SR)	17.05.2011
809624	ALU	11305593.3	EP2525587	DE	HAS Session Reconstruction (HAS-SR)	17.05.2011
809624	ALU	11305593.3	EP2525587	GB	HAS Session Reconstruction (HAS-SR)	17.05.2011
813545	ALU	13306176.2	EP2843967	FR	Hierarchical Scheduling In Optical Burst Switching Networks And Related Node Architecture	28.08.2013
813545	ALU	13306176.2	EP2843967	DE	Hierarchical Scheduling In Optical Burst Switching Networks And Related Node Architecture	28.08.2013
813545	ALU	13306176.2	EP2843967	GB	Hierarchical Scheduling In Optical Burst Switching Networks And Related Node Architecture	28.08.2013
815172	ALU	14305049.0		EP	Crowd Region Of Interest Selector For Ultra Hd Video Stream Management	14.01.2014
802915	ALU	201410527954.8		CN	LOCAL ROUTING FOR FEMTO	09.10.2014
817077	ALU	14/576075		US	Conditional And Unconditional Rule Table Actions	18.12.2014
818500	ALU	14/949508		US	External Software Fault Detection System For Distributed Multi-CPU Architecture	23.11.2015
810355	ALU	11872079.6	EP2754274	DE	Incast-avoidance Scheme For Data Center Networks	06.09.2011
810355	ALU	11872079.6	EP2754274	GB	Incast-avoidance Scheme For Data Center Networks	06.09.2011
801595	ALU	08805051.3	EP2213110	FR	Users counter in Multicast Broadcast Services Zones	03.10.2008
801595	ALU	08805051.3	EP2213110	DE	Users counter in Multicast Broadcast Services Zones	03.10.2008
801595	ALU	08805051.3	EP2213110	GB	Users counter in Multicast Broadcast Services Zones	03.10.2008
800713	ALU	07290852.8	EP2012474	FR	Microwave node architecture in a multi vendor environment	06.07.2007
800713	ALU	07290852.8	EP2012474	DE	Microwave node architecture in a multi vendor environment	06.07.2007
800713	ALU	07290852.8	EP2012474	GB	Microwave node architecture in a multi vendor environment	06.07.2007
809487	ALU	201764144		JP	Method Of Connecting Boards At High Frequency	14.06.2013
810216	ALU	13/238329		US	Cell-Free Large-Scale Antenna System	21.09.2011
806190	ALU	10290213.7	EP2381597	FR	Low-Cost HW Fading Simulator using RRH	21.04.2010
806190	ALU	10290213.7	EP2381597	DE	Low-Cost HW Fading Simulator using RRH	21.04.2010
806190	ALU	10290213.7	EP2381597	GB	Low-Cost HW Fading Simulator using RRH	21.04.2010
810355	ALU	11872079.6	EP2754274	FR	Incast-avoidance Scheme For Data Center Networks	06.09.2011
813016	ALU	20157010540	KR101667950	KR	A Method of HAS Congestion Management In Wireless Network	25.10.2013
806084	ALU	201530370	JP6009014	JP	Identification Of Receiving BSR-Femto From Handover From Macro Cellular Network	01.10.2010
818568	ALU	15/265037		US	A Hitless And Fast Inherent Propagation Delay Self-Calibration Method For Galvanic Isolated 1PPS Interface	14.09.2016
801369	ALU	08755435.8	EP2149225	FR	Dual OSS Management of an Ethernet Access Network	14.05.2008
801369	ALU	08755435.8	EP2149225	DE	Dual OSS Management of an Ethernet Access Network	14.05.2008
812191	ALU	13805697.3		EP	Method To Determine The ASBR For Inter-AS Multicast VPN System And Method For Powering Redundant Components	27.11.2013
809005	ALU	12821593.6	EP2742677	FR	System And Method For Powering Redundant Components	19.07.2012
809005	ALU	12821593.6	EP2742677	DE	System And Method For Powering Redundant Components	19.07.2012
809005	ALU	12821593.6	EP2742677	GB	System And Method For Powering Redundant Components	19.07.2012
817788	ALU	PCI/EP2016/066429		WO	Method For Efficient Selective Retransmission Protocol For Multicast/Broadcast Services	11.07.2016
817788	ALU	105126724		TW	Method For Efficient Selective Retransmission Protocol For Multicast/Broadcast Services	22.08.2016
813818	ALU	13306682.9		EP	Advanced Doherty Analysis & Smart Self-Tuning Algorithm	09.12.2013
815517	ALU	201410174280.8		CN	A New Assume Positive Solution In Online Charging System	22.04.2014
150238	ALU	08789637.9		EP	Detection Of Spam/Telemarketing Phone Campaigns With Impersonated Caller Identities In Converged Networks	15.05.2008
150238	ALU	5365/CHENP/2009		IN	Detection Of Spam/Telemarketing Phone Campaigns With Impersonated Caller Identities In Converged Networks	15.05.2008
150238	ALU	2010508964	JP4981171	JP	Detection Of Spam/Telemarketing Phone Campaigns With Impersonated Caller Identities In Converged Networks	15.05.2008
150238	ALU	20097024428	KR101129752	KR	Detection Of Spam/Telemarketing Phone Campaigns With Impersonated Caller Identities In Converged Networks	15.05.2008
805667	ALU	13/509650	US9621410	US	OTN Tandem Connection Alarm Localization enhancement	17.12.2010
805928	ALU	2012552375	JP5525068	JP	Monitoring Of IEEE 1588V2 Transparent Clock Failure/ Degradation: Architecture And Implementation (M.I.T.)	09.02.2011

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0426

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
808442	ALU	4561/DELNP/2013		IN	Resource Profile Adjustment For Pre-Fetching Of Assets To User Equipment	06.12.2011
808442	ALU	2013543276	JP5721854	JP	Resource Profile Adjustment For Pre-Fetching Of Assets To User Equipment	06.12.2011
808442	ALU	20137017610	KR101548144	KR	Resource Profile Adjustment For Pre-Fetching Of Assets To User Equipment	06.12.2011
808299	ALU	11305414.2	EP2509245	FR	Adaptive Generation of Optimal DSLAM Service & Spectrum Profiles	08.04.2011
808299	ALU	11305414.2	EP2509245	DE	Adaptive Generation of Optimal DSLAM Service & Spectrum Profiles	08.04.2011
804739	ALU	10-2012-7006764	KR101397918	KR	Identifying Cell Spots	13.08.2010
804739	ALU	13/390771	US8774812	US	Identifying Cell Spots	13.08.2010
811861	ALU	13/780234	US9306758	US	System And Method For Dynamic MLDP Tunnel And PIM Binding	28.02.2013
Kisel 3-3 (A)	ALU	07291307.2	EP2053831	DE	Method For Caching Content Data Packages In Caching Nodes	26.10.2007
Kisel 3-3 (A)	ALU	07291307.2	EP2053831	GB	Method For Caching Content Data Packages In Caching Nodes	26.10.2007
805762	ALU	10193549.2	EP2337244	FR	Efficient scheme for protection in systems based on coherent detection	02.12.2010
805762	ALU	10193549.2	EP2337244	DE	Efficient scheme for protection in systems based on coherent detection	02.12.2010
805762	ALU	10193549.2	EP2337244	GB	Efficient scheme for protection in systems based on coherent detection	02.12.2010
806514	ALU	12/827949	US9361581	US	Caching Of Rules	30.06.2010
814293	ALU	201480034422.9		CN	Spurious Apparatus Detection Mechanism In Reverse Power Networks	12.06.2014
814293	ALU	2016-520384		JP	Spurious Apparatus Detection Mechanism In Reverse Power Networks	12.06.2014
814293	ALU	10-2015-7035526	KR101742417	KR	Spurious Apparatus Detection Mechanism In Reverse Power Networks	12.06.2014
814293	ALU	14/892092	US9621712	US	Spurious Apparatus Detection Mechanism In Reverse Power Networks	12.06.2014
802611	ALU	08170414.0	EP2073566	FR	Shared-Meshed acceleration based on pre-tuning savings	02.12.2008
802611	ALU	08170414.0	EP2073566	DE	Shared-Meshed acceleration based on pre-tuning savings	02.12.2008
802611	ALU	08170414.0	EP2073566	GB	Shared-Meshed acceleration based on pre-tuning savings	02.12.2008
815719	ALU	14/502113	US9686358	US	Network-Coded Caching-Aided Multicast For Efficient Content Delivery	30.09.2014
813393	ALU	201480018142.9		CN	IP TV commercial monitor	24.03.2014
813393	ALU	2016-504601		JP	IP TV commercial monitor	24.03.2014
813393	ALU	14/779415		US	IP TV commercial monitor	24.03.2014
813600	ALU	201480032077.5		CN	Centralized HTTP Adaptive Streaming	27.05.2014
813600	ALU	2016-517233		JP	Centralized HTTP Adaptive Streaming	27.05.2014
813600	ALU	14/895569		US	Centralized HTTP Adaptive Streaming	27.05.2014
812035	ALU	2013800494857		CN	Method For Remote Detection Of Reversed POTS Splitters	24.07.2013
812035	ALU	2015-532338		JP	Method For Remote Detection Of Reversed POTS Splitters	24.07.2013
803079	ALU	201610674632.5		CN	Manual attachment on customer's Femto cell.	12.06.2010
134061	ALU	14/263727		US	SIP Call Routing Using Information from INVITE Message Body	28.04.2014
810725	ALU	201380006490.X		CN	VoIP Client Control Via In-band Video Signalling	24.01.2013
810725	ALU	14/374391	US9559888	US	VoIP Client Control Via In-band Video Signalling	24.01.2013
805161	ALU	10722466.9	EP2436146	FR	A Fault-Resilient Method Of Generating Complete Correlated IMS Charging Data Records	20.05.2010
805161	ALU	10722466.9	EP2436146	DE	A Fault-Resilient Method Of Generating Complete Correlated IMS Charging Data Records	20.05.2010
805161	ALU	10722466.9	EP2436146	GB	A Fault-Resilient Method Of Generating Complete Correlated IMS Charging Data Records	20.05.2010
810326	ALU	2013800327197		CN	Enhanced Scheduler Architecture For Enabling Of Multi Operator Spectrum Sharing/ Virtualization	24.05.2013
810326	ALU	14/408791	US9414396	US	Enhanced Scheduler Architecture For Enabling Of Multi Operator Spectrum Sharing/ Virtualization	24.05.2013
816274	ALU	201580039552.6		CN	Signaling For Packet Switched Network Equipments Handling Coherent Emissions	15.07.2015
816274	ALU	2017503472		JP	Signaling For Packet Switched Network Equipments Handling Coherent Emissions	15.07.2015
813307	ALU	201480034898.2		CN	Dynamic Network Service Association and On Demand Service Provisioning	30.05.2014
809225	ALU	12305362.1	EP2645628	FR	IPTV Deadstream Detection	29.03.2012
809225	ALU	12305362.1	EP2645628	DE	IPTV Deadstream Detection	29.03.2012
809225	ALU	12305362.1	EP2645628	GB	IPTV Deadstream Detection	29.03.2012
Moeller 26 (LB)	ALU	07838502.8	EP2069759	FR	Inexpensive Terahertz Pulse Wave Generator	19.09.2007
Moeller 26 (LB)	ALU	07838502.8	EP2069759	DE	Inexpensive Terahertz Pulse Wave Generator	19.09.2007
Moeller 26 (LB)	ALU	07838502.8	EP2069759	GB	Inexpensive Terahertz Pulse Wave Generator	19.09.2007

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

**PATENT
REEL: 043877 FRAME: 0427**

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
812688	ALU	12306228.3	EP2720424	FR	Apparatus, Method and Computer Program Operable to Determine Estimates	09.10.2012
812688	ALU	12306228.3	EP2720424	DE	Apparatus, Method and Computer Program Operable to Determine Estimates	09.10.2012
812688	ALU	12306228.3	EP2720424	GB	Apparatus, Method and Computer Program Operable to Determine Estimates	09.10.2012
816182	ALU	14/588352		US	LTE WAL Contents For Various Assignments Of Cells To Tais	31.12.2014
816094	ALU	14/674669		US	Simplified Method To Enhance Real-Time QoE In E-FACH (Or In LTE)	31.03.2015
817176	ALU	15305879.7		EP	Miniaturized Coaxial Cavity Resonators	10.06.2015
814035	ALU	13306194.5	EP2843926	FR	Using POTS To Startup A Reversed Powered Device	03.09.2013
814035	ALU	13306194.5	EP2843926	DE	Using POTS To Startup A Reversed Powered Device	03.09.2013
814035	ALU	13306194.5	EP2843926	GB	Using POTS To Startup A Reversed Powered Device	03.09.2013
810028	ALU	201280050917.1		CN	Method And Apparatus For Controlling Buffer Status Report Messaging	14.08.2012
801841	ALU	2011507866	JP5995440	JP	Dynamic preemption	23.04.2009
801841	ALU	20107027272	KR101625831	KR	Dynamic preemption	23.04.2009
816274	ALU	15/326557		US	Signaling For Packet Switched Network Equipments Handling Coherent Emissions	15.07.2015
Heer 15-1-2-1 (AJ)	ALU	06826169.2	EP1966949	FR	Apparatus For Providing Internet Protocol Television Service And Internet Service	16.10.2006
Heer 15-1-2-1 (AJ)	ALU	06826169.2	EP1966949	DE	Apparatus For Providing Internet Protocol Television Service And Internet Service	16.10.2006
Heer 15-1-2-1 (AJ)	ALU	06826169.2	EP1966949	GB	Apparatus For Providing Internet Protocol Television Service And Internet Service	16.10.2006
809153	ALU	14/115905	US9438541	US	Propagation of working group from resource management to enterprise telecom system	28.03.2012
814364	ALU	14/278887	US9379423	US	Tuning Mechanism Of Very Compact Cavity Filter	15.05.2014
815665	ALU	14305603.4	EP2937933	FR	Low-Profile Wideband Radiating Antenna Element With Circumferential Topology	24.04.2014
815665	ALU	14305603.4	EP2937933	DE	Low-Profile Wideband Radiating Antenna Element With Circumferential Topology	24.04.2014
815665	ALU	14305603.4	EP2937933	GB	Low-Profile Wideband Radiating Antenna Element With Circumferential Topology	24.04.2014
807798	ALU	201280004981.6	ZL201280004981.6	CN	Application-Originated Text Messages Delivered Over A Packet-Switched Network	05.01.2012
807798	ALU	12701282.1		EP	Application-Originated Text Messages Delivered Over A Packet-Switched Network	05.01.2012
807798	ALU	2013549467	JP5666020	JP	Application-Originated Text Messages Delivered Over A Packet-Switched Network	05.01.2012
807798	ALU	20137021126	KR101467970	KR	Application-Originated Text Messages Delivered Over A Packet-Switched Network	05.01.2012
Xie 19 (C)	ALU	12/185944	US8005360	US	PMDC Feedback Signal For Alternate Polarization DPSK System	05.08.2008
Xie 19 (C)	ALU	09788933.1	EP2329609	EP	PMDC Feedback Signal For Alternate Polarization DPSK System	17.07.2009
Xie 19 (C)	ALU	200980130833.7	ZL200980130833.7	CN	PMDC Feedback Signal For Alternate Polarization DPSK System	17.07.2009
814499	ALU	14305398.1	EP2922226	GB	Packet power and phase detector for slotted rings	20.03.2014
805928	ALU	10153237.2	EP2367309	FR	Monitoring Of IEEE 1588V2 Transparent Clock Failure/ Degradation: Architecture And Implementation (M.I.T.)	10.02.2010
805928	ALU	10153237.2	EP2367309	DE	Monitoring Of IEEE 1588V2 Transparent Clock Failure/ Degradation: Architecture And Implementation (M.I.T.)	10.02.2010
805928	ALU	10153237.2	EP2367309	GB	Monitoring Of IEEE 1588V2 Transparent Clock Failure/ Degradation: Architecture And Implementation (M.I.T.)	10.02.2010
808196	ALU	2013-7009314	KR101527298	KR	Speech Enabled Virtual Assistant	09.09.2011
808196	ALU	13/822345	US9231960	US	Speech Enabled Virtual Assistant	09.09.2011
807510	ALU	12/955014	US8605656	US	Method And Apparatus For Local Gateway Assignment In Wireless Networks	29.11.2010
818334	ALU	15306122.1		EP	Distributed Collecting and Processing of Sensor Data using a Mobile Network Computing Infrastructure	08.07.2015
Bu 6-6-40 (T)	ALU	201510440938.X		CN	Methods And Devices For Defending A 3G Wireless Network Against Malicious Attacks	15.12.2006
812178	ALU	15/375684		US	Manipulation And Restoration Of Authentication Challenge Parameters In Network Authentication Procedures	12.12.2016
De Lind Van Wijngaarden 26-3-17-2 (AJ)	ALU	09758694.5	EP2289209	FR	Signal Suspension And Resumption In DSL Systems	28.05.2009

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0428

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
De Lind Van Wijngaarden 26-3-17-2 (AJ)	ALU	09758694.5	EP2289209	DE	Signal Suspension And Resumption In DSL Systems	28.05.2009
De Lind Van Wijngaarden 26-3-17-2 (AJ)	ALU	09758694.5	EP2289209	GB	Signal Suspension And Resumption In DSL Systems	28.05.2009
804002	ALU	10713711.9	EP2396957	GB	Synchronizing Packet Sequence Number In TDM-PW Service For Line Card Redundancy	10.02.2010
814184	ALU	14/034878	US9473478	US	Method Of Offering Personalized Plans Based On The Subscriber RG	24.09.2013
808420	ALU	11767508.2		EP	An Audio Source Locator And Tracker, A Method Of Directing A Camera To View An Audio Source And Video Conferencing Terminal	15.09.2011
Khan 46 (FU)	ALU	201310057704.8	ZL2013100577048	CN	Cell Switching And Packet Combining In A Wireless Communication System	08.07.2005
808588	ALU	12305011.4	EP2613499	FR	Communication context tag	05.01.2012
808588	ALU	12305011.4	EP2613499	DE	Communication context tag	05.01.2012
808588	ALU	12305011.4	EP2613499	GB	Communication context tag	05.01.2012
807363	ALU	11828213.6		EP	QoS-Oriented Scheduling Mechanisms For ATCA Based Products	24.08.2011
807363	ALU	2013530806	JP5710006	JP	QoS-Oriented Scheduling Mechanisms For ATCA Based Products	24.08.2011
115062	ALU	11/838658	US7835464	US	Hardware efficient Q-Monitor Circuit / Adaptive Receiver	14.08.2007
115062	ALU	200710147711.1	ZL200710147711.1	CN	Hardware efficient Q-Monitor Circuit / Adaptive Receiver	24.08.2007
811474	ALU	2013800383159		CN	Iterative Multi-Channel Multi-Tone Crosstalk Acquisition And Compensation	18.07.2013
811474	ALU	14/409966	US9673860	US	Iterative Multi-Channel Multi-Tone Crosstalk Acquisition And Compensation	18.07.2013
812103	ALU	201380040126.5		CN	High-Speed Content Routing	29.07.2013
808913	ALU	11305983.6	EP2552068	FR	Compensated Delay For Delay Loops To Reduce The Quefrency And Allow Larger Precoder Tonegroups	28.07.2011
808913	ALU	11305983.6	EP2552068	DE	Compensated Delay For Delay Loops To Reduce The Quefrency And Allow Larger Precoder Tonegroups	28.07.2011
808913	ALU	11305983.6	EP2552068	GB	Compensated Delay For Delay Loops To Reduce The Quefrency And Allow Larger Precoder Tonegroups	28.07.2011
806412	ALU	P112029387.7		BR	Methods Of Determining Coverage Areas	13.04.2011
806412	ALU	201180024593.X	ZL201180024593.X	CN	Methods Of Determining Coverage Areas	13.04.2011
806669	ALU	201080065034.9	ZL201080065034.9	CN	A Mechanism To Identify Application Protocol Based On Centroid Keyword Vector	19.05.2010
806669	ALU	10851576.8		EP	A Mechanism To Identify Application Protocol Based On Centroid Keyword Vector	19.05.2010
806669	ALU	9593/CHENP/2012		IN	A Mechanism To Identify Application Protocol Based On Centroid Keyword Vector	19.05.2010
139499	ALU	11/538076	US8588813	US	UMA LOCATION POSITIONING METHODS AND PROCEDURES	03.10.2006
818628	ALU	PCT/US2016/063163		WO	Sparse Dispersion Compensation For Heterogeneous-Spans Networks And Span-Skipping Dispersion Mapping	21.11.2016
Bu 6-6-40 (T)	ALU	06845546.8	EP1964366	FR	Methods And Devices For Defending A 3G Wireless Network Against Malicious Attacks	15.12.2006
Bu 6-6-40 (T)	ALU	06845546.8	EP1964366	DE	Methods And Devices For Defending A 3G Wireless Network Against Malicious Attacks	15.12.2006
Bu 6-6-40 (T)	ALU	06845546.8	EP1964366	GB	Methods And Devices For Defending A 3G Wireless Network Against Malicious Attacks	15.12.2006
811974	ALU	12306595.5	EP2744292	FR	Green Comb for WiFi	17.12.2012
811450	ALU	2017-36102		JP	Targeted Advertisement Board	28.02.2017
812879	ALU	12306491.7	EP2739024	FR	Seamless communication application shift	30.11.2012
812879	ALU	12306491.7	EP2739024	DE	Seamless communication application shift	30.11.2012
812879	ALU	12306491.7	EP2739024	GB	Seamless communication application shift	30.11.2012
113422	ALU	02360229.5	EP1387525	FR	OMC Macro EDITOR	02.08.2002
113422	ALU	02360229.5	EP1387525	DE	OMC Macro EDITOR	02.08.2002
113422	ALU	02360229.5	EP1387525	GB	OMC Macro EDITOR	02.08.2002
804890	ALU	10290096.6		EP	Wireless Human Interface Device Creation Module With Storage Device Formfactor	26.02.2010
804342	ALU	09290280.8	EP2242215	FR	Dataplane solution to prevent Black Holing of customer frames in Ethernet switched networks	16.04.2009
804342	ALU	09290280.8	EP2242215	DE	Dataplane solution to prevent Black Holing of customer frames in Ethernet switched networks	16.04.2009
804342	ALU	09290280.8	EP2242215	GB	Dataplane solution to prevent Black Holing of customer frames in Ethernet switched networks	16.04.2009
810754	ALU	201380018636.2		CN	System And Method For Root Cause Analysis Of Mobile Network Performance Problems	27.03.2013

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0429

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
810754	ALU	13715562.8		EP	System And Method For Root Cause Analysis Of Mobile Network Performace Problems	27.03.2013
810427	ALU	15/395610		US	Apparatus And Method For Matching Offers And Requests For Sharing Of Resources	30.12.2016
814227	ALU	13305852.9	EP2816859	FR	Method for CQI Feedback managment for Multicarrier based Systems	21.06.2013
814227	ALU	13305852.9	EP2816859	DE	Method for CQI Feedback managment for Multicarrier based Systems	21.06.2013
814227	ALU	13305852.9	EP2816859	GB	Method for CQI Feedback managment for Multicarrier based Systems	21.06.2013
Liu 18-14 (C)	ALU	01301473.3	EP1130894	FR	Conferencing And Announcement Generation For Wireless VoIP and VoATM Calls	19.02.2001
Liu 18-14 (C)	ALU	01301473.3	EP1130894	DE	Conferencing And Announcement Generation For Wireless VoIP and VoATM Calls	19.02.2001
Liu 18-14 (C)	ALU	01301473.3	EP1130894	GB	Conferencing And Announcement Generation For Wireless VoIP and VoATM Calls	19.02.2001
Schlenk 4 (R)	ALU	07251433.4	EP1976195	FR	Method And Apparatus For Mac Address Learning	30.03.2007
Schlenk 4 (R)	ALU	07251433.4	EP1976195	DE	Method And Apparatus For Mac Address Learning	30.03.2007
Schlenk 4 (R)	ALU	07251433.4	EP1976195	GB	Method And Apparatus For Mac Address Learning	30.03.2007
802718	ALU	201610985560.6		CN	Broadcast services and DSL backhauled Femto Base Stations	31.05.2009
804298	ALU	10747600.4	EP2457343	DE	Differential Clock Recovery Using TimeStamp with a Decimal Precision	02.07.2010
804298	ALU	10747600.4	EP2457343	GB	Differential Clock Recovery Using TimeStamp with a Decimal Precision	02.07.2010
811077	ALU	13708321.8	EP2823624	FR	Method And Apparatus For Identifying An Application Associated With An IP Flow Using DNS Data	25.02.2013
811077	ALU	13708321.8	EP2823624	DE	Method And Apparatus For Identifying An Application Associated With An IP Flow Using DNS Data	25.02.2013
811077	ALU	13708321.8	EP2823624	GB	Method And Apparatus For Identifying An Application Associated With An IP Flow Using DNS Data	25.02.2013
105113	ALU	04291018.2	EP1469660	FR	COMMUNICATION CONTACT CENTER	16.04.2004
105113	ALU	04291018.2	EP1469660	DE	COMMUNICATION CONTACT CENTER	16.04.2004
105113	ALU	04291018.2	EP1469660	GB	COMMUNICATION CONTACT CENTER	16.04.2004
Cai 135-38 (Y)	ALU	09732654.0		EP	Online Charging For Roaming Users In A Proxy Online Charging System Of A Visited Network	26.03.2009
Cai 135-38 (Y)	ALU	208361	IL208361	IL	Online Charging For Roaming Users In A Proxy Online Charging System Of A Visited Network	26.03.2009
805661	ALU	09306267.7	EP2337281	FR	Extended metric links	18.12.2009
811105	ALU	13714117.2	EP2832110	FR	Method And Apparatus For Authenticating Video Content	15.03.2013
811105	ALU	13714117.2	EP2832110	DE	Method And Apparatus For Authenticating Video Content	15.03.2013
811105	ALU	13714117.2	EP2832110	GB	Method And Apparatus For Authenticating Video Content	15.03.2013
800318	ALU	07290649.8	EP1993240	FR	Security assurance icon for services on end-user terminals	18.05.2007
800318	ALU	07290649.8	EP1993240	DE	Security assurance icon for services on end-user terminals	18.05.2007
800318	ALU	07290649.8	EP1993240	GB	Security assurance icon for services on end-user terminals	18.05.2007
809487	ALU	20177002211		KR	Method Of Connecting Boards At High Frequency	14.06.2013
807510	ALU	201180057306.5	ZL201180057306.5	CN	Method And Apparatus For Local Gateway Assignment In Wireless Networks	22.11.2011
804298	ALU	10747600.4	EP2457343	FR	Differential Clock Recovery Using TimeStamp with a Decimal Precision	02.07.2010
807058	ALU	11769961.1		EP	System And Method For Controllably Viewing Digital Video Streams Captured By Surveillance Cameras	15.09.2011
815487	ALU	14305985.5	EP2961113	FR	Avoiding deadlock condition in MPLS-TP Ring Protection Switching (MRPS)	24.06.2014
815487	ALU	14305985.5	EP2961113	DE	Avoiding deadlock condition in MPLS-TP Ring Protection Switching (MRPS)	24.06.2014
815487	ALU	14305985.5	EP2961113	GB	Avoiding deadlock condition in MPLS-TP Ring Protection Switching (MRPS)	24.06.2014
810743	ALU	12842302.7	EP2769569	FR	LTE Subscriber Identity Correlation Service	17.10.2012
810743	ALU	12842302.7	EP2769569	DE	LTE Subscriber Identity Correlation Service	17.10.2012
810743	ALU	12842302.7	EP2769569	GB	LTE Subscriber Identity Correlation Service	17.10.2012
Das 19-17-41 (S)	ALU	4178/CHENP/2008	IN279407	IN	Methods Of Reverse Link Power Control	13.02.2007
806349	ALU	12290380.0		EP	Antenna Apparatus and Antenna Selection Method	12.11.2009
810385	ALU	12290048.3	EP2627062	FR	Instantaneous Detection Of Missing POTS Splitter	09.02.2012
810385	ALU	12290048.3	EP2627062	DE	Instantaneous Detection Of Missing POTS Splitter	09.02.2012
810385	ALU	12290048.3	EP2627062	GB	Instantaneous Detection Of Missing POTS Splitter	09.02.2012
804092	ALU	10708256.2	EP2396949	FR	Availability indicator via video	01.02.2010
135997	ALU	03012382.2	EP1370108	GB	OPTICAL SWITCH CONTROLLER FOR FAIR AND EFFECTIVE LIGHTPATH RESERVATION	30.05.2003
120438	ALU	09/468227	US6456857	US	TERMINAL (U)SIM SERVICE CAPABILITY FEATURES FOR OPEN SERVICE ARCHITECTURE.	20.12.1999

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT
REEL: 043877 FRAME: 0430

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
Bu 3-4-33 (T)	ALU	06739051.8	EP1864471	FR	Methods And Devices For Defending A 3G Wireless Network Against A Signaling Attack	21.03.2006
Bu 3-4-33 (T)	ALU	06739051.8	EP1864471	DE	Methods And Devices For Defending A 3G Wireless Network Against A Signaling Attack	21.03.2006
Bu 3-4-33 (T)	ALU	06739051.8	EP1864471	GB	Methods And Devices For Defending A 3G Wireless Network Against A Signaling Attack	21.03.2006
802152	ALU	09712236.0	EP2260640	FR	SIM-less device access for security services	04.02.2009
802152	ALU	09712236.0	EP2260640	DE	SIM-less device access for security services	04.02.2009
802152	ALU	09712236.0	EP2260640	GB	SIM-less device access for security services	04.02.2009
809805	ALU	201280066336.7		CN	Automated Pan-Tilt-Zoom Optimization	17.12.2012
808826	ALU	10290663.3	EP2466810	FR	Method For Routing In Name Based Networking	17.12.2010
808933	ALU	201280037750.5	ZL201280037750.5	CN	HTTP Adaptive Streaming With Network Hints	09.07.2012
808933	ALU	2014524314		JP	HTTP Adaptive Streaming With Network Hints	09.07.2012
813097	ALU	13305533.5	EP2797249	FR	Automated Dynamic Reconfiguration Of G.INP Parameters	23.04.2013
813097	ALU	13305533.5	EP2797249	DE	Automated Dynamic Reconfiguration Of G.INP Parameters	23.04.2013
813097	ALU	13305533.5	EP2797249	GB	Automated Dynamic Reconfiguration Of G.INP Parameters	23.04.2013
Akyamac 2-7-38 (AA)	ALU	14/572379		US	Method And System For Efficient Provisioning Of Multiple Services For Multiple Failure Restoration In Multi-Layer Mesh Networks	16.12.2014
810652	ALU	2014-546419	JP5808501	JP	Multimedia RTMP Streaming Real-time Up- And Downstream Quality Of Service Characterisation For Immersive Communications	06.12.2012
810652	ALU	20147019581	KR10-1547786	KR	Multimedia RTMP Streaming Real-time Up- And Downstream Quality Of Service Characterisation For Immersive Communications	06.12.2012
810652	ALU	14/358557	US9338146	US	Multimedia RTMP Streaming Real-time Up- And Downstream Quality Of Service Characterisation For Immersive Communications	06.12.2012
808178	ALU	201280050569.8		CN	Networks And Methods For Paging Message Control	04.10.2012
808178	ALU	12772692.5		EP	Networks And Methods For Paging Message Control	04.10.2012
Ma 29-67 (Z)	ALU	2015129612		JP	Method To Support User Location In In-Structure Coverage Systems	26.01.2009
809019	ALU	201280039521.7		CN	Method And Apparatus For Controlling Wireless Uplink Sessions	08.08.2012
811418	ALU	13705877.2	EP2815525	FR	Method And Apparatus For Interference Cancellation In Hybrid Satellite-Terrestrial Network	07.02.2013
811418	ALU	13705877.2	EP2815525	DE	Method And Apparatus For Interference Cancellation In Hybrid Satellite-Terrestrial Network	07.02.2013
811418	ALU	13705877.2	EP2815525	GB	Method And Apparatus For Interference Cancellation In Hybrid Satellite-Terrestrial Network	07.02.2013
805488	ALU	09306269.3	EP2337272	FR	Micro-Loop/Cycle Mitigation Scheme in Link-State Routing	18.12.2009
805488	ALU	09306269.3	EP2337272	DE	Micro-Loop/Cycle Mitigation Scheme in Link-State Routing	18.12.2009
804092	ALU	10708256.2	EP2396949	DE	Availability indicator via video	01.02.2010
804092	ALU	10708256.2	EP2396949	GB	Availability indicator via video	01.02.2010
104929	ALU	04290332.8	EP1453276	FR	PRO-ACTIVE CALL CONNECTION	09.02.2004
104929	ALU	04290332.8	EP1453276	DE	PRO-ACTIVE CALL CONNECTION	09.02.2004
104929	ALU	04290332.8	EP1453276	GB	PRO-ACTIVE CALL CONNECTION	09.02.2004
816955	ALU	PCT/US2016/014216		CN	A System And Apparatus For High Capacity Mobile Wireless Hotspot Service Using Lte In The Unlicensed Spectrum	21.01.2016
816955	ALU	16704730.7		EP	A System And Apparatus For High Capacity Mobile Wireless Hotspot Service Using Lte In The Unlicensed Spectrum	21.01.2016
808162	ALU	11290004.8	EP2475219	FR	WiFi Based Capacity Enforcement For Mobile Communication Systems	05.01.2011
812418	ALU	201734943		JP	Multi-Sector Antenna Structure	08.11.2013
137816	ALU	06704327.3	EP1839415	FR	Pre-computed Paths for Policy-Based Routing	05.01.2006
137816	ALU	06704327.3	EP1839415	DE	Pre-computed Paths for Policy-Based Routing	05.01.2006
137816	ALU	06704327.3	EP1839415	GB	Pre-computed Paths for Policy-Based Routing	05.01.2006
808162	ALU	11290004.8	EP2475219	DE	WiFi Based Capacity Enforcement For Mobile Communication Systems	05.01.2011
808162	ALU	11290004.8	EP2475219	GB	WiFi Based Capacity Enforcement For Mobile Communication Systems	05.01.2011
805813	ALU	09290957.1	EP2337245	GB	Variable bitrate OFDM	17.12.2009
806282	ALU	13/504818	US8681962	US	Method to establish a correlation between DPU and CPE	26.10.2010
812157	ALU	13305894.1		EP	Packet Optical Add Drop Multiplexing Node	27.06.2013
812418	ALU	13/679059	US9368880	US	Multi-Sector Antenna Structure	16.11.2012
810818	ALU	201280051729.0		CN	System And Method For Load Balancing MMEs And MME Pools	15.10.2012
813027	ALU	13/728168	US8912449	US	Thermal Warp Compensation IC Package	27.12.2012
812178	ALU	2017102618		JP	Manipulation And Restoration Of Authentication Challenge Parameters In Network Authentication Procedures	18.06.2013

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PATENT
REEL: 043877 FRAME: 0431

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
803536	ALU	08021349.9	EP2200225	GB	Efficient protocol forwarding by header exchange based on commercial devices	09.12.2008
808322	ALU	11290214.3	EP2521227	FR	Semiconductor Optical Amplifier Device And Optical Matrix Switch	04.05.2011
Nair 3-11-13 (SP)	ALU	2012109231	JP5851933	JP	Method And Apparatus For Activating A Dormant Mobile Unit In A Distributed Network	08.11.2005
811192	ALU	12305174.0		EP	On-board Access Point for Massive MultiMedia Distribution	16.02.2012
806349	ALU	2014115333	RU2546582	RU	Antenna Apparatus and Antenna Selection Method	21.09.2010
816055	ALU	14306380.8		EP	Phase Shifters With High Insertion Phase	09.09.2014
Haimi-Cohen 16-4 (R)	ALU	10716983.1	EP2430795	FR	Fast Channel Change Handling Of Late Multicast Join	29.04.2010
Haimi-Cohen 16-4 (R)	ALU	10716983.1	EP2430795	DE	Fast Channel Change Handling Of Late Multicast Join	29.04.2010
816527	ALU	14/749990		US	Assisted Navigation For Uhdv Interactive Consumption	25.06.2015
816527	ALU	2015-126635		JP	Assisted Navigation For Uhdv Interactive Consumption	24.06.2015
815631	ALU	14/750224		US	Assisted Navigation For Uhdv Interactive Consumption	25.06.2015
809232	ALU	11290308.3		EP	Seamless Resynchronization	04.07.2011
809190	ALU	11305770.7		EP	Method To Couple Common Mode Phantom Signals	20.06.2011
812593	ALU	13382068.8	EP2773078	EP	Optimized Adaptive Streaming Over Unidirectional Delivery	01.03.2013
812668	ALU	13/746406	US9401951	US	System And Method For Managing Distribution Of Network Information	22.01.2013
806074	ALU	100110390		TW	Athermal Optical Filters In Silicon-On-Insulator Waveguides	25.03.2011
816524	ALU	15702906.7		EP	Methods For Policy Enforcement In A Topology Abstraction System	20.01.2015
817685	ALU	14/664311		US	Cross-Layer Aware Multi-Path Transport For Elastic Packet Services	20.03.2015
Claussen 13-10-17-46 (H)	ALU	11/431271	US8958752	US	Method And Apparatus For Managing Interference In A Wireless Communication System	10.05.2006
Claussen 13-10-17-46 (H)	ALU	5959/CHENP/2008		IN	Method And Apparatus For Managing Interference In A Wireless Communication System	27.04.2007
807557	ALU	11305001.7		EP	Automatic SELT/MELT Cross-Calibration	03.01.2011
802363	ALU	08290515.9	EP2131563	FR	METHOD TO CREATE MULTI TYPE/ANNEX A/B/M/J/I xDSL LINE TERMINATION EQUIPMENT	04.06.2008
802363	ALU	08290515.9	EP2131563	DE	METHOD TO CREATE MULTI TYPE/ANNEX A/B/M/J/I xDSL LINE TERMINATION EQUIPMENT	04.06.2008
802363	ALU	08290515.9	EP2131563	GB	METHOD TO CREATE MULTI TYPE/ANNEX A/B/M/J/I xDSL LINE TERMINATION EQUIPMENT	04.06.2008
800817	ALU	08763073.7	EP2140626	FR	Mechanism To Dynamically Optimize Psudowires Based On The Collected End-to-End Cost	22.02.2008
800817	ALU	08763073.7	EP2140626	DE	Mechanism To Dynamically Optimize Psudowires Based On The Collected End-to-End Cost	22.02.2008
800817	ALU	08763073.7	EP2140626	GB	Mechanism To Dynamically Optimize Psudowires Based On The Collected End-to-End Cost	22.02.2008
812976	ALU	12306463.6		EP	QoE enhancement : Quality Video Assessment using on video refence prediction	27.11.2012
810227	ALU	13/242743	US9401804	US	Leakage-Resilient Garbled Circuit GenerationUsing Reduced Memory Hardware Token	23.09.2011
Wang 7-34-28 (X)	ALU	20097000219	KR101107945	KR	Reducing Packet Loss For A Packet Data Service During Congestion In A Transport Network	26.06.2007
Wang 7-34-28 (X)	ALU	2009518260	JP4981132	JP	Reducing Packet Loss For A Packet Data Service During Congestion In A Transport Network	26.06.2007
817684	ALU	PCI/EP2016/051244		CN	Self-heating mitigation for burst mode lasers	21.01.2016
817684	ALU	15/545382		US	Self-heating mitigation for burst mode lasers	21.01.2016
135821	ALU	02000581.5	EP1227610	FR	DISTRIBUTED INTELLIGENCE MAC PROTOCOLS FOR DWDM METRO NETWORKS	10.01.2002
135821	ALU	02000581.5	EP1227610	DE	DISTRIBUTED INTELLIGENCE MAC PROTOCOLS FOR DWDM METRO NETWORKS	10.01.2002
135821	ALU	02000581.5	EP1227610	GB	DISTRIBUTED INTELLIGENCE MAC PROTOCOLS FOR DWDM METRO NETWORKS	10.01.2002
Bosch 29-1 (P)	ALU	2009255752	AU2009255752	AU	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	PI0913387-9		BR	Method For Providing Seamless Transition Between Networks Following Different Protocols	18.05.2009
Bosch 29-1 (P)	ALU	098116931	TWI399957	TW	Method For Providing Seamless Transition Between Networks Following Different Protocols	21.05.2009
804823	ALU	12/472315	US8165122	US	Convert Unicast Client Requests to Multicast for Load Balancing and High Availability	26.05.2009
812314	ALU	13/907122	US9258221	US	System And Method For Rapid Protection Of RSVP Based LSP	31.05.2013

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PATENT
REEL: 043877 FRAME: 0432

EXHIBIT A

Assigned Patents

Nokia Technologies Oy ("Technologies"), Nokia Solutions and Networks B.V. ("Networks"), Alcatel Lucent SAS ("ALU")

Family / Internal file number	Source	Application Number	Grant Number	Country	Title	Application Date
812120	ALU	13305398.3	EP2784951	FR	ASE-based Loading channel for stream of optical packets	28.03.2013
812120	ALU	13305398.3	EP2784951	DE	ASE-based Loading channel for stream of optical packets	28.03.2013
812120	ALU	13305398.3	EP2784951	GB	ASE-based Loading channel for stream of optical packets	28.03.2013
811692	ALU	13/453143		US	Synchronization Management Groups	23.04.2012
813109	ALU	13305215.9	EP2770670	FR	Detection Of Disorderly Leaving Events Impacts On A Victim Line	26.02.2013
813109	ALU	13305215.9	EP2770670	DE	Detection Of Disorderly Leaving Events Impacts On A Victim Line	26.02.2013
813109	ALU	13305215.9	EP2770670	GB	Detection Of Disorderly Leaving Events Impacts On A Victim Line	26.02.2013
814384	ALU	13306305.7	EP2854299	FR	SNR-based bridged-taps and RFI discrimination	25.09.2013
814384	ALU	13306305.7	EP2854299	DE	SNR-based bridged-taps and RFI discrimination	25.09.2013
814384	ALU	13306305.7	EP2854299	GB	SNR-based bridged-taps and RFI discrimination	25.09.2013
Menten 4 (LE)	ALU	7928/CHENP/2010		IN	Processing Of Packet Fragments	28.04.2009
Menten 4 (LE)	ALU	2011516266	JP5394482	JP	Processing Of Packet Fragments	28.04.2009
Menten 4 (LE)	ALU	20117001705	KR101228640	KR	Processing Of Packet Fragments	28.04.2009
810398	ALU	13/785145	US8942518	US	Flexible Optical Modulator For Advanced Modulation Formats	05.03.2013
812037	ALU	12306599.7	EP2744198	FR	Performance enhancement of video surveillance systems using mobile devices	17.12.2012
812037	ALU	12306599.7	EP2744198	DE	Performance enhancement of video surveillance systems using mobile devices	17.12.2012
812037	ALU	12306599.7	EP2744198	GB	Performance enhancement of video surveillance systems using mobile devices	17.12.2012
807141	ALU	10290395.2	EP2408128	FR	PTP-Network InterWorking Function (PN-IWF)	15.07.2010
807141	ALU	10290395.2	EP2408128	DE	PTP-Network InterWorking Function (PN-IWF)	15.07.2010
807141	ALU	10290395.2	EP2408128	GB	PTP-Network InterWorking Function (PN-IWF)	15.07.2010
811450	ALU	12306005.5		EP	Targeted Advertisement Board	16.08.2012
Heinkel 4-4-3 (U)	ALU	12/311390	US8345703	US	Method And Apparatus For Reconfiguring IC Architectures	03.10.2006
Heinkel 4-4-3 (U)	ALU	20097006896	KR1133800	KR	Method And Apparatus For Reconfiguring IC Architectures	03.10.2006
817931	ALU	15290168.2		EP	Network Node Checking Flow Compliance	30.06.2015
Bachl 23-23-23 (RW)	ALU	MX/a/2008/015821	MX283428	MX	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	14.06.2007
Bachl 23-23-23 (RW)	ALU	6803/CHENP/2008	IN285029	IN	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	14.06.2007
Bachl 23-23-23 (RW)	ALU	200780022898.0	ZL200780022898.0	CN	Method For Coordinated Control Of Radio Resources For Multicasting In A Distributed Wireless System	14.06.2007
801604	ALU	07291605.9	EP2075952	FR	CONTENT BASED REVERSED SERVICE BILLING	24.12.2007
801604	ALU	07291605.9	EP2075952	DE	CONTENT BASED REVERSED SERVICE BILLING	24.12.2007
801604	ALU	07291605.9	EP2075952	GB	CONTENT BASED REVERSED SERVICE BILLING	24.12.2007
809961	ALU	13/408014		US	Chunk Request Scheduler For HTTP Adaptive Streaming	29.02.2012
809960	ALU	13/628563	US9729603	US	Content Stream Delivery Using Variable Cache Replacement Granularity	27.09.2012
803978	ALU	10716590.4	EP2436134	FR	Repair Mechanism of Real-Time Broadcasted Services in Hybrid DVB-Satellite Handled and Cellular Systems.	29.03.2010
803978	ALU	10716590.4	EP2436134	DE	Repair Mechanism of Real-Time Broadcasted Services in Hybrid DVB-Satellite Handled and Cellular Systems.	29.03.2010
803978	ALU	10716590.4	EP2436134	GB	Repair Mechanism of Real-Time Broadcasted Services in Hybrid DVB-Satellite Handled and Cellular Systems.	29.03.2010
818540	ALU	15290253.2		EP	Accurate 1PPS Interface	30.09.2015
818568	ALU	201510642268.X		CN	A Hitless And Fast Inherent Propagation Delay Self-Calibration Method For Galvanic Isolated 1PPS Interface	30.09.2015
818511	ALU	15306711.1		EP	Fast Inverse Nonlinear Fourier Transform Based On Darboux Transform	26.10.2015
Del Signore 5-4 (KW)	ALU	11/455514	US8027693	US	Conservation Of Paging Resources In A Mobile Switching Center	19.06.2006
Ma 12-11 (Z)	ALU	09/631886	US6859643	US	Power Amplifier Sharing In A Wireless Communication System With Amplifier Pre-Distortion	04.08.2000
Chin 3-13 (MW)	ALU	200310101083.5	ZL1010101083.5	CN	An Emergency Call Back Method	15.10.2003
Chin 3-13 (MW)	ALU	10/270629	US7676215	US	An Emergency Call Back Method	16.10.2002
Chin 3-13 (MW)	ALU	2003356367	JP4335636	JP	An Emergency Call Back Method	16.10.2003
Chin 3-13 (MW)	ALU	20030070526	KR101010868	KR	An Emergency Call Back Method	10.10.2003
Chin 3-13 (MW)	ALU	03256372.8	EP1411743	GB	An Emergency Call Back Method	09.10.2003
Chin 3-13 (MW)	ALU	03256372.8	EP1411743	IT	An Emergency Call Back Method	09.10.2003
Chin 3-13 (MW)	ALU	03256372.8	EP1411743	ES	An Emergency Call Back Method	09.10.2003
Chin 3-13 (MW)	ALU	03256372.8	EP1411743	FR	An Emergency Call Back Method	09.10.2003
Chin 3-13 (MW)	ALU	03256372.8	EP1411743	DE	An Emergency Call Back Method	09.10.2003
Rollender 16 (DH)	ALU	10/345168	US7480374	US	Emergency Service Callback To A Ported Number	16.01.2003
800655	ALU	11/717877	US8274983	US	Fairness Algorithm for Network Admission Control	13.03.2007

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PATENT PURCHASE AGREEMENT BETWEEN NOKIA TECHNOLOGIES OY AND NOKIA SOLUTIONS AND NETWORKS BV AND ALCATEL LUCENT SAS AND PROVENANCE ASSET GROUP LLC

PATENT

RECORDED: 09/13/2017

REEL: 043877 FRAME: 0433

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6630045

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
PROVENANCE ASSET GROUP LLC	02/05/2021
RECEIVING PARTY DATA	
Name:	PROVEN NETWORKS, LLC
Street Address:	12424 WILSHIRE BOULEVARD
Internal Address:	12TH FLOOR
City:	LOS ANGELES
State/Country:	CALIFORNIA
Postal Code:	90025
PROPERTY NUMBERS Total: 4	
Property Type	Number
Patent Number:	7506381
Patent Number:	8266530
Patent Number:	8687573
Patent Number:	9490958
CORRESPONDENCE DATA	
Fax Number:	(631)844-0081
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	6318440080
Email:	fkuhner@tb-iplaw.com
Correspondent Name:	TUTUNJIAN & BITETTO, P.C.
Address Line 1:	401 BROADHOLLOW ROAD
Address Line 2:	SUITE 402
Address Line 4:	MELVILLE, NEW YORK 11747
ATTORNEY DOCKET NUMBER:	0569-0107-0US
NAME OF SUBMITTER:	JOHN G. TUTUNJIAN
SIGNATURE:	/John G. Tutunjian/
DATE SIGNED:	03/30/2021
Total Attachments: 13	

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PATENT SALE AGREEMENT

This Patent Sale Agreement (this “**Agreement**”) is effective as of February 5, 2021 (the “**Effective Date**”), by and between, Provenance Asset Group LLC, a Delaware limited liability company having its principal place of business at 55 Crescent Hill Road, Pittsford, New York 14534 (“**Assignor**”), and Proven Networks, LLC, a California Limited Liability Company having its principal place of business at 12424 Wilshire Boulevard, 12th Floor, Los Angeles, California 90025 (“**Assignee**”) (hereinafter referred to collectively as the “**Parties**” and individually as a “**Party**”). The Parties hereto agree as follows:

1. **DEFINITIONS.** In addition to the other terms defined in this Agreement, the following terms have the following meanings when used herein:

1.1 “**Affiliate**” means, with respect to an entity, any legal entity that is (at the time of reference) controlled by, controlling, or under common control with such entity. Control, in this context, exists where one entity owns, directly or indirectly, more than fifty percent (50%) of the voting equity in another entity. Such entities shall be deemed to be Affiliates hereunder only for as long as such control exists.

1.2 “**Encumbrance(s)**” means any (a) patent licenses or sublicenses, covenants not to assert, and/or similar patent immunities; (b) rights or options to renew or extend preexisting patent licenses exercised solely by third parties (such as legally binding options); (c) releases for past infringement; (d) SSO Commitments; and (e) other such commitments having corresponding effect.

1.3 “**Nokia**” means Nokia Corporation, a corporation organized under the laws of Finland, having its registered address at Karakaari 7, 02610 Espoo, Finland, and/or any of its Subsidiaries.

1.4 “**Operator Customer**” means a telecommunications service provider that provides wired or wireless telephony or data transmission services, such as local exchange carriers, mobile wireless communications providers and infrastructure data transmission service providers. For the sake of further clarity, Operator Customers include Verizon, AT&T, Orange, Deutsche Telekom, British Telecom, China Telecom, but for all purposes of this Agreement specifically excludes (a) the companies listed on Exhibit B and (b) each of their Related Companies as of October 22, 2019 (each an “**Excluded Company**”), however for (a) and (b) Excluded Company covers only the scope of such companies’ business activities as were conducted as of October 22, 2019 and not, for the avoidance of doubt, additional types of business activities.

1.5 “**Patent Encumbrances**” means in relation to the Patents, any Encumbrances related to the Patents and/or for which there is a commitment to maintain in connection with the transfer of any Patents, including the Encumbrances enumerated in Section 3 and the SSO Commitments, in each case, to the extent any such Encumbrance exists on the Effective Date.

1.6 “**Patents**” means (a) all patents and patent applications listed in Exhibit A; (b) all reissues, reexaminations, continuations, continuations-in-part, divisionals, renewals and extensions of such patents and patent applications (whether pending, issued,

abandoned or filed prior to, on or after the Effective Date); (c) all patents and patent applications (i) to which any or all of the foregoing directly or indirectly claims priority to, or the benefit of, the filing date, or (ii) for which any or all of the foregoing directly or indirectly forms a basis for priority or otherwise provides the benefit of an earlier filing date; and (d) all foreign counterparts to any or all of the foregoing.

1.7 “**Related Company**” of an entity or natural person means any legal entity that is (at the time of reference) controlled by, controlling, or under common control with such Person. Control, in this context, exists where one entity owns directly or indirectly more than fifty percent (50%) of the voting equity in another entity, or regardless of equity ownership, is otherwise able (whether by law or contract) to direct its affairs or to appoint a majority of the members of the board of directors or an equivalent body able to determine the course of action of the entity by virtue of its voting or other rights. Such entities shall be deemed to be Related Companies hereunder only for as long as such control exists.

1.8 “**Security Interests**” means the security interests recorded against the Patents by (i) Cortland Capital Market Services LLC in the United States Patent Office on September 13, 2017, and/or (ii) Nokia US Holdings Inc. in the United States Patent Office on February 14, 2019.

1.9 “**SSO Commitment(s)**” means (a) commitments made under or pursuant to any intellectual property policies or other similar provisions adopted by any standard setting organizations (including any licensing commitments on (F)RAND or any other similar terms and conditions), including the standard setting organization(s) listed on Exhibit C; (b) what is reaffirmed by Nokia’s Licensing Statement dated April 8, 2014 (Exhibit D); and (c) Nokia’s commitments to MOFCOM in relation to its SEPs dated October 19, 2015 (Exhibit E).

1.10 “**Taxes**” means any and all taxes including income, national, state or local excise, sales, use, withholdings, transfer, levies, duties, value added or other imposts imposed by any taxing authorities, applicable laws and regulations arising out of this Agreement.

1.11 “**Unlicensed Company**” means (a) with respect to a Patent identified on Exhibit A as originating with Alcatel Lucent (ALU), a company listed in Exhibit F as being unlicensed to ALU originated Patents (giving due regard to priority date and other exceptions identified therein), (b) with respect to an Assigned Patent identified on Exhibit A as originating with Nokia Networks (NET), a company listed in Exhibit F as being unlicensed to NET originated Assigned Patents (giving due regard to priority date and other exceptions identified therein) and (c) with respect to a Patent identified on Exhibit A as originating with Nokia Technologies (TECH), a company listed in Exhibit F as being unlicensed to TECH originated Patents (giving due regard to priority date and other exceptions identified therein). Exhibit F is not a complete list of companies that are unlicensed to the Patents, however.

2. **ASSIGNMENT.** Subject to and effective upon Assignee’s timely payment pursuant to Section 5 and further subject to the Patent Encumbrances and Section 3, Assignor hereby assigns to Assignee all of Assignor’s rights, title, and interest in, to, and under the Patents to the full extent of its ownership or interest therein, including (i) all causes of action (whether currently pending, filed, or otherwise) and other enforcement rights to sue or countersue or to pursue damages, injunctive relief and any other remedies of any kind for past, current, and future infringement; (ii)

all rights to recover and collect royalties and other payments due now or hereafter due or payable with respect thereto; (iii) all statutory rights, including the right to practice the Patents; and (iv) any and all privileges, including the benefit of all attorney-client privilege and attorney work product privilege. Notwithstanding the foregoing or anything to the contrary in this Agreement, no agreements related to the Patents, including license agreements and the rights thereunder (*e.g.* a right to royalty payments) are assigned or transferred to Assignee under this Agreement, and Assignee shall have no rights in respect thereof. Except as expressly set forth herein with respect to the Patents, no right, title or interest, license or other right is hereby assigned, transferred or granted, by implication, estoppel or otherwise, to Assignee, under any patents, trade secrets or any other intellectual property rights now or hereafter owned or controlled by Assignor and/or any of its Affiliates.

3. **ENCUMBRANCES.**

3.1 Patent Encumbrances.

(a) Assignee's rights, title and interest in, to, and under the Patents are and will after the Effective Date be subject to the Patent Encumbrances and any subsequent sale, assignment or transfer of the Patents shall remain subject to the Patent Encumbrances. Assignee shall respect and abide by the Patent Encumbrances. For the avoidance of doubt, the Patent Encumbrances run with the Patents and will survive any assignment and any bankruptcy of Assignee, its successor(s), or their assignee(s).

(b) Other than pursuant to SSO Commitments, Nokia has informed the Assignor that none of the entities listed in Exhibit F (i) as being unlicensed to ALU originated Patents (giving due regard to priority date and other exceptions identified therein) has been granted a patent license, sublicense, covenant not to assert, or any other Encumbrance under any such Patent, (ii) as being unlicensed to NET originated Assigned Patents (giving due regard to priority date and other exceptions identified therein) has been granted a patent license, sublicense, covenant not to assert, or any other Encumbrance under any such Assigned Patent, and (iii) as being unlicensed to TECH originated Patents (giving due regard to priority date and other exceptions identified therein) has been granted a patent license, sublicense, covenant not to assert, or any other Encumbrance under any such Patent. Assignor expressly disclaims and makes no representation or warranty as to the accuracy of Exhibit F. Neither Assignee nor its successors and assigns shall be entitled to (a) any damages from the Assignor or any prior owner of the Patents, including Nokia, related to any inaccuracy in Exhibit F, or (b) bring any claim related to any inaccuracy in Exhibit F against the Assignor or any prior owner of the Patents, including Nokia, whether at law or in equity and whether in contract, tort or otherwise.

(c) If Assignee believes there is an inaccuracy on Exhibit F it may request that Assignor contact Nokia to confirm the inaccuracy and update Exhibit F accordingly; provided, however, Assignor cannot guaranty that Nokia will provide any confirmation and Assignor's obligation is to merely ask Nokia a reasonable number of times.

3.2 Operator Customers.

(a) Assignee agrees and undertakes, that in the event Assignee or its Related Company initiates any legal or administrative proceeding against an Operator Customer of Nokia, or a Related Company of such an Operator Customer, based on Patents, other than as a defensive counterclaim to an infringement claim first initiated by the Operator Customer or its Related Company, upon written notice by the Assignee or Nokia demonstrating that the entity against which the legal or administrative proceeding was initiated is an Operator Customer of Nokia or a Related Company of such an Operator Customer, the Assignee hereby agrees to dismiss the legal or administrative action within 21 business days; and if Assignee fails to do so, Assignee agrees and undertakes to, instead, grant, under such Patents, solely to such Operator Customer and its Related Companies, effective immediately prior to such initiating of legal or administrative proceeding, a royalty free, fully paid-up, world-wide, perpetual, irrevocable, non-exclusive, non-transferable (except to the extent set forth below in this Section 3.2) and non-assignable (except to the extent set forth below in this Section 3.2) license to (i) practice all methods, (ii) make (including the right to practice methods, processes and procedures), have made, use, sell, offer to sell, import, and otherwise dispose of any and all products and/or services of Operator Customer and/or its Related Companies.

(b) Assignee further agrees and undertakes, that the encumbrance described in this Section 3.2 is a Patent Encumbrance and runs with the Patents; and, in the event Assignee fails to contractually bind any subsequent assignee of any Patents or any third-party subsequently assigned, licensed or granted any right to assert or enforce any Patents to the agreement and undertaking in this Section 3.2, the Assignee hereby grants, under such Patents, all Operator Customers of Nokia and the Related Companies of such Operator Customers, immediately prior to any such assignment or granting of such a right, a royalty free, fully paid-up, world-wide, perpetual, irrevocable, non-exclusive, non-transferable (except to the extent set forth below in this Section 3.2) and non-assignable (except to the extent set forth below in this Section 3.2) license to (i) practice all methods, (ii) make (including the right to practice methods, processes and procedures), have made, use, sell, offer to sell, import, and otherwise dispose of any and all products and/or services of such Operator Customers and/or their Related Companies.

(c) Subject to the below, the licenses granted in this Section 3.2 are not assignable or transferable by the Operator Customer or its Related Companies under any circumstances either voluntarily, by operation of law, or otherwise, without the prior written consent of Assignee.

(d) In the event Assignee or its Related Company fails to dismiss a legal or administrative proceeding within 21 business days of receiving written notice from Assignee or Nokia demonstrating that the entity against which the legal or administrative proceeding was initiated is an Operator Customer of Nokia or a Related Company of such Operator Customer, or if Assignee fails to contractually bind any subsequent assignee of any Patents or any third-party subsequently assigned, licensed or granted any right to assert or enforce any Patents as described in this Section 3.2, Assignee hereby, on a fully paid-up basis, irrevocably releases the Operator Customer of Nokia and its Related Companies and (solely for any products and services of Operator Customer or Related Company that would infringe a Patent but for this provision) their respective distributors, resellers, customers and other direct or indirect downstream vendees from

any and all liability for any infringement of the Patents, as may be applicable, solely to the extent any such infringing activity predates the initiation of the legal and/or administrative proceeding or transfer of right, title or interest and would have been licensed under this Agreement if the license under this Section 3.2 had been in existence at the time of the infringing activity.

(e) If a Related Company of an Operator Customer ceases to be a Related Company, any license and release granted to such company pursuant to the above shall continue in place so that it includes those businesses the Related Company was engaged in at the time it ceased to be a Related Company of the Operator Customer and cover such annual sales volume that is equal to the sales of the company in question during the full calendar year immediately prior to the year during which the company ceased to be a Related Company, allowing 10% annual growth.

(f) If a company, other than an Excluded Company, becomes (or has become) a Related Company of an Operator Customer of Nokia after September 12, 2017, any license and release granted pursuant to the above will extend to such acquired Related Company. The Operator Customer and its Related Companies shall be third party beneficiaries of this Agreement with a right to enforce their rights under this Section 3.2.

(g) For the avoidance of doubt, if an Unlicensed Company acquires an Operator Customer of Nokia with annual revenue of less than fifty million US dollars (\$50,000,000 USD), the provisions set forth in (a) through (f) of this Section 3.2 shall not apply to any products or services of the Unlicensed Company, other than the wired or wireless telephony or data transmission services of the Operating Customer.

(h) For further avoidance of doubt, (i) nothing in this Section 3.2 or any other section of this Agreement alters the fact that Assignor does not intend to reserve, and does not reserve, any right to sue any entity under the Patents or to grant licenses under the Patents, it being understood that those rights belong solely to Assignee, and (ii) the rights and obligations of Assignee in this Section 3.2 shall apply to any subsequent assignee of any Patents and any third-party subsequently assigned, licensed or granted any right to assert or enforce any Patents.

3.3 Qualcomm Commitment.

(a) Solely with respect to the Patents identified in Part II of Exhibit A, Assignee shall execute and deliver (by airmail, with return receipt requested, or courier service (e.g., DHL Express, FedEx)) to Qualcomm Incorporated (“**Qualcomm**”) at the address specified in Exhibit G, before or on the Effective Date, a separate written agreement in the form set forth on Exhibit G (the “**Patent Agreement for Commitment Patents**”) under which Assignee undertakes the binding obligations (the “**QC Commitment**”) to Qualcomm and Qualcomm’s Related Companies as set forth in the Patent Agreement for Commitment Patents.

(b) This Agreement is contingent on Assignee providing to Assignor, before or contemporaneously with the Effective Date, a .pdf version of the original Patent Agreement for Commitment Patents (with respect to the Patents identified in Part II of Exhibit A) with Qualcomm executed by Assignee in accordance with this Section 3.3. Assignor may forward such .pdf version

to Qualcomm; however, Assignee shall remain obligated to send the original Patent Agreement for Commitment Patents to Qualcomm as provided in this Section 3.3.

(c) Notwithstanding anything to the contrary in this Agreement, no sale, transfer, or assignment to Assignee of any right, title and interest in and to the Patents identified in Part II of Exhibit A will take place, nor will the Effective Date with respect to such assets occur until Assignee has provided to Assignor the documentation required pursuant to this Section 3.3. In the event Assignee has not provided Assignor with such documentation within ten (10) days of the Effective Date, Assignor shall no longer be obliged to assign such assets. In such case all the other provisions of this Agreement remain in force, and Assignee shall not be entitled to be assigned any replacement assets.

3.4 Further Assignments. Assignee shall ensure that any further sale, lease, rent, transfer, assignment, lien, mortgage, or the grant of licensing, sublicensing, enforcement or other similar rights, or other Encumbrance by Assignee (or by any subsequent holder of any right, title and/or interest in or to the Patents) on any of the Patents shall be made subject to the (i) Patent Encumbrances, and (ii) licenses and releases granted, as well as the obligations, in this Section 3. Any sale, lease, rent, transfer, assignment, lien, mortgage, or the grant of licensing, sublicensing, enforcement or other similar rights, or other Encumbrance which fails to so provide shall be null and void. Assignor and its assignors, including Nokia, each are and shall be a third-party beneficiary of any agreement(s) for any subsequent sale, assignment or transfer of any Patents, with a right to enforce any of the (i) Patent Encumbrances, and (ii) licenses and releases granted, as well as the obligations, in this Section 3.

4. **COOPERATION.** For a period of six (6) months after the Effective Date, each of Assignor and Assignee shall, upon the reasonable request of the other Party, execute and deliver such documents and other papers and perform such acts, as may be required to carry out the provisions of this Agreement and consummate and make effective the assignment of the Patents. Notwithstanding anything to the contrary in this Agreement, recordation or registration of any document evidencing the assignment of the Patents from Assignor to Assignee shall be Assignee's responsibility and at its sole cost and expense.

5. **PAYMENT.**

5.1 Purchase Price. In consideration for the assignment of the Patents hereunder and other rights and benefits set forth herein and as full payment for the assignment of the Patents hereunder, Assignee shall pay to Assignor U.S. \$450,000 (the "**Purchase Price**"). All payment(s) pursuant to this Agreement shall be made on the date that Assignor delivers to Assignee copies of releases of the Security Interests.

5.2 Payments by Wire Transfer. All payment(s) pursuant to this Agreement shall be made by wire transfer to Assignor's bank account as follows

Bank:	Silicon Valley Bank
Bank Location:	Santa Clara, California USA
ABA Number:	121140399
Swift Code:	SVBKUS6S

Account Name: Provenance Asset Group LLC
Account Number: 3302222649

Confirmation of payment shall be sent by e-mail to tlynch@provenassets.com at the same time as payment is made.

6. MAINTENANCE AND PROSECUTION.

6.1 Maintenance and Prosecution. As of the Effective Date, Assignee shall assume and have sole control over, and responsibility for all liabilities and obligations arising or accruing after the Effective Date with respect to (i) all filing and prosecution as well as potential abandoning of the Patents; (ii) subject to the immediately following sentence, payment of all maintenance fees, prosecution fees, annuities, and the like that become due with respect to the Patents and all costs incurred in connection therewith; and (iii) enforcement, exploitation, and defense of the Patents against third parties. Assignor will pay all maintenance fees and annuities for the Patents, the final deadline for payment of which is prior to sixty (60) days after the Effective Date (the “**60-day Anniversary**”) and Assignee will pay any maintenance fees and annuities for which the final deadline for payment is on or after the 60-day Anniversary. Schedule sets forth, to Assignor’s knowledge based on Assignor’s or Assignor Patent Counsel’s pertinent records, the final payment dates for any maintenance fees and annuities for the Assigned Patents occurring within one hundred and eighty (180) days after the Effective Date.

7. **TAXES.** Each Party is and will be responsible for payment of all taxes, duties, levies, fees, excises, or tariffs (“**Taxes**”) that it is obligated to pay pursuant to applicable laws, and neither Party is or will be responsible for, or incur any liability on account of, any Taxes payable by the other Party.

8. **DELIVERABLES AND TRANSFER OF PROSECUTION FILES.** Assignor shall be responsible for all costs and expenses associated with the transfer of its prosecution-related files from Assignor to Assignee. Within fifteen (15) days of the Effective Date, Assignor shall deliver to Assignee all of the following to the extent in Assignor’s or its counsel’s possession: (i) original letters patent for the Patents; (ii) originals of all assignment agreements for the Patents including confirmatory patent assignments of the Patents from Assignor to Assignee in the form set forth in Exhibit H; (iii) a patent prosecution docket report for each of the Patents that is a pending patent application; and (iv) each patent prosecution (docket) file for each of the Patents.

9. LIMITATION OF LIABILITY.

9.1 LIMITATION ON CONSEQUENTIAL DAMAGES. NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR LOSS OF PROFITS, OR ANY PUNITIVE, INDIRECT, SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES, HOWEVER CAUSED, KNOWN OR UNKNOWN, ANTICIPATED OR UNANTICIPATED, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. THE PARTIES ACKNOWLEDGE THAT THESE LIMITATIONS ON POTENTIAL DAMAGES WERE AN ESSENTIAL ELEMENT IN SETTING CONSIDERATION UNDER THIS AGREEMENT, WITHOUT WHICH THE PARTIES WOULD NOT HAVE ENTERED INTO THIS AGREEMENT.

9.2 LIMITATION OF TOTAL LIABILITY. EXCEPT FOR ANY BREACH OF SECTIONS 3.2, 3.3 OR 7, WITHOUT WAIVING ANY OTHER RIGHTS OF THE PARTIES (INCLUDING ANY RIGHT TO SEEK SPECIFIC PERFORMANCE OR SEEK OTHER EQUITABLE RELIEF) NEITHER PARTY'S TOTAL LIABILITY (EXCLUDING PAYMENT OBLIGATIONS SET FORTH IN SECTION 5) UNDER THIS AGREEMENT SHALL EXCEED THE PURCHASE PRICE. THE PARTIES ACKNOWLEDGE THAT THESE LIMITATIONS ON POTENTIAL LIABILITIES AND THE ALLOCATION OF RISK THAT THEY IMPLEMENT WERE AN ESSENTIAL ELEMENT IN SETTING CONSIDERATION UNDER THIS AGREEMENT, WITHOUT WHICH THE PARTIES WOULD NOT HAVE ENTERED INTO THIS AGREEMENT.

9.3 DISCLAIMER OF REPRESENTATIONS AND WARRANTIES. NEITHER PARTY MAKES ANY REPRESENTATION OR WARRANTY EXCEPT FOR THEIR RESPECTIVE REPRESENTATIONS AND WARRANTIES SET FORTH IN SECTION 10, AND EACH PARTY DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. EXCEPT AS EXPRESSLY SET FORTH IN SECTION 10, NEITHER PARTY GIVES THE OTHER PARTY ANY ASSURANCE (A) REGARDING THE PATENTABILITY OF ANY CLAIMED INVENTION IN, OR THE VALIDITY OF, ANY PATENT; OR (B) THAT MANUFACTURE, USE, SALE, OFFERING FOR SALE, IMPORTATION, EXPORTATION OR OTHER DISTRIBUTION OF ANY PRODUCT OR METHOD DISCLOSED AND CLAIMED IN ANY PATENT WILL NOT CONSTITUTE AN INFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHTS OF OTHER PERSONS. EXCEPT AS EXPRESSLY PROVIDED IN SECTION 10 HEREOF, THE PATENTS ARE SOLD "AS IS" WITHOUT ANY FURTHER REPRESENTATION OR WARRANTY. ASSIGNOR MAKES NO REPRESENTATION OR WARRANTY AS TO WHETHER THE PATENTS ARE FREE OF ENCUMBRANCES, INCLUDING PATENT ENCUMBRANCES.

10. REPRESENTATIONS AND WARRANTIES.

10.1 By Assignor. Assignor hereby represents and warrants to Assignee that:

(a) Authority. Assignor has the right and authority to enter into this Agreement and to carry out its obligations hereunder.

(b) Title and Contest. Assignor is the exclusive owner of all right, title and interest in, and has good marketable title to, the Patents subject to the Patent Encumbrances and the Security Interests.

(c) Validity and Enforceability. During the time that the Patents have been owned by Assignor, the Patents have never been found invalid or unenforceable for any reason in any administrative, arbitral, judicial or other proceeding.

(d) Standard Setting Organizations. To Assignor's knowledge, subject to the content of Exhibit D and Exhibit E, patents in the patent families identified on Exhibit C that include Patents have been declared to the standard setting organizations identified on Exhibit C.

To Assignor's knowledge, save for blanket declarations, if any, no patents in other patent families that include Patents have been declared to standard setting organizations.

10.2 By Assignee. Assignee hereby represents and warrants to Assignor that Assignee has the right and authority to enter into this Agreement and to carry out its obligations hereunder.

11. GENERAL.

11.1 Governing Law. This Agreement is to be construed in accordance with and governed by the laws of the State of New York and/or U.S. federal law, if applicable, without regard to its conflict of law provisions. Each Party hereby submits to the exclusive jurisdiction of the United States District Court in the Southern District of New York for any actions, suits or proceedings arising out of or relating to this Agreement (and each Party agrees not to commence any action, suit or proceeding relating thereto except in such courts).

11.2 Attorneys' Fees. If either Party commences any action or proceeding against the other Party to enforce this Agreement or any of such Party's rights hereunder, the prevailing Party will be entitled to its reasonable expenses related to such action or proceeding, including reasonable attorneys' fees.

11.3 Confidentiality. Each Party may disclose the existence of this Agreement and the fact that the Patents were assigned hereunder by Assignor to Assignee; and the Parties may disclose and file Exhibit H with any patent office. However, subject to the exceptions provided below, each Party agrees not to disclose the terms of this Agreement or the negotiations leading thereto to any third party without the prior written consent of the other Party. This obligation is subject to the following exceptions where disclosure is permissible: (a) if required by government or court order or otherwise required by law or any applicable securities exchange rules or regulations; (b) as required to enforce rights under this Agreement; (c) in the case of Assignor to the prior owners of the Patents; and (d) on a confidential basis, in connection with a merger or acquisition or proposed merger or acquisition, or the like. Notwithstanding the above, Assignee shall keep the existence and terms of the form of the Patent Agreement for Commitment Patents in Exhibit G confidential in accordance with the confidentiality provisions of that agreement.

11.4 Due Diligence. ASSIGNEE ACKNOWLEDGES THAT IT HAS HAD SUFFICIENT OPPORTUNITY TO PERFORM, AND HAS PERFORMED, APPROPRIATE DUE DILIGENCE REGARDING THE PATENTS TO THE SATISFACTION OF ASSIGNEE.

11.5 No Waiver. No delay, failure or waiver by either Party to exercise any right or remedy under this Agreement, and no partial or single exercise of any such right or remedy, will operate to limit, preclude, cancel, waive, or otherwise affect such right or remedy, nor will any single or partial exercise of such right or remedy limit, preclude, impair, or waive any further exercise of such right or remedy or the exercise of any other right or remedy.

11.6 Severability. If any provision of this Agreement is determined to be invalid or unenforceable, the validity or enforceability of the other provisions or of this Agreement as a whole will not be affected and such provision will be changed and interpreted so as best to accomplish the objectives of such provision within the limits of applicable law or applicable court decision.

11.7 Entire Agreement. This Agreement serves to document formally the entire understanding between the Parties relating to the subject matter hereof, and supersedes and replaces any prior or contemporaneous agreements, negotiations, or understandings, whether oral or written, relating to the same subject matter. No amendment or modification of any provision of this Agreement will be effective unless in writing and signed by duly authorized signatories of both Parties.

11.8 Enforceability. This Agreement is valid, binding, and enforceable by each Party against the other Party in accordance with its terms.

11.9 Miscellaneous. The Parties hereto shall not be considered as joint venturers, partners, employers or agents of one another, and shall not have the power to bind or obligate one another except as set forth in this Agreement. This Agreement may be executed in two (2) or more copies, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[signature page follows]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives.

Provenance Asset Group LLC

By:  _____

Name: Timothy M. Lynch, CEO

Proven Networks, LLC

By: _____

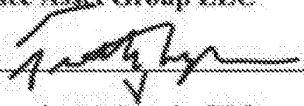
Name: _____

Title: _____

[Signature page to February 5, 2021 Patent Sale Agreement]

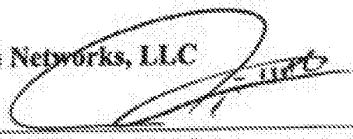
IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives.

Provenance Asset Group LLC

By: 

Name: Timothy M. Lynch, CEO

Proven Networks, LLC

By: 

Name: Roy Escarot

Title: _____

[Signature page to February 5, 2021 Patent Sale Agreement]

Exhibit A
PATENTS
PART I

Originating Portfolio	Family Name / ID	Country	Patent Number	Application Number	Estimated Priority
ALU	801224	US	US8266530	app: 11/730588	4/3/2007
NET	200801436	US	US8687573	app: 12/994,964	5/30/2008
NET	200801436	US	US9490958	app: 14/193,516	5/30/2008
TECH	32810	DE	EP1395892	app: 02743287.1	6/15/2001
TECH	32810	FR	EP1395892	app: 02743287.1	6/15/2001
TECH	32810	GB	EP1395892	app: 02743287.1	6/15/2001
TECH	32810	ES	EP1395892	app: 02743287.1	6/15/2001
TECH	32810	US	US7506381	app: 10/173569	6/15/2001

PART II

Originating Portfolio	Family Name / ID	Country	Patent Number	Application Number	Estimated Priority
ALU	801224	US	US8266530	app: 11/730588	4/3/2007

Electronic Acknowledgement Receipt	
EFS ID:	43502812
Application Number:	12994964
International Application Number:	
Confirmation Number:	7082
Title of Invention:	ALLOCATING RESOURCES WITHIN COMMUNICATION SYSTEM
First Named Inventor/Applicant Name:	Daniela Laselva
Customer Number:	29683
Filer:	John George Tutunjian/Fern Kuhner
Filer Authorized By:	John George Tutunjian
Attorney Docket Number:	863.0261.U1(US)
Receipt Date:	13-AUG-2021
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Time Stamp:	10:36:46
Application Type:	U.S. National Stage under 35 USC 371

Payment information:

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	0569-0109-0US_POA.pdf	1294618	no	2
			3c248f9d4b1e50e4656d968c5c4b0bf1deb563a2		

Warnings:

Information:					
2	Assignee showing of ownership per 37 CFR 3.73	0569-0109-0US_Statement_Under_373c.pdf	193683	no	3
			805c7e34108f37312a7cb1dbd4f57ae3dd58612a		
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	0569-0109-0US_Assignment_1.pdf	389098	no	4
			0b6f8b4c015aefd0453134ec5ed98fecfad7789b		
Warnings:					
Information:					
4	Assignee showing of ownership per 37 CFR 3.73	0569-0109-0US_Assignment_2_Part1.pdf	12540231	no	150
			814da8b3f97fd65986f1b687b90794a86494800b		
Warnings:					
Information:					
5	Assignee showing of ownership per 37 CFR 3.73	0569-0109-0US_Assignment_2_Part2.pdf	15722696	no	173
			d5aaeb1cc9b0c9549c86e8967d8368ba75608773		
Warnings:					
Information:					
6	Assignee showing of ownership per 37 CFR 3.73	0569-0109-0US_Assignment_3.pdf	1633876	no	15
			5b2d3ca394bdf2349d0c67466be284c21fc19c40		
Warnings:					
Information:					
Total Files Size (in bytes):			31774202		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/994,964	11/29/2010	Daniela Laselva	863.0261.U1(US)

CONFIRMATION NO. 7082

POWER OF ATTORNEY NOTICE

29683

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OC000000127751301

Date Mailed: 08/19/2021

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/13/2021.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mteklelmichael/



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12/994,964	11/29/2010	Daniela Laselva	863.0261.U1(US)

CONFIRMATION NO. 7082

POA ACCEPTANCE LETTER

24336
TUTUNJIAN & BITETTO, P.C.
401 Broadhollow Road, Suite 402
Melville, NY 11747



Date Mailed: 08/19/2021

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/13/2021.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/mtekle michael/