

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Good Technology Software, Inc.
Petitioner

v.

MobileIron, Inc.
Patent Owner

Case: *Not Assigned*
U.S. Patent No. 8,340,633

PETITION FOR *INTER PARTES* REVIEW

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EXHIBIT LIST

Exhibit #	Exhibit Description
Ex. 1001	U.S. Patent No. 8,340,633
Ex. 1002	File History of U.S. Patent No. 8,340,633
Ex. 1003	U.S. Patent No. 7,817,983 (“Cassett”)
Ex. 1004	U.S. Patent No. 6,925,160 (“Stevens”)
Ex. 1005	U.S. Patent Publication No. 2009-0005002 (“Agarwal”)
Ex. 1006	U.S. Patent No. 7,310,511 (“Barnea”)
Ex. 1007	Declaration of Dr. Robert Akl in support of Petitioner’s Petition for <i>Inter Partes</i> Review
Ex. 1008	Curriculum Vitae of Dr. Robert Akl

I. INTRODUCTION AND STATEMENT OF RELIEF REQUESTED

Petitioner Good Technology Software, Inc. (“Petitioner”) petitions for *inter partes* review in accordance with 35 U.S.C. §§ 311-319 and 37 C.F.R. § 42.100 *et seq.* and seeks cancellation of Claims 1-4, 6-25, 27, and 28 of U.S. Patent No. 8,340,633 (“the ‘633 Patent”), which issued December 25, 2012 and is assigned to MobileIron, Inc. (“Patent Owner”).

II. MANDATORY NOTICES

A. Real Party-In-Interest under 37 C.F.R. § 42.8(b)(1)

Petitioner identifies Good Technology Software, Inc. and Good Technology Corporation as the real parties-in-interest.

B. Related Matters under 37 C.F.R. § 42.8(b)(2)

Patent Owner is asserting the ‘633 Patent in Good Technology Corporation et al. v. MobileIron, Inc., Case No. 1:14-cv-01308 (LPS) (CJB) (D. Del. filed on October 14, 2014.

C. Lead and Back-up Counsel under 37 C.F.R. § 42.8(b)(3)

Lead Counsel	Back-up Counsel
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D. Service Information under 37 C.F.R. § 42.8(b)(4)

Petitioner requests that all correspondence be directed to lead counsel and back-up counsel. Petitioner further authorizes and requests that electronic service be made to each of the following e-mail addresses: (1) pbennett@eip.com; (2) agarg@eip.com; and (3) PTAB-SERVICE@eip.com.

III. GROUNDS FOR STANDING UNDER 37 C.F.R. § 42.104(a)

Pursuant to 37 C.F.R. § 42.104(A), Petitioner certifies that the ‘633 Patent is available for *inter partes* review under 35 U.S.C. § 311. *See* 35 U.S.C. § 311(a)-(c); *see also* Leahy-Smith America Invents Technical Corrections Act, 126 Stat. 2456 §1(d)(1) (Jan 14, 2013). Further, Petitioner certifies that it is not barred or estopped from requesting an *inter partes* review challenging the ‘633 Patent claims on the grounds identified in this Petition.

IV. BACKGROUND

Technology allowing for management of wireless (e.g., mobile) devices and tracking of their usage has been around for many years. Ex. 1007 [AkI Dec.] at ¶ 40. In particular, mobile devices have been used to communicate both voice communications and large amounts of data over wireless networks controlled by network services providers over the years. Network service providers have long competed in both quality of service and price points for access to wireless networks that provide the resources used by the mobile devices. Thus, it has always been

important to track information regarding the usage of such mobile devices and the costs associated with such usage. Ex. 1007 [Akl Dec.] at ¶ 41. In particular, network service providers use the information to stay ahead of the competition and market their strengths over the competition, and users use the information to make decisions regarding which network service providers to use. Ex. 1007 [Akl Dec.] at ¶ 41.

The ‘633 Patent, filed in 2009, discloses systems and methods “directed to the collection of a wide variety of data from a variety of mobile devices, which, in turn, may be used in facilitation deployment, configuration, and/or management of the mobile devices.” Ex. 1001 [‘633 Patent] at 2:7-11. In particular, the ‘633 Patent discloses “receiving mobile device usage data directly from each of a plurality of mobile devices associated with a particular enterprise, aggregating the usage data from each of the plurality of mobile devices at a central database, and generating one or more mobile device usage reports based on the aggregated usage data.” Ex. 1001 [‘633 Patent], Abstract. These ideas were commonplace by 2009.

It is not surprising, then, that many were innovating in the field of collecting mobile device usage data before the ‘633 Patent was filed. For example, U.S. Patent No. 7,817,983 (“Cassett”), with a priority date four years earlier than the ‘633 Patent, relates to “apparatus and methods for monitoring usage patterns of a wireless device [that] may include a usage monitoring and reporting module operable to monitor and log usage on a wireless device.” Ex. 1003 [Cassett], Abstract. Similarly, U.S. Patent

No. 6,925,160 (“Stevens”), which has a priority date more than 6 years before the ‘633 Patent, also relates to “a convenient way for companies to manage cellular telephone costs associated with cellular telephone usage by employees” by providing tools for “receiv[ing] billing and usage information from various wireless service providers.” Ex. 1004 [Stevens] at 3:38-47. U.S. Patent Publication No. 2009-0005002 (“Agarwal”), which has a priority date over 2 years before the ‘633 Patent, also relates to “methods and portable devices for collecting information about portable device usage.” Ex. 1005 [Agarwal], Abstract.

As is described in detail below, Cassett and Stevens, in combination, are directed to the same invention claimed in the ‘633 Patent. Those references, together with other secondary references, disclose each and every limitation recited in the challenged claims. Accordingly, Petitioner proposes six grounds of rejection which are set forth in detail below:

Ground	Claims	Basis	Reference(s)
1	1-4, 6-10, 12-19, 21, 22, 25, 27, and 28	103(a)	Cassett in view of Stevens
2	1-4, 6-10, 12-19, 21, 22, 25, 27, and 28	103(a)	Stevens in view of Cassett
3	6, 20, 23, and 24	103(a)	Cassett in view of Stevens and further in view of Agarwal
4	6, 20, 23, and 24	103(a)	Stevens in view of Cassett and further in view of Agarwal
5	11	103(a)	Cassett in view of Stevens and further in view of Barnea

6	11	103(a)	Stevens in view of Cassett and further in view of Barnea
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V. OVERVIEW OF THE ‘633 PATENT

A. Written Description and Figures

The ‘633 Patent describes systems and methods for receiving mobile device usage data from a plurality of mobile devices, aggregating the usage data, and generating reports based on the aggregated data. *See generally* Ex. 1001 [‘633 Patent], Abstract. At the time the ‘633 Patent was filed, it was well-known among skilled artisans to gather usage data from mobile devices, aggregate the data, and generate reports based on the aggregated data. Ex. 1007 [Akl Dec.] at ¶ 43. As will be demonstrated in detail below, the purported invention claimed in the ‘633 Patent are nothing more than standard implementations of these concepts.

Claimed embodiments of the ‘633 Patent are generally depicted in the process flow shown in Figure 8 of the ‘633 Patent and its associated description. Ex. 1001 [‘633 Patent] at 23:17-24:33; *see also* Ex. 1007 [Akl Dec.] at ¶ 44. There, the ‘633 Patent provides an example of the process by which data usage information (e.g., call data, SMS, or email usage) is received from a mobile phone, aggregated, and a report generated from the aggregated data. *See* Ex. 1007 [Akl Dec.] at ¶ 44. In particular, the process flow shown in Figure 8 describes how call “data is collected by the client (e.g., client 302) in the background of the normal operations of the

mobile device” and then sent to a server. *See generally* Ex. 1001 [‘633 Patent] at 23:17-62; *see also* Ex. 1007 [Akl Dec.] at ¶ 44. Further, the ‘633 Patent describes that similarly “SMS text, email, or other data usage information may be collected by the mobile device client.” Ex. 1001 [‘633 Patent] at 24:6-7. Such “data from individual mobile devices may then be aggregated and/or otherwise processed.” Ex. 1001 [‘633 Patent] at 24:22-23. The “server may then generate a variety of reports.” Ex. 1001 [‘633 Patent] at 24:30-31; *see also* Ex. 1007 [Akl Dec.] at ¶ 45. In particular, “carrier to carrier reports (e.g., the number of calls made from AT&T serviced mobile phones to other AT&T serviced phones or the number of call made from Verizon serviced phones to T-Mobile serviced phones)” may be generated. Ex. 1001 [‘633 Patent] at 24:60-64; *see also* Ex. 1007 [Akl Dec.] at ¶ 45. Such reports may provide feedback, for example, on carrier market share. Ex. 1001 [‘633 Patent] at 25:63-65.

B. Claims

The ‘633 Patent has twenty-eight (28) claims. Claims 1-4, 6-25, 27, and 28 are challenged in this Petition. These claims include independent Claims 1 and 28. Claim 1 is a method claim and Claim 28 is a system claim.

C. Prosecution History

The ‘633 Patent was originally filed as U.S. Patent Application No. 12/421,517 (“the ‘517 Application”) on April 9, 2009. The ‘517 Application did not

claim any domestic benefit or foreign priority to any other application. *See, e.g.*, Ex. 1002 [‘633 File History] at 3-4.

During prosecution, the Applicant filed two Information Disclosure Statements listing references for consideration. *See* Ex. 1002 [‘633 File History] at 100 and 214. In spite of these filings, none of the prior art references relied upon in this Petition were considered during prosecution of the ‘633 Patent.

After a series of Office Actions and claim amendments, on October 16, 2012, the Examiner issued a Notice of Allowance. Ex. 1002 [‘633 File History] at 204 (October 16, 2012 Notice of Allowance). Subsequently, the ‘517 Application issued as the ‘633 Patent on December 25, 2012. *See* Ex. 1002 [‘633 File History] at 228 (December 25, 2012 Issue Notification), Ex. 1007 [Akl Dec.] at ¶¶ 46-47.

D. Level of Ordinary Skill in the Art

Petitioner seeks institution of IPR based on obviousness grounds. Thus, in accordance with the *Graham* factors, a determination must be made of the level of ordinary skill in the art. As explained by Petitioner’s expert Dr. Robert Akl in his declaration submitted herewith, a person of ordinary skill in the art in the field of the ‘633 Patent would have at least a Bachelor’s degree in computer science, electrical engineering or a similar field, plus around four years of experience designing and implementing wireless communication systems and/or computer networking systems, or the equivalent. Ex. 1007 [Akl Dec.] at ¶¶ 18-19.

E. Claim Construction

In an *inter partes* review, a claim is given the “broadest reasonable construction in light of the specification.” *See* 37 C.F.R. § 42.100(b). In general, the correct construction for most terms is their plain and ordinary meaning.¹ In certain instances, however, proposed clarifying constructions are set forth below in order to assist the Board’s analysis.

1. “Mobile Device Network Traffic Usage Data”

The phrase *mobile device network traffic usage data* is recited in Claims 1 and 28 of the ‘633 Patent. In the context of the ‘633 patent, a person of ordinary skill in the art would understand the broadest reasonable interpretation of *mobile device network traffic usage data* to mean “information regarding use of a network for sending and/or receiving data by a mobile device.” Ex. 1007 [Akl] at ¶ 49. Consistent with this construction, the ‘633 Patent explains that *mobile device network traffic usage data* includes “voice (or call) usage information, SMS usage information, other data usage information (e.g., MMS or internet/web browser data usage),

¹ Petitioner is not taking any position herein regarding the correct construction of terms under the standard used in a district court litigation as articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*).

location data and application use data” of a mobile device over a network. Ex. 1001 [‘633 Patent] at 20:61-65.

This is also consistent with the prosecution history, where the Patent Owner explicitly amended the claims to recite “*mobile device network traffic usage data*” instead of “*mobile device usage data*” i.e. usage data for network traffic as opposed to just general non-network use of a mobile device. Ex. 1002 [‘633 File History] at 139-146.

2. “Characterized Actions Performed on Each of the Mobile Devices”

The term *characterized actions performed on each of the mobile devices* appears in Claims 1 and 28 of the ‘633 Patent. Viewed in the context of the ‘633 Patent, a person of ordinary skill in the art would understand the broadest reasonable interpretation of *characterized actions performed on each of the mobile devices* to mean “identifiable usage of and/or actions performed on a mobile device.” Ex. 1007 [Akl Dec.] at ¶ 50. Consistent with this construction, the ‘633 Patent states that “the control client logs man-machine interface (MMI) data, file system commands, and other data characterizing usage of, and/or the actions performed on, the mobile device.” Ex. 1001 [‘633 Patent] at 2:47-50.

This is also consistent with the prosecution history, where the Patent Owner explicitly amended the claims to recite “*aggregating the usage data from each of the plurality of mobile devices according to characterized actions performed on each of*

the mobile devices” instead of “*aggregating the usage data from each of the plurality of mobile devices*” i.e. usage data regarding actions and usage occurring at the mobile device and not, for example, at a different device such as a server. Ex. 1002 [‘633 File History] at 161-169.

VI. OVERVIEW OF THE PRIOR ART

A. U.S. Patent No. 7,817,983 (“Cassett”)

U.S. Patent No. 7,817,983 (“Cassett”) was filed on March 13, 2006, and claims the benefit of U.S. Provisional Application No. 60/660,965, filed March 14, 2005. Ex. 1003 [Cassett] at cover page (22) and (60). Further, Cassett was published as U.S. Patent Publication No. 2006/0223495 on October 5, 2006. Accordingly, even without the benefit of the provisional application, Cassett is prior art to the ‘633 Patent under 35 U.S.C. § 102(a) (pre-AIA), 102(b) (pre-AIA), and 102(e) (pre-AIA). Cassett has not previously been considered by the USPTO in connection with the ‘633 Patent.

Like the ‘633 Patent, Cassett discloses wireless devices, such as “cellular telephones,” (i.e. *mobile devices*). Ex. 1003 [Cassett] at 1:35-36; *see also* Ex. 1007 [Akl Dec.] at ¶ 57. “The wireless device may be configured to collect usage pattern data” (i.e., *mobile device network traffic usage data*). Ex. 1003 [Cassett] at 3:67-4:1; *see also* Ex. 1007 [Akl Dec.] at ¶¶ 58-60. “The usage pattern data comprises any information relating to activity on the wireless device, such as what activity is

occurring, when the activity occurs, and how often the activity occurs.” Ex. 1003 [Cassett] at 4:25-28; *see also* Ex. 1007 [Akl Dec.] at ¶ 58. “The activity may comprise at least one of a call-related activity, a messaging-related activity, a browser-related activity and a software application-related activity.” Ex. 1003 [Cassett] at 4:29-31; *see also* Ex. 1007 [Akl Dec.] at ¶ 59. “For example, usage pattern data may track information relating to voice calls, video calls, text messages, the uploading and downloading of content, and the execution and usage of the content and/or applications” (i.e., *characterized actions performed on each of the mobile devices*). Ex. 1003 [Cassett] at 4:32-35; *see also* Ex. 1007 [Akl Dec.] at ¶ 60. The usage data may be gathered and logged in a log of the wireless device. *See* Ex. 1003 [Cassett] at 6:9-10.

Like the ‘633 Patent, Cassett discloses the wireless device may be in communication with a usage pattern manager server (i.e., *a first server*) and report the usage (i.e., *mobile device network traffic usage data*) to the usage pattern manager server, via a network. *See* Ex. 1003 [Cassett] at 7:49-50, 8:47-51; *see also* Ex. 1007 [Akl Dec.] at ¶ 63.

Like the ‘633 Patent, Cassett discloses a server may include an analyzer that may “deriv[e] wireless device usage patterns from the collected usage data in usage logs” (i.e. *aggregating the usage data*). Ex. 1003 [Cassett] at 9:23-25; *see also* Ex. 1007 [Akl Dec.] at ¶ 66. In particular, the analyzer generates a usage pattern report

(i.e., *generating based on the aggregated usage data one or more mobile device usage reports*). See Ex. 1003 [Cassett] at 9:26-30; *see also* Ex. 1007 [AkI Dec.] at ¶ 67. The reports ... “may be generated comparing the usage pattern of devices associated with different network service providers” (i.e., *a first network service provider and a second network service provider*). Ex. 1003 [Cassett] at 9:48-50; *see also* Ex. 1007 [AkI Dec.] at ¶ 67.

B. U.S. Patent No. 6,925,160 (“Stevens”)

U.S. Patent No. 6,925,160 to Stevens was filed on August 21, 2003, and claims the benefit of U.S. Provisional Application No. 60/404,748, filed August 21, 2002. Ex. 1004 [Stevens], cover page (22) and (60). Further, Stevens was patented on August 2, 2005. *Id.*, cover page (45). Accordingly, even without the benefit of the provisional application, Stevens is prior art to the ‘633 Patent under 35 U.S.C. § 102(a) (pre-AIA), 102(b) (pre-AIA), and 102(e) (pre-AIA). Stevens has not previously been considered by the USPTO.

Like the ‘633 Patent, Stevens discloses a “cellular telephone,” (i.e. *mobile devices*). Ex. 1004 [Stevens] at 3:16-19; *see also* Ex. 1007 [AkI Dec.] at ¶ 79. In particular, a server (i.e., *a first server*) “receives usage information related to the usage and charges associated with employees of [a] company” (i.e., *mobile device network traffic usage*). Ex. 1004 [Stevens] at 3:24-25, 4:23-27; *see also* Ex. 1007 [AkI Dec.] at ¶ 79. “Information received from carriers generally is related to billing

statements, phone usage, and other phone-related information” (i.e., *characterized actions performed on each of the mobile devices*). Ex. 1004 [Stevens] at 12:57-59; *see also* Ex. 1007 [Akl Dec.] at ¶ 81. The system therefore needs to “convert[] the information from the carrier-specific format to a common format.” Ex. 1004 [Stevens] at 12:61-63; *see also* Ex. 1007 [Akl Dec.] at ¶ 118. The systems also generates reports based on the usage and charges that a manager can view. *See* Ex. 1004 [Stevens] at 10:35-60. In particular, the management reports can be “used by managers to analyze employees’ phone usage across various carriers [(i.e., *a first network service provider and a second network service provider*)], companies, divisions, and departments” (i.e., *generating based on the aggregated usage data one or more mobile device usage reports*). Ex. 1004 [Stevens] at 10:37-39; *see also* Ex. 1007 [Akl Dec.] at ¶ 82.

C. U.S. Patent Publication No. 2009/0005002 (“Agarwal”)

U.S. Patent Publication No. 2009/0005002 to Agarwal was filed on June 28, 2007, and claims the benefit of U.S. Provisional Application No. 60/779,148, filed on Oct. 2, 2006. Ex. 1005 [Agarwal], cover page (22), ¶ [0001]. Further, Agarwal was published on January 1, 2009. *Id.*, cover page (43). Accordingly, even without the benefit of the provisional application, Agarwal is prior art to the ‘633 Patent under 35 U.S.C. § 102(a) (pre-AIA) and 35 U.S.C. § 102(e) (pre-AIA). Agarwal has not previously been considered by the USPTO.

Like the ‘633 Patent, Agarwal discloses portable devices (e.g., “mobile phones,”) (i.e. *mobile devices*) “incorporate many new technologies and features ... [including] data messaging in the form of SMS or MMS... [and] internet connectivity over cellular networks and wireless internet access points (e.g., using Wi-Fi, etc.) [, which] has enabled internet browsing, content downloading, mobile commerce transactions, email activity, and the like” (i.e., *characterized actions performed on each of the mobile devices*) Ex. 1005 [Agarwal] at ¶ [0002] ; *see also* Ex. 1007 [Akl Dec.] at ¶ 94.

Like the ‘633 Patent, Agarwal discloses “usage information” (i.e., *mobile device network traffic usage data*) “collected from each portable device may be communicated over [a] network to [an] information processor [(i.e., *first server*)] for processing and/or storage in [a] database.” Ex. 1005 [Agarwal] at ¶ [0026] (reference numerals removed); *see also* Ex. 1007 [Akl Dec.] at ¶ 95.

Like the ‘633 Patent, Agarwal discloses that “on-network usage (e.g., interaction over a network of a carrier providing wireless service for the cellular phone [(i.e., *a first network service provider*))] and/or off-network usage (e.g., interaction over a network which is not affiliated with the carrier [(i.e., *a second network service provider*))] of the portable device may be monitored.” Ex. 1005 [Agarwal] at ¶ [0029]; *see also* Ex. 1007 [Akl Dec.] at ¶ 96.

Like the ‘633 Patent “the collected information ... may be processed ... [, which] may comprise cleaning, organizing, filtering, sorting, encoding, encrypting, applying time and/or location stamps to, etc. the data.” Ex. 1005 [Agarwal] at ¶ [0031]; *see also* Ex. 1007 [Akl Dec.] at ¶ 97.

D. U.S. Patent No. 7,310,511 (“Barnea”)

U.S. Patent No. 7,310,511 (“Barnea”) was filed on February 14, 2005, and claims the benefit of U.S. Provisional Application No. 60/543,910, filed February 13, 2004. Ex. 1006 [Barnea] at cover page (22) and (60). Further, Barnea was published as U.S. Patent Publication No. 2005/0186939 on August 25, 2005. Accordingly, even without the benefit of the provisional application, Barnea is prior art to the ‘633 Patent under 35 U.S.C. § 102(a) (pre-AIA), 102(b) (pre-AIA), and 102(e) (pre-AIA). Barnea has not previously been considered by the USPTO.

Barnea discloses using “usage level (i.e., *mobile device network traffic usage data*) recorded in the per-telephone records ... to send text messages with advertisements, reminders and offers (i.e., *alerts*) in order to encourage a user to take advantage of the available roaming services.” Ex. 1006 [Barnea] at 5:50-53; *see also* Ex. 1007 [Akl Dec.] at ¶ 104. In particular, an “output application may send a certain text message when the record, say in the form of an activity log, indicates lack of activity over a certain amount of time.” Ex. 1006 [Barnea] at 6:1-3; *see also* Ex. 1007 [Akl Dec.] at ¶ 104. “Likewise noticeably large amounts of activity may

trigger different messages, and average amounts of activity may trigger yet further messages.” Ex. 1006 [Barnea] at 6:4-6; *see also* Ex. 1007 [Akl Dec.] at ¶ 104. Barnea discloses that this activity may include “usage attributes” from a “usage attribute unit 58, which analyzes the roamers’ services usage behavior during a visit (e.g., voice calls generating, sending SMS etc.).” Ex. 1006 [Barnea] at 7:14-17; *see also* Ex. 1007 [Akl Dec.] at ¶ 105.

Barnea discloses this usage activity may be “derived from two substitutive sources 60 and 62 respectively, which are signaling probing and TAP analyzers.” Ex. 1006 [Barnea] at 7:17-19; *see also* Ex. 1007 [Akl Dec.] at ¶ 105. Barnea goes on to explain that the “skilled person will appreciate that the above two sources are basically substitutable ... [and that] actual sources used will be selected according to the operator’s preference.” Ex. 1006 [Barnea] at 8:24-26.

In one example, Barnea discloses that for roamers with zero usage, a basic reminder may be sent “mentioning the call tariffs, assuming the roamer did not generate a call due to perceived high price of calls.” Ex. 1006 [Barnea] at 46-53. Further, for low usage roamers, a “message may be sent to these roamers to entice usage of the services in low use by offering embedded incentives.” Ex. 1006 [Barnea] at 10:5-6.

In yet another example, Barnea discloses that in some instances a user may be registered on a foreign hosting GSM network that has an established GSM roaming

agreement, but not an established GPRS roaming agreement, and therefore cannot activate a data connection over the GPRS connection. *See* Ex. 1006 [Barnea] at 10:47-57; *see also* Ex. 1007 [Akl Dec.] at ¶ 106. Accordingly, Barnea discloses that a “GPRS alert (i.e., *alert*) is sent to users who register successfully on a roaming network (i.e., *mobile device network traffic usage data*) which does not have a GPRS roaming agreement with the home network (i.e. where GPRS will not work) and provides a list of networks in that country which do have a GPRS roaming agreement with the applicable home network.” Ex. 1006 [Barnea] at 10:66-11:4; *see also* Ex. 1007 [Akl Dec.] at ¶ 106.

VII. CLAIM CHALLENGES

The following discussion of the claims is organized such that, for each prior art reference, the independent claims are discussed first followed by the dependent claims. Where the features of different claims are substantively identical, they are discussed together. All claim terms given a construction above are bolded in any quoted reference to claim language for ease of reference.

A. Claims 1-4, 6-10, 12-19, 21, 22, 25, 27, and 28 Obvious under Section 103 over the Combined Teachings of U.S. Patent No. 7,817,983 (“Cassett”) and U.S. Patent No. 6,925,160 (“Stevens”)

Cassett and Stevens each disclose systems and methods almost identical to those recited in independent Claims 1 and 28 of the ‘633 Patent. For example, Cassett discloses each element recited in the independent claims with the exception

that it arguably does not explicitly discuss that the discussed wireless devices are “associated with a particular enterprise,” as recited in Claims 1 and 28. As demonstrated below, this potential deficiency is readily cured by the teachings of Stevens, which explicitly describes systems and methods wherein wireless devices are associated with particular enterprises. *See* Ex. 1004 [Stevens] at 3:16-25, 4:23-27.

Similarly, Stevens discloses each element recited in the independent claims except (arguably) for receiving mobile device network traffic usage data “directly from each of a plurality of mobile devices.” This potential deficiency is readily cured by the teachings of Cassett, which discloses mobile devices that send network traffic usage data directly to the system. *See* Ex. 1003 [Cassett] at 7:49-50, 8:47-51.

As discussed in detail below, a person of ordinary skill in the art at the time the alleged invention in the ‘633 Patent was made, would have been motivated by the teachings in both Cassett and Stevens to combine their respective teachings to reach the systems and methods recited in Claims 1-4, 6-10, 12-19, 21, 22, 25, 27, and 28 of the ‘633 Patent.

1. Cassett and Stevens are Properly Combinable

a) Cassett and Stevens are analogous art

As discussed above, Cassett is related to monitoring usage patterns of wireless devices generally, including information relating to voice calls. Ex. 1003 [Cassett]

at 4:32-35. That information is logged on the wireless device itself and sent to a server where reports of any form are output to provide any type of needed analysis regarding the usage of the wireless devices. *See* Ex. 1003 [Cassett] at 6:9-10, 7:47-50, 9:26-30, and 15:51-55. Stevens, describes receiving similar usage information (e.g., phone usage information) regarding wireless devices and generating reports based on the usage information. Ex. 1004 [Stevens] at 3:24-25, 4:23-27, 10:66-11:2. Accordingly, each of Cassett and Stevens are analogous prior art to each other and to the '633 Patent. *See* Ex. 1007 [Akl Dec.] at ¶¶ 110-111.

b) A Skilled Artisan Would Have Been Motivated to Supplement Teachings of Cassett with the Teachings of Stevens

As noted above, the systems and methods described in Cassett arguably differ from the systems and methods recited in Claims 1 and 28 of the '633 Patent in that Cassett arguably does not explicitly discuss that the wireless devices disclosed in Cassett are *associated with a particular enterprise* or company. Cassett does not provide specific information with respect to who owns or manages the wireless devices used in the disclosed system. Stevens, however, discloses monitoring usage of employee cellular telephones associated with the employing company, which is *a particular enterprise*. Ex. 1004 [Stevens] at 1:40-43; *see also* Ex. 1007 [Akl Dec.] at ¶ 116. A person of ordinary skill in the art would have found it obvious at the time of the '633 Patent invention to supplement Cassett's system with the teachings

of Stevens to allow Cassett's wireless devices to be *associated with a particular enterprise*, as taught by Stevens.

The motivation, as provided by Stevens, a known work in the same field of endeavor, would be to enable generation of reports related to the usage of wireless devices within a company and across companies, which may be useful to managers. Ex. 1004 [Stevens] at 10:37-39; *see also* Ex. 1007 [Akl Dec.] at ¶ 117. A person of ordinary skill in the art could have accomplished these modifications according to readily known techniques in order to predictably yield a system such as that claimed in the '633 Patent. *See* Ex. 1007 [Akl Dec.] at ¶ 117. In particular, one of ordinary skill in the art would have recognized that the usage information collected in Cassett could be collected from "employer-supplied" mobile phones as taught by Stevens in order to generate reports related to usage within and across companies. *See* Ex. 1007 [Akl Dec.] at ¶ 117. This enhancement of Cassett would merely be additional business context in which the systems and methods of Cassett could generally be used. *See* Ex. 1007 [Akl Dec.] at ¶ 117. Accordingly, a person of ordinary skill in the art would have been motivated to combine the teachings of Cassett with those of Stevens in order to arrive at the invention recited in the claims of the '633 Patent.

c) A Skilled Artisan Would Have Been Motivated to Supplement or Modify the Teachings of Stevens with the Teachings of Cassett

The systems and methods disclosed in Stevens are also almost identical to the systems and methods recited in Claims 1 and 28 of the '633 Patent. As noted above, Stevens arguably differs from the systems and methods recited in Claims 1 and 28 of the '633 Patent only in that it does not receive the mobile device network traffic usage *directly from each of a plurality of mobile devices*. Instead, Stevens discusses that “information received [is] from carriers.” Ex. 1004 [Stevens] at 12:57-59. The system therefore needs to “convert[] the information from the carrier-specific format to a common format.” Ex. 1004 [Stevens] at 12:61-63. Nevertheless, a person of ordinary skill in the art would find it obvious to receive mobile device network traffic usage *directly from each of a plurality of mobile devices*, just as in Cassett, which discloses wireless devices may be in communication with a usage pattern manager server and report the usage to the usage pattern manager server via a network. *See* Ex. 1003 [Cassett] at 7:49-50, 8:47-51; *see also* Ex. 1007 [Akl Dec.] at ¶ 118. The motivation, as provided by Stevens, would be to avoid the conversion of information from a carrier-specific format to a common format, which requires extra processing. Ex. 1004 [Stevens] at 12:55-63; *see also* Ex. 1007 [Akl Dec.] at ¶ 118.

Moreover, a person of ordinary skill in the art could accomplish these modifications according to readily known techniques in order to predictably yield a

system such as that claimed in the ‘633 Patent. *See* Ex. 1007 [Akl Dec.] at ¶ 118. In particular, one of ordinary skill in the art would recognize that by modifying Stevens to utilize Cassett’s techniques for collecting and receiving information regarding usage of the wireless devices, the data would be received in a single format type. *See* Ex. 1007 [Akl Dec.] at ¶ 118. Accordingly, conversion of the data could be avoided if the system of Stevens was modified to incorporate such features of Cassett. *See* Ex. 1007 [Akl Dec.] at ¶ 118. Accordingly, it would have been obvious to a person of ordinary skill in the art to modify Stevens with the teachings of Cassett to arrive at the invention claimed in the ‘633 Patent. *See* Ex. 1007 [Akl Dec.] at ¶ 118.

2. Independent Claims 1 and 28 are Obvious under Section 103 over Cassett in view of Stevens and Stevens in view of Cassett

Independent Claims 1 and 28 of the ‘633 Patent are obvious over Cassett in view of Stevens, and also over Stevens in view of Cassett.² The claim chart set forth below identifies where each of the elements of Claim 1 are disclosed, taught, or otherwise suggested in each of Cassett and Stevens. The elements of Claim 1 include the preamble (1P), elements (1A-1C), and sub-elements of each of the elements (identified numerically, e.g., 1A.1, 1A.2, etc.).

Claim 1	Cassett	Stevens
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² These ground are not redundant because they are supported by independent rationales for combining the references as described above.

[1P] A method, comprising:	1:56-66	1:47-51
[1A.1] receiving, at a first server, mobile device network traffic usage data	4:25-35, 5:4-9, 7:46-50, 8:47-51	3:16-25, 3:44-48, 4:23-29, 10:40-57, 12:57-59
[1A.2] directly from each of a plurality of mobile devices	7:46-50, 8:47-51, Fig. 1	
[1A.3] associated with a particular enterprise,		3:10-25, 4:23-27, 10:35-39, 12:57-59
[1A.4] a first subset of the plurality of mobile devices being associated with a first network service provider and a second subset of the plurality of mobile devices being associated with a second network service provider;	9:23-50, 10:44-54, 12:54-59	3:10-23, 3:48-54, 10:35-39, 10:66-11:2
[1B.1] aggregating the usage data from each of the plurality of mobile devices	9:19-22, 9:43-46, 15:51-55	3:44-59, 10:37-50, 12:57-63, 13:19-33
[1B.2] according to characterized actions performed on each of the mobile devices; and	4:24-35, 7:9-25, 7:63-67	3:24-38, 4:41-56, 10:47-57, 12:57-59
[1C.1] generating based on the aggregated usage data one or more mobile device usage reports	9:26-30, 11:64-66, 15:51-62	10:37-60
[1C.2] at least a subset of which compare a first aggregated usage data associated with the first network service provider with a corresponding second aggregated usage data associated with the second network service provider	9:23-50, 10:44-54, 12:54-59	3:10-23, 3:48-54, 10:35-39, 10:66-11:2

Claim 1 (method) and Claim 28 (system) differ only in form and not substance. In particular, Claim 28 recites a *central database* and a *server configured to perform* substantially the same functions as the elements of Claim 1 recited above. As such, while Claim 1 is discussed with specificity below, the same arguments apply equally to Claim 28.

Cassett broadly discloses that the embodiments described therein comprise “apparatus, methods, computer readable media and processors operable to monitor and log wireless device usage data that may be used to generate usage pattern reports relating to the occurrence of predetermined activities on the wireless device.” *See, e.g.*, Ex. 1003 [Cassett] at 1:56-60. In particular, Cassett discloses a server 104 (i.e., *a server*) and “an information repository 136 (i.e., *central database*) for storing logs 120 received from wireless device 102.” *See, e.g.*, Ex. 1003 [Cassett] at 9:19-22, Fig. 1. Specifically, Cassett discloses that “information repository 136 may include any type of memory or storage device” (i.e., *a central database*). *See, e.g.*, Ex. 1003 [Cassett] at 9:19-22.

Similarly, Stevens broadly discloses “a system and method for assisting businesses in managing phone accounts” and “a system and method for permitting businesses to view and manage accounts for multiple phone service carriers. Ex. 1004 [Stevens] at 1:47-51. In particular, Stevens discloses “the system will run...on a server from which a business may interact with the system.” Ex. 1004 [Stevens]

at 4:25-29. This server is therefore *a server configured to* perform the functions described in Stevens. Stevens further discloses that “information received [is] from carriers.” Ex. 1004 [Stevens] at 12:57-59. The system therefore needs to “convert[] the information from the carrier-specific format to a common format.” Ex. 1004 [Stevens] at 12:61-63. The system “loads [] tables with the information” and “updates and inserts the tables into a database that is in the common format.” Ex. 1004 [Stevens] at 13:19-33. This database where the information is stored is a *central database*. As such, Claims 1 and 28 will be considered together.

a) Cassett and Stevens disclose Element 1.A1

Element 1A.1 of Claim 1 recites: “*receiving, at a first server, mobile device network traffic usage data*” and a corresponding element of Claim 28 similarly recites “*a server configured to receive mobile device network traffic usage data.*” Each of Cassett and Stevens discloses this element.

Cassett discloses a wireless device 102 (i.e., *mobile device*) may be in communication with a usage pattern manager server 104 (i.e., *a first server or a server*) and report the usage (i.e., *network traffic usage data*) to the usage pattern manager server module 104 (i.e., the server *receiving the usage data*), via the network 110. *See* Ex. 1003 [Cassett] at 7:49-50, 8:47-51.

In particular, Cassett discloses that the wireless device 102 may be a “telephone.” *See* Ex. 1003 [Cassett] at 5:4-9. Similarly, the ‘633 Patent discloses

that a *mobile device* may be a “phone.” See Ex. 1001 [‘633 Patent] at 2:14. Therefore, the wireless devices 102 are examples of *mobile devices* as recited in the claims.

Further, Cassett discloses “the usage pattern data comprises any information relating to activity on the wireless device, such as what activity is occurring, when the activity occurs, and how often the activity occurs.” Ex. 1003 [Cassett] at 4:25-28. “The activity may comprise at least one of a call-related activity, a messaging-related activity, a browser-related activity and a software application-related activity. Ex. 1003 [Cassett] at 4:29-31. “For example, usage pattern data may track information relating to voice calls, video calls, text messages, the uploading and downloading of content, and the execution and usage of the content and/or applications.” Ex. 1003 [Cassett] at 4:32-35. Similarly, the ‘633 Patent explains that *mobile device network traffic usage data* includes “voice (or call) usage information, SMS usage information, other data usage information (e.g., MMS or internet/web browser data usage, location data and application use data” of a mobile device over a network. Ex. 1001 [‘633 Patent] at 20:61-65. Accordingly, the usage pattern data are examples of *mobile device network traffic usage* as recited in the claims.

Stevens discloses a system that “receives information related to the usage and charges associated with employees of [a] company” (i.e., *mobile device network*

traffic usage). Ex. 1004 [Stevens] at 3:24-25, 4:23-27. In particular, Stevens discloses a first employee may be associated with a first cellular telephone, and a second employee may be associated with a second cellular telephone and the information is related to the usage of the cellular telephones (i.e., *mobile devices*). Ex. 1004 [Stevens] at 3:16-19. Similarly, the ‘633 Patent discloses that a *mobile device* may be a “phone.” See Ex. 1001 [‘633 Patent] at 2:14. Therefore, the cellular telephones are examples of *mobile devices* as recited in the claims.

Further, Stevens discloses the “information received from carriers generally is related to billing statements, phone usage, and other phone-related information.” Ex. 1004 [Stevens] at 12:57-59. Similarly, the ‘633 Patent explains that *mobile device network traffic usage data* includes “voice (or call) usage information” of a mobile device over a network. Ex. 1001 [‘633 Patent] at 20:61-65. Accordingly, phone usage and other phone-related information are examples of *mobile device network traffic usage* as recited in the claims.

In addition, Stevens discloses “the system will run ... on a server from which a business may interact with the system.” Ex. 1004 [Stevens] at 4:25-29. The system 1102 therefore may be a *server* or *first server*, as recited in the claims.

b) Cassett discloses Element 1A.2

Element 1A.2 of Claim 1 and the corresponding element of Claim 28 recites the mobile device network traffic usage is received *directly from each of a plurality of mobile devices*. Cassett discloses this element.

Cassett discloses the wireless device 102 may be in communication with a usage pattern manager server 104 and report the usage to the usage pattern manager server module 104, via the network 110. *See* Ex. 1003 [Cassett] at 7:49-50, 8:47-51. In particular, the wireless device 102 may include a usage monitoring and reporting module 114. *See* Ex. 1003 [Cassett], Fig. 1. The “usage monitoring and reporting module 114 is operable to monitor usage of the wireless device 102 and report the usage to the usage pattern manager server module 104.” Ex. 1003 [Cassett] at 7:47-50. The “data transmission between the wireless device 102 and remote devices, i.e., remote server 104 and user workstation 106, may be transmitted over a limited-access communications channel through wireless network 110. Ex. 1003 [Cassett] at 8:47-51. As shown in Fig. 1 of Cassett, reproduced below, the wireless device 102 and remote server 104 are directly connected via the network 110. Accordingly, the server 104 receives data *directly* from the wireless devices 102.

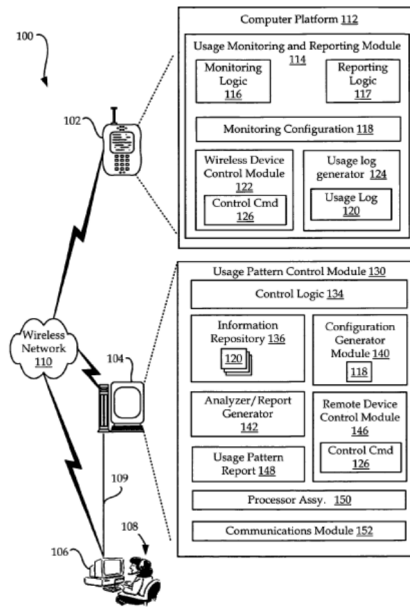


Fig. 1

c) Stevens discloses Element 1A.3

Element 1A.3 of Claim 1 and the corresponding element of Claim 28 recite that the plurality of mobile devices are: *associated with a particular enterprise*. Stevens discloses this element.

Stevens, discloses a server “receives usage information related to the usage and charges associated with employees of [a] company” (i.e., *associated with a particular enterprise*). Ex. 1004 [Stevens] at 3:24-25 and 4:23-27. In particular, Stevens discloses “information received from carriers generally is related to billing statements, phone usage, and other phone-related information” (i.e., *usage data of each of a plurality of mobile devise associated with a particular enterprise*). Ex. 1004 [Stevens] at 12:57-59.

d) Cassett and Stevens disclose Element 1A.4

Element 1A.4 of Claim 1 and the corresponding element of Claim 28 recites *a first subset of the plurality of mobile devices being associated with a first network service provider and a second subset of the plurality of mobile devices being associated with a second network service provider*. Each of Cassett and Stevens discloses this element.

For example, Cassett discloses an analyzer 142 of the server 104 may “deriv[e] wireless device usage patterns from the collected usage data in usage logs 120.” Ex. 1003 [Cassett] at 9:23-25. In particular, the analyzer 142 generates a usage pattern report 148. *See* Ex. 1003 [Cassett] at 9:26-30. The reports ... “may be generated comparing the usage pattern of devices associated with different network service providers.” Ex. 1003 [Cassett] at 9:48-50. In order for reports to be generated that compare the usage pattern of devices associated with different network service providers, at least one device must be associated with a *first service provider* and another device must be associated with a *second service provider* that is different than the *first service provider*.

Stevens also discloses this claim element. For example, Stevens discloses “service for first cellular telephone 1114 is provided by a first wireless telephone service provider 1120 and service for the second cellular telephone 1118 is provided by a second wireless telephone service provider 1122.” Ex. 1004 [Stevens] at 3:20-

23. As would be understood by one of ordinary skill in the art, a wireless telephone system is a type of *network* and therefore the wireless telephone service providers of Stevens are *network service providers*. Further, a cellular telephone that is provided service by a wireless telephone service provider is *associated* with the telephone service provider in that it receives service from the service provider.

e) Cassett and Stevens disclose Element 1B.1

Element 1B.1 of Claim 1 recites *aggregating the usage data from each of the plurality of mobile devices* and the corresponding element of Claim 28 similarly recites *a server configured to ... aggregate the usage data from each of the plurality of mobile devices at the central database*. Each of Cassett and Stevens discloses these elements.

For example, Cassett discloses a server 104 (i.e., *a server*) and “an information repository 136 (i.e., *central database*) for storing logs 120 received from wireless device 102.” *See, e.g.*, Ex. 1003 [Cassett] at 9:19-22, Fig. 1. Specifically, Cassett discloses that “information repository 136 may include any type of memory or storage device” (i.e., *a central database*). *See, e.g.*, Ex. 1003 [Cassett] at 9:19-22. Further, Cassett discloses an “analyzer 142 may develop usage pattern reports based on usage data collected from a plurality of the same wireless device types, and/or reports that compare usage patterns between wireless device types.” Ex. 1003 [Cassett] at 9:43-46. The reports “may include any form of output that represents

analysis of log 120 and other information contained in the information repository 136, as well as any other associated information such as proposed network architectures, projected operating statistics, etc.” Ex. 1003 [Cassett] at 15:51-55. Accordingly, since the reports are generated from the information in the information repository 136, and the reports contain information with respect to a plurality of wireless devices, the information repository must aggregate and store usage data from the plurality of wireless devices. *See* Ex. 1007 [Akl Dec.] at ¶ 68.

Stevens also discloses these elements. For example, Stevens discloses the system generates reports based on the usage and charges that a manager can view. In particular, the management reports can be “used by managers to analyze employees’ phone usage across various carriers, companies, divisions, and departments.” Ex. 1004 [Stevens] at 10:37-39. For example, “the report shown in current report 806 is directed to details of various individual employees.” Ex. 1004 [Stevens] at 10:48-50. In order for the report 806 to have details of various employees, the usage data from the devices of each employee must be aggregated to generate the report. *See* Ex. 1007 [Akl Dec.] at ¶ 84. Further, Stevens discloses that “information received [is] from carriers.” Ex. 1004 [Stevens] at 12:57-59. The system therefore needs to “convert[] the information from the carrier-specific format to a common format.” Ex. 1004 [Stevens] at 12:61-63. The system “loads [] tables with the information” and “updates and inserts the tables into a database that is in

the common format” (i.e., *aggregates the usage data from each of a plurality of mobile devices*). Ex. 1004 [Stevens] at 13:19-33. This database where the information is stored is a *central database*. See Ex. 1007 [AkI Dec.] at ¶ 88.

f) Cassett and Stevens disclose Element 1B.2

Element 1B.2 of Claim 1 and the corresponding element of Claim 28 recite aggregating the usage data from each of the plurality of mobile devices: *according to characterized actions performed on each of the mobile devices*. Each of Cassett and Stevens also discloses this element.

As discussed above, a person of ordinary skill in the art would understand the broadest reasonable interpretation of *characterized actions performed on each of the mobile devices* to mean “identifiable usage of and/or actions performed on a mobile device.” Ex. 1007 [AkI Dec.] at ¶ 50. For example, the ‘633 Patent states that “the control client logs man-machine interface (MMI) data, file system commands, and other data characterizing usage of, and/or the actions performed on, the mobile device.” Ex. 1001 [‘633 Patent] at 2:47-50.

Similarly, Cassett discloses that “usage pattern data may track information relating to voice calls, video calls, text messages, the uploading and downloading of content, and the execution and usage of the content and/or applications.” Ex. 1003 [Cassett] at 4:32-35. These different types of usage data collected, includes making voice calls, video calls, sending/receiving text messages, and uploading and

downloading of content are all *actions performed on a mobile device*. See Ex. 1007 [Akl Dec.] at ¶ 60. Accordingly, the usage data is collected *according to characterized actions performed on each of the mobile devices*.

Similarly, Stevens discloses “information received from carriers generally is related to billing statements, phone usage, and other phone-related information.” Ex. 1004 [Stevens] at 12:57-59. These different types of information collected, includes phone usage, which is *actions performed on a mobile device*. See Ex. 1007 [Akl Dec.] at ¶ 81. Accordingly, the information is collected *according to characterized actions performed on each of the mobile devices*.

g) Cassett and Stevens disclose Element 1C.1

Element 1C.1 of Claim 1 recites *generating based on the aggregated usage data one or more mobile device usage reports* and the corresponding element of Claim 28 similarly recites *a server configured to ... generate based on the aggregated usage data one or more mobile device usage reports*. Each of Cassett and Stevens discloses these elements.

For example, Cassett discloses the analyzer 142 of the server 104 generates a usage pattern report 148. See Ex. 1003 [Cassett] at 9:26-30. The report “provides details of the usage patterns of all aspects of the wireless device 102, including call and messaging habits, and content and software consumption.” Ex. 1003 [Cassett] at 11:64-66. “Report 148 may include any form of output that represents analysis of

log 120 and other information contained in the information repository 136, as well as any other associated information such as proposed network architectures, projected operating statistics, etc.” Ex. 1003 [Cassett] at 15:51-55. Accordingly, Cassett discloses usage pattern reports (i.e., *usage reports*) are generated by the server 104 based on the usage data received in the log 120 from the wireless devices 102.

Stevens also discloses these elements. For example, Stevens discloses the system generates reports based on the usage and charges that a manager can view. In particular, the management reports can be “used by managers to analyze employees’ phone usage across various carriers, companies, divisions, and departments.” Ex. 1004 [Stevens] at 10:37-39. For example, “the report shown in current report 806 is directed to details of various individual employees.” Ex. 1004 [Stevens] at 10:48-50.

h) Cassett and Stevens disclose Element 1C.2

Element 1C.2 of Claim 1 and the corresponding element of Claim 28 recite mobile device usage reports *at least a subset of which compare a first aggregated usage data associated with the first network service provider with a corresponding second aggregated usage data associated with the second network service provider*. Each of Cassett and Stevens discloses these elements.

For example, Cassett discloses the reports “may be generated comparing the usage pattern of devices associated with different network service providers.” Ex. 1003 [Cassett] at 9:48-50. In order for reports to be generated that compare the usage pattern of devices associated with different network service providers, at least some of the usage data must be associated with a *first service provider* and other usage data must be associated with a *second service provider* that is different than the *first service provider*. See Ex. 1007 [Akl Dec.] at ¶ 67.

Stevens discloses the use of a report that “allows a business to analyze the costs and usage of all the carriers, thereby assisting the business in determining which carrier is superior, which is overcharging, and etc.” Ex. 1004 [Stevens] at 10:66-11:2. In order for reports to be generated that analyze usage of all the carriers, at least some of the usage information must be associated with a first carrier (i.e., *first service provider*) and other usage information must be associated with a second carrier (i.e., *second service provider*) that is different than the first carrier. See Ex. 1007 [Akl Dec.] at ¶ 82.

3. Dependent Claims 2-4, 6-10, 12-19, 21, 22, 25, and 27 are Obvious under Section 103 over the Combined Teachings of Cassett and Stevens

a) Cassett and Stevens disclose the additional features of Claim 2

Claim 2 recites “*The method of claim 1, wherein the first server is a central server not affiliated with the particular enterprise and wherein the usage data is sent*

from the mobile devices directly to the central server.” Each of Cassett and Stevens discloses the additional feature of dependent Claim 2.

Cassett discloses the wireless device 102 may be in communication with a usage pattern manager server 104 and report the usage to the usage pattern manager server module 104, via the network 110. *See* Ex. 1003 [Cassett] at 7:49-50, 8:47-51. The server 104 is *a central server* where data from all of the wireless devices 102 is sent directly from the wireless devices 102 via the network 110. *See* Ex. 1007 [Akl Dec.] at ¶ 63. The server 104 is not described as being affiliated with any particular enterprise. *See* Ex. 1007 [Akl Dec.] at ¶ 63.

For example, Stevens discloses that “the system will run ... on a server from which a business may interact with the system.” Ex. 1004 [Stevens] at 4:25-29. “In an exemplary embodiment, the system runs on a remote server accessible via the global internet.” Ex. 1004 [Stevens] at 4:25-29. Accordingly, the system of Stevens may not be directly affiliated with a particular business or enterprise, but instead may be a system running on some remote server over the global internet.

b) Stevens discloses the additional feature of Claim 3

Claim 3 recites *The method of claim 2, further comprising aggregating the aggregated usage data from the plurality of mobile devices associated with the particular enterprise with aggregated usage data from mobile devices associated with other enterprises and generating one or more multi-enterprise usage reports*

each comprising data from at least two different enterprises. Stevens discloses the additional feature of dependent Claim 3.

For example, Stevens discloses the management reports created using collected usage data can be “used by managers to analyze employees’ phone usage across various carriers, companies, divisions, and departments.” Ex. 1004 [Stevens] at 10:37-39. In particular, the reports (i.e., *multi-enterprise usage reports*) may show employee’s phone usage across multiple companies (i.e., *at least two different enterprises*). Accordingly, to generate such reports, data from multiple companies must be aggregated. *See* Ex. 1007 [Akl Dec.] at ¶ 83. In addition, for usage information from multiple companies to be received at a server to be made part of a report, the server must not be affiliated with at least one of those companies, which is a *particular enterprise*. *See* Ex. 1007 [Akl Dec.] at ¶ 83.

c) Stevens discloses the additional feature of Claim 4

Claim 4 recites *The method of claim 1, wherein the first server is an enterprise server of the particular enterprise, and wherein the method further comprises sending the usage data from the first server directly to a central server that is not affiliated with the particular enterprise.* Stevens also discloses the additional feature of dependent Claim 4.

Stevens discloses that in some embodiments, “the system will run on a business’s equipment” (i.e., *enterprise server of the particular enterprise*). Ex. 1004

[Stevens] at 4:25-26. Therefore, since Stevens discloses usage information is collected by the system, it would be received at such an *enterprise server*. See Ex. 1007 [Ak1 Dec.] at ¶ 79. Further, Stevens discloses a “first employee 1108 can use first computer 1112 to access the website and interact with the information” collected. Ex. 1004 [Stevens] at 3:63-64. Accordingly, the information would be sent from the business equipment to the computer 1112 that is affiliated with the employee (e.g., a personal computer/server) and *not affiliated with the particular enterprise*, so the employee can see what information is being collected about his phone usage. See Ex. 1007 [Ak1 Dec.] at ¶ 87.

d) Cassett discloses the additional feature of Claim 6

Claim 6 recites *The method of claim 1, further comprising: at each mobile device, selectively filtering raw data to generate the usage data prior to transmitting the usage data and the receiving of the usage data*. Cassett discloses the additional feature of dependent Claim 6.

For example, Cassett discloses “in one aspect, configuration 118 may include usage parameters 188 which identify data to log relating to a predetermined activity occurring on the wireless device 102.” Ex. 1003 [Cassett] at 7:59-61. The monitoring configuration 118 is shown as part of the wireless device 102. See Ex. 1003 [Cassett], Fig. 1. Accordingly, the configuration 118 ensures that only identified data is logged in the log 120 and sent to the server 104. Thus, the

configuration 118 *filters* all of the *raw data* (i.e., any usage of the phone), and sends only data with respect to predetermined activities. Therefore, the logged data is filtered *prior to transmitting the usage data* from the wireless device 102 and *receiving of the usage data* at the server 104. *See* Ex. 1007 [AkI Dec.] at ¶ 64.

e) Cassett discloses the additional feature of Claim 7

Claim 7 recites *The method of claim 1, further comprising: at each mobile device, correlating the usage data based on a corresponding time of usage prior to transmitting the usage data and the receiving of the usage data.* Cassett discloses the additional feature of dependent Claim 7.

For example, Cassett discloses “the collected usage data 201 comprises any information relating to activity on the wireless device, such as what activity is occurring, when the activity occurs, how often the activity occurs, i.e. the frequency, and/or how long the activity occurs, i.e. the duration.” Ex. 1003 [Cassett] at 7:63-67. “The collected usage data 201 are stored by the log generator 124 in usage log 120.” Ex. 1003 [Cassett] at 7:61-63. Accordingly, when the activity occurs is recorded in the log 120 along with that actual activity that occurred, meaning that the *corresponding time of usage* is correlated with the actual usage, prior to the log 120 being transmitted to the server 104. *See* Ex. 1007 [AkI Dec.] at ¶ 58.

f) Cassett discloses the additional feature of Claim 8

Claim 8 recites *The method of claim 1, further comprising: at each mobile device, correlating the usage data based on the corresponding geographic location of mobile device at the corresponding time of usage prior to transmitting the usage data and the receiving of the usage data.* Cassett discloses the additional feature of dependent Claim 8.

For example, Cassett discloses “usage pattern data may include, but are not limited to ... a location from where calls are made/received, for example, global positioning (GPS) fix” Ex. 1003 [Cassett] at 4:41-45. Accordingly, a call made (i.e., *usage data*) is correlated with the GPS fix where the call was made (i.e., *geographic location of the mobile device*), and stored in the log 120 prior to the log 120 being transmitted to the server 104.

g) Cassett discloses the additional feature of Claim 9

Claim 9 recites *The method of claim 1, further comprising: at each mobile device, correlating the usage data based on the corresponding cellular tower at the corresponding time of usage prior to transmitting the usage data and the receiving of the usage data.* Cassett discloses the additional feature of dependent Claim 9.

For example, Cassett discloses “usage pattern data may include, but are not limited to ... cell site info such as pseudo noise (PN) offset, system identification (SID), network identification (ND) and base station identification (BSID)” Ex. 1003

[Cassett] at 4:41-48. Accordingly, a call made (i.e., *usage data*) is correlated with the BSID, which identifies a *cellular tower* used to make the call, and stored in the log 120 prior to the log 120 being transmitted to the server 104. *See* Ex. 1007 [Ak1 Dec.] at ¶ 61.

h) Cassett and Stevens disclose the additional feature of Claim 10

Claim 10 recites *The method of claim 1, wherein the usage data comprises one or more of call usage information, SMS text usage information, web browser usage information, and application usage information.* Each of Cassett and Stevens also discloses the additional feature of dependent Claim 10.

For example, Cassett discloses “usage pattern data may track information relating to voice calls, video calls, text messages, the uploading and downloading of content, and the execution and usage of the content and/or applications.” Ex. 1003 [Cassett] at 4:32-35. Accordingly, Cassett discloses that the usage information collected may relate to at least one of voice calls (i.e., *call usage information*), text messages (i.e., *SMS text usage information*), uploading and downloading of content (i.e., *web browser information*), and execution and usage of the content and/or applications (i.e., *web browser information* and/or *application usage information*). *See* Ex. 1007 [Ak1 Dec.] at ¶ 59.

Similarly, Stevens discloses “information received from carriers generally is related to billing statements, phone usage, and other phone-related information.” Ex.

1004 [Stevens] at 12:57-59. Accordingly, Stevens discloses that the usage information collected may relate to phone usage (i.e., *call usage information*). See Ex. 1007 [Akl Dec.] at ¶ 81.

i) Cassett discloses the additional feature of Claim 12

Claim 12 recites *The method of claim 1, further comprising disabling all or a portion of the usage capabilities of a particular mobile device based on usage data received from the particular mobile device*. Cassett discloses the additional feature of dependent Claim 12.

For example, Cassett discloses for the wireless device 102, “one aspect of configuration logic 254 may include plurality of control command parameters 246 operable to control access to the usage pattern monitoring module 114 and the reported logs.” Ex. 1003 [Cassett] at 10:31-37. “When operative, such a parameter may allow an authorized user to initiate an upload of usage logs 120 while preventing the same user from downloading a new configuration 118.” Ex. 1003 [Cassett] at 10:31-37. Accordingly, based on the logs 120 (i.e., *usage data*) being uploaded (i.e., *received*) from the wireless device 102, the wireless device 102 is prevented (i.e., *disabling all or a portion of the usage capabilities of a particular mobile device*) from downloading a new configuration 118. See Ex. 1007 [Akl Dec.] at ¶ 69.

j) Cassett discloses the additional feature of Claim 13

Claim 13 recites *The method of claim 1, further comprising wiping all or a portion of the memory of a particular mobile device based on usage data received from the particular mobile device.* Cassett discloses the additional feature of dependent Claim 13.

For example, Cassett discloses on the wireless device 102 “log 120 may be deleted automatically upon uploading to a usage pattern manager server 104.” Ex. 1003 [Cassett] at 8:19-25. Accordingly, based on the logs 120 (i.e., *usage data*) being uploaded (i.e., *received*) from the wireless device 102, the logs 120 (i.e., *a portion of the memory of a particular mobile device*) are deleted (i.e., *wiped*) from the wireless device 102. *See* Ex. 1007 [AkI Dec.] at ¶ 70.

k) Cassett discloses the additional feature of Claim 14

Claim 14 recites *The method of claim 1, further comprising changing a security policy corresponding to a particular mobile device based on usage data received from the particular mobile device.* Cassett discloses the additional feature of dependent Claim 14.

For example, Cassett discloses for the wireless device 102 “one aspect of configuration logic 254 may include plurality of control command parameters 246 operable to control access to the usage pattern monitoring module 114 and the reported logs.” Ex. 1003 [Cassett] at 10:31-37. “When operative, such a parameter

may allow an authorized user to initiate an upload of usage logs 120 while preventing the same user from downloading a new configuration 118.” Ex. 1003 [Cassett] at 10:31-37. Accordingly, based on the logs 120 (i.e., *usage data*) being uploaded (i.e., *received*) from the wireless device 102, the wireless device 102 is prevented (i.e., *changing a security policy*) from downloading a new configuration 118. *See* Ex. 1007 [Akl Dec.] at ¶ 69. In particular, changing whether or not a new configuration can be downloaded is a *change in a security policy*. *See* Ex. 1007 [Akl Dec.] at ¶ 69.

I) Cassett and Stevens disclose the additional features of Claim 15

Claim 15 recites *The method of claim 1, further comprising changing a service plan of a particular mobile device based on usage data received from the particular mobile device*. Each of Cassett and Stevens discloses the additional feature of dependent Claim 15.

For example, Cassett discloses “based upon review of report 148, and/or based upon a comparison of reports 148 taken over time, an authorized user 108 or other report recipient may observe and/or determine device usage trends that may be useful in determining products and services to offer to the wireless device, and/or to determine changes in the associated network to better suit the observed usage patterns.” Ex. 1003 [Cassett] at 9:34-40. Accordingly, Cassett discloses that the report 148, generated based on usage data from a wireless device 102, may be used

to determine services to offer the wireless device, such as a particular service plan. *See* Ex. 1007 [Ak1 Dec.] at ¶ 71.

Stevens discloses that the report 806 generated based on usage data of employees phones may be used by the business or manager to “assist in understanding employees’ cost per minute and how to optimize the different available rate plans based on employees’ usage.” Ex. 1004 [Stevens] at 11:2-5. Similarly, the ‘633 Patent describes that a “manager may then exploit this aggregated data to better manage the enterprise’s mobile devices, control costs, and monitor Quality of Service.” Ex. 1001 [‘633 Patent] at 18:19-27. “In various embodiments, this may include negotiating with wireless network providers for better rates, policing QoS commitments or claims, optimizing wireless service plans down to individual mobile device granularity, and providing feedback or instruction to mobile users within the enterprise, among other managing goals.” Ex. 1001 [‘633 Patent] at 18:19-27. Accordingly, both Stevens and the ‘633 Patent refer to “optimizing” rate plans (i.e., *service plans*) by the manager based on received data which is a form of *changing a service plan of a particular mobile device based on usage data received from the particular mobile device*. *See* Ex. 1007 [Ak1 Dec.] at ¶ 85.

m) Cassett and Stevens disclose the additional feature of Claim 16

Claim 16 recites *The method of claim 1, wherein one or more of the reports comprise a call summary report of a particular mobile device, group of mobile devices, or entire enterprise.* Each of Cassett and Stevens discloses the additional feature of dependent Claim 16.

For example, Cassett discloses generated “report 148 provides details of the usage patterns of all aspects of the wireless device 102, including call and messaging habits.” Ex. 1003 [Cassett] at 11:64-66. Accordingly, the report includes a call summary report of wireless devices 102. *See* Ex. 1007 [Akl Dec.] at ¶ 72.

For example, Stevens discloses “the report shown in current report 806 is directed to details of various individual employees.” Ex. 1004 [Stevens] at 10:48-50. “The report sets forth an employee’s names 808, carrier 810, total charge 812, airtime charges 814, roaming charges 816, long distance charges 818, UCPM charges 820, total minutes 822, minutes over/under 824, and plan type 826.” Ex. 1004 [Stevens] at 10:51-55. Accordingly, the report includes a call summary report of the particular device of an employee or employees. *See* Ex. 1007 [Akl Dec.] at ¶ 86.

n) Cassett discloses the additional feature of Claim 17

Claim 17 recites *The method of claim 1, wherein one or more of the reports comprise a data summary report of a particular mobile device, group of mobile*

devices, or entire enterprise. Cassett discloses the additional feature of dependent Claim 17.

For example, Cassett discloses “report 148 may include any form of output that represents analysis of log 120 and other information contained in the information repository 136, as well as any other associated information such as proposed network architectures, projected operating statistics, etc.” Ex. 1003 [Cassett] at 15:51-55. Further, Cassett discloses that the usage pattern data in the log 120 “may track information relating to ... the uploading and downloading of content, and the execution and usage of the content and/or applications.” Ex. 1003 [Cassett] at 4:32-35. Such uploading and downloading of content comprises data usage. *See* Ex. 1007 [Akl Dec.] at ¶ 60. Accordingly, the report includes a data summary report of wireless devices 102.

o) Cassett discloses the additional feature of Claim 18

Claim 18 recites *The method of claim 1, wherein one or more of the reports comprise an SMS summary report of a particular mobile device, group of mobile devices, or entire enterprise.* Cassett discloses the additional feature of dependent Claim 18.

For example, Cassett discloses generated “report 148 provides details of the usage patterns of all aspects of the wireless device 102, including call and messaging habits.” Ex. 1003 [Cassett] at 11:64-66. In particular, Cassett discloses that such

usage data “may track information relating to ... text messages.” Ex. 1003 [Cassett] at 4:32-35. Accordingly, the report includes an SMS summary report of wireless devices 102. *See* Ex. 1007 [Akl Dec.] at ¶ 72.

p) Cassett and Stevens disclose the additional feature of Claim 19

Claim 19 recites *The method of claim 1, wherein the usage data comprises data from mobile devices associated with two or more network service providers and wherein at least one of the usage reports comprises usage data from at least two different network service providers.* Each of Cassett and Stevens discloses the additional feature of dependent Claim 19.

For example, Cassett discloses the reports ... “may be generated comparing the usage pattern of devices associated with different network service providers.” Ex. 1003 [Cassett] at 9:48-50. In order for reports to be generated that compare the usage pattern of devices associated with different network service providers, at least some of the wireless devices must be associated with one *network service provider* and other wireless devices must be associated with another different *network service provider*, meaning there are wireless devices associated with *two or more network service providers*. *See* Ex. 1007 [Akl Dec.] at ¶ 67. Further, the report itself would need to include the usage data from these different network service providers to show the comparison of the usage.

Similarly, Stevens discloses the report 806 generated based on usage data “allows a business to analyze the costs and usage of all the carriers, thereby assisting the business in determining which carrier is superior, which is overcharging, and etc.” Ex. 1004 [Stevens] at 10:66-11:2. In order for reports to be generated that compare usage of all carriers (i.e., *network service providers*), at least some of the phones must be associated with one *network service provider* and other phones must be associated with another different *network service provider*, meaning there are phones associated with *two or more network service providers* to be able to collect data with respect to different carriers. *See* Ex. 1007 [Ak1 Dec.] at ¶ 82. Further, the report itself would need to include the usage data from these different network service providers to show the analysis of the usage of all the carriers. *See* Ex. 1007 [Ak1 Dec.] at ¶ 82.

q) Cassett discloses the additional feature of Claim 21

Claim 21 recites *The method of claim 1, wherein the usage data is received on an event driven basis*. Cassett discloses the additional feature of dependent Claim 21. For example, Cassett discloses “the timing of log transmission is non-limiting and may be transmitted ... on the occurrence of predetermined events, such as upon establishing a communication channel with communications network 110 and upon power up, and upon some threshold setting.” Ex. 1003 [Cassett] at 8:9-14. Accordingly, Cassett discloses that logs 120 (i.e., *usage data*) may be transmitted by

the wireless device 102 and therefore received by the server 104 based on any timing, including when certain events occur (i.e., *event driven basis*). See Ex. 1007 [Akl Dec.] at ¶ 65.

r) Cassett discloses the additional features of Claim 22

Claim 22 recites *The method of claim 1, wherein the usage data is received on a periodic basis*. Cassett discloses the additional feature of dependent Claim 22.

For example, Cassett discloses “the timing of log transmission is non-limiting and may be transmitted at ... a predetermined interval.” Ex. 1003 [Cassett] at 8:9-14. Accordingly, Cassett discloses that logs 120 (i.e., *usage data*) may be transmitted by the wireless device 102 and therefore received by the server 104 based on any timing, including at set intervals (i.e., *on a periodic basis*). See Ex. 1007 [Akl Dec.] at ¶ 65.

s) Cassett discloses the additional feature of Claim 25

Claim 25 recites *The method of claim 1, wherein the characterized actions comprise SMS usage information*. Cassett discloses the additional features of dependent Claim 25.

Cassett discloses “usage pattern data may track information relating to ... text messages.” Ex. 1003 [Cassett] at 4:32-35. Accordingly, Cassett tracks usage of any text messages, including SMS messages, on the wireless device 102. See Ex. 1007 [Akl Dec.] at ¶ 60.

t) Cassett and Stevens disclose the additional feature of Claim 27

Claim 27 recites *The method of claim 1, wherein the characterized actions comprise roaming information.* Each of Cassett and Stevens discloses the additional feature of dependent Claim 27.

Cassett discloses “usage pattern data may include, but are not limited to ... cell site info such as pseudo noise (PN) offset, system identification (SID), network identification (ND) and base station identification (BSID).” Ex. 1003 [Cassett] at 4:32-35. Accordingly, Cassett tracks usage of different networks, including roaming networks, by logging the network identification (ND) associated with usage of the wireless device 102. *See* Ex. 1007 [Akl Dec.] at ¶ 62.

Stevens discloses that a report 806 generated based on usage data “sets forth ... roaming charges 816.” Ex. 1004 [Stevens] at 10:51-55. Accordingly, the data usage related to characterized actions collected according to Stevens to generate the report would include roaming information related to charges for calls made while roaming. *See* Ex. 1007 [Akl Dec.] at ¶ 86.

B. Dependent Claims 6, 20, 23, and 24 are Obvious under Section 103 over Cassett/Stevens and further in view of U.S. Patent Publication No. 2009/0005002 (“Agarwal”)

As discussed above, Claim 6 is rendered obvious by the combined teachings of Cassett and Stevens. Assuming, *arguendo*, that Cassett and Stevens does not render Claim 6 obvious, any deficiency is cured by the teachings of Agarwal.

Moreover, as detailed below, Claims 20, 23, and 24 are also rendered obvious by this combination.

1. Agarwal is Properly Combinable with Cassett/Stevens

Like Cassett and Stevens, Agarwal is directed to “methods and portable devices for collecting information about portable device[s].” Ex. 1005 [Agarwal], Abstract. A person of ordinary skill in the art, in considering how to improve the combined teachings of Cassett/Stevens, would have looked to Agarwal for at least two reasons. First, Cassett teaches tracking “the execution and usage of [] content and/or applications” running on mobile devices. Ex. 1003 [Cassett] at 4:34-35. Agarwal discloses a specific need for monitoring email activity and other usage on these same types of devices. Ex. 1005 [Agarwal] at ¶ [0002]-[0003]; *see also* Ex. 1007 [Akl Dec.] at ¶ 119. Thus, a person of ordinary skill in the art would have naturally looked from Cassett to Agarwal in order to gather additional tracking usage data for different types of mobile device applications. Ex. 1007 [Akl Dec.] at ¶ 119

Additionally, Cassett teaches that transmitting the usage information from the mobile device to the network may be performed according to various timing protocols. For example, Cassett teaches that “the timing of log transmission is non-limiting and may be transmitted at a ... predetermined schedule, and on the occurrence of predetermined events, such as upon establishing a communication channel with communications network 110 and upon power up, and upon some

threshold setting.” Ex. 1003 [Cassett] at 8:9-14. Agawal teaches collecting usage information from mobile devices in real-time. *See* Ex. 1005 [Agarwal] at ¶ [0039]; *see also* ¶ [0040]. Thus, a person of ordinary skill in the art would have been motivated by Cassett’s suggestion that “the timing of log transmission is non-limiting” to look for other techniques for ensuring the timely transmission of collected usage data. The skilled artisan would have been led to Agarwal’s real-time collection system because it would provide “complete and representative information regarding interactions of the portable device...” as taught by Agarwal. Ex. 1005 [Agarwal] at ¶ [0010]; *see also* Ex. 1007 [Akl Dec.] at ¶ 120. This would allow, for the combined system to effectively monitor and generate reports related to the activity of wireless devices. Ex. 1005 [Agarwal] at ¶ [0002]-[0003]; *see also* Ex. 1007 [Akl Dec.] at ¶ 120.

A person of ordinary skill in the art could have accomplished these modifications according to readily known techniques in order to predictably yield systems such as those claimed in the ‘633 Patent. *See* Ex. 1007 [Akl Dec.] at ¶ 119. In particular, one of ordinary skill in the art would recognize that the usage information collected in Cassett relating to any applications could also be used for collecting usage information specifically for e-mail applications as this would just be another scenario where the systems and methods of Cassett could be used. *See*

Ex. 1007 [Akl Dec.] at ¶ 119. Accordingly, the teachings of Agarwal are properly combined with Cassett/Stevens.

2. Claims 6, 20, 23, and 24 are Obvious Over Cassett/Stevens and further in view of Agarwal

Claim 6 recites *The method of claim 1, further comprising: at each mobile device, selectively filtering raw data to generate the usage data prior to transmitting the usage data and the receiving of the usage data.* Although Petitioner submits that Cassett teaches this feature as described above, even if it does not, any deficiency is cured by Agarwal.

For example, Agarwal discloses “the collected information (e.g., that collected in steps 230 and/or 240) may be processed in step 250.” Ex. 1005 [Agarwal] at ¶ [0031]. “Processing may comprise cleaning, organizing, filtering, sorting, encoding, encrypting, applying time and/or location stamps to, etc. the data.” Ex. 1005 [Agarwal] at ¶ [0031]. “In one embodiment, the collected information may be processed by the portable device (e.g., 120 a-120 c).” Ex. 1005 [Agarwal] at ¶ [0031]. Accordingly, since the processing, which includes *filtering raw data*, is performed on the portable device, it is performed before any transmission or reception of the collected information (i.e., *usage data*) to a server. Ex. 1007 [Akl Dec.] at ¶ 97.

Claim 20 recites *The method of claim 1, wherein the usage data is received in real-time.* To the extent that Cassett/Stevens does not disclose this feature,

Agarwal cures any deficiency. For example, Agarwal discloses “the information may be collected in real-time.” Ex. 1005 [Agarwal] at ¶ [0039]; *see also* ¶ [0040]. Accordingly, Agarwal explicitly discloses that usage data may be collected in real-time.

Claim 23 recites *The method of claim 1, wherein the usage data is received on a continuous basis*. Agarwal discloses the additional feature of dependent Claim 23. For example, Agarwal discloses “the information may be collected in real-time.” Ex. 1005 [Agarwal] at ¶ [0039]. Accordingly, Agarwal explicitly discloses that usage data may be collected in real-time, which may inherently be on a continuous basis. *See* Ex. 1007 [Akl Dec.] at ¶ 98.

Claim 24 recites *The method of claim 1, wherein the characterized actions comprise email usage information*. Agarwal discloses the additional feature of dependent Claim 24. For example, Agarwal discloses “mobile phones now incorporate many new technologies and features.” Ex. 1005 [Agarwal] at ¶ [0002]. For example, “internet connectivity over cellular networks and wireless internet access points (e.g., using Wi-Fi, etc.) has enabled internet browsing, content downloading, mobile commerce transactions, email activity, and the like.” Ex. 1005 [Agarwal] at ¶ [0002]. Further, Agarwal discloses “with the advent of these new features and the services to support such features, cellular providers and other wireless industry participants have realized a need for information on usage of these

features and services.” Ex. 1005 [Agarwal] at ¶ [0003]. Accordingly, Agarwal explicitly discloses that one of the application usage types to be monitored is email activity performed on the mobile phone.

C. Dependent Claim 11 is Obvious under Section 103 over Cassett/Stevens and further in view of U.S. Patent No. 7,310,511 (“Barnea”)

1. Barnea is Properly Combinable with Cassett/Stevens

Like Cassett and Stevens, Barnea is directed to measuring the that activity of a roaming device on a roaming network by “probe devices watch international signaling lines ... [and] obtain considerable amounts of signaling data and ... the signals are aggregated into call data records, (CDR).” Ex. 1006 [Barnea] at 6:41-46. A person of ordinary skill in the art, in considering how to improve the combined teachings of Cassett/Stevens, would have looked to Barnea for at least the following reason. Cassett teaches that wireless device usage and location may be monitored, and that such information may “provide useful marketing information” including for providing “targeted marketing.” Ex. 1003 [Cassett] at 4:10-13, 4:32-35, 4:53-59. Barnea discloses “usage level recorded in the per-telephone records is used to send text messages with advertisements, reminders and offers in order to encourage a user to take advantage of the available roaming services.” Ex. 1006 [Barnea] at 5:50-53. Thus, a person of ordinary skill in the art would have naturally looked from Cassett to Barnea in order to provide marketing techniques, such as direct advertising and

alerts to mobile device, based on collected usage information. *See* Ex. 1007 [Akl Dec.] at ¶ 121.

A person of ordinary skill in the art could have accomplished these modifications according to readily known techniques in order to predictably yield systems such as those claimed in the ‘633 Patent. *See* Ex. 1007 [Akl Dec.] at ¶ 121. In particular, one of ordinary skill in the art would recognize that the usage information collected in Cassett relating to voice calls, SMS, etc. of the wireless device could also be used for sending advertisements and alerts to the wireless device based on this information as this would fulfill the goal of Cassett to provide targeted marketing using information collected from wireless devices. *See* Ex. 1007 [Akl Dec.] at ¶ 121. Accordingly, the teachings of Barnea are properly combined with Cassett/Stevens.

2. Claim 11 is Obvious over Cassett/Stevens and further in view of Barnea

Claim 11 recites *The method of claim 1, further comprising automatically sending an alert to a particular mobile device based on usage data received from the particular mobile device.* To the extent that Cassett/Stevens does not disclose this element, Barnea cures this deficiency. For example, Barnea discloses “usage level recorded in the per-telephone records is used to send text messages with advertisements, reminders and offers in order to encourage a user to take advantage of the available roaming services.” Ex. 1006 [Barnea] at 5:50-53. Barnea discloses

that this usage level may include “usage attributes” from a “usage attribute unit 58, which analyzes the roamers’ services usage behavior during a visit (e.g., voice calls generating, sending SMS etc.).” Ex. 1006 [Barnea] at 7:14-17.

In one example, Barnea discloses for roamers with zero usage a basic reminder may be sent “mentioning the call tariffs, assuming the roamer did not generate a call due to perceived high price of calls.” Ex. 1006 [Barnea] at 46-53. Further, for low usage roamers, a “message may be sent to these roamers to entice usage of the services in low use by offering embedded incentives.” Ex. 1006 [Barnea] at 10:5-6.

In yet another example, Barnea discloses that in some instances a user may be registered on a foreign hosting GSM network that has an established GSM roaming agreement, but not an established GPRS roaming agreement, and therefore cannot activate a data connection over the GPRS connection. *See* Ex. 1006 [Barnea] at 10:47-57. Accordingly, Barnea discloses that a “GPRS alert is sent to users who register successfully on a roaming network which does not have a GPRS roaming agreement with the home network (i.e. where GPRS will not work) and provides a list of networks in that country which do have a GPRS roaming agreement with the applicable home network.” Ex. 1006 [Barnea] at 10:66-11:4. Accordingly, Barnea discloses that messages (i.e., alerts) may be sent to mobile devices based on their usage while roaming. *See* Ex. 1007 [Akl Dec.] at ¶ 104.

This is consistent with the ‘633 Patent, which similarly describes that “alerts may be sent, by way of example, once a mobile phone initiates roaming, at periodic intervals while the user is roaming, and/or once a mobile phone has been roaming for a predetermined threshold of time.” Ex. 1001 [‘633 Patent] at 21:26-29. Accordingly, the ‘633 Patent discloses that alerts are sent on the basis of information received from the mobile device regarding whether it is roaming.

VIII. CONCLUSION

For the foregoing reasons, Petitioner respectfully submits that there is a reasonable likelihood that at least one of the claims challenged in this Petition is unpatentable. Accordingly, Petitioner respectfully requests that the Board institute *inter partes* review of Claims 1-4, 6-25, 27, and 28 of the ‘633 Patent.

Respectfully submitted,

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A copy of this **PETITION FOR *INTER PARTES* REVIEW** and supporting materials have been served on MobileIron, Inc. (the patent owner) via Federal Express overnight delivery at the following correspondence address of record for the subject patent, on this day of March 3, 2015:

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