

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

VirnetX Inc.,

Plaintiff,

v.

Apple Inc.,

Defendant.

Civil Action No. 6:11-cv-563

Jury Trial Demanded

VirnetX Inc. and Science Applications
International Corporation,

Plaintiffs,

v.

Apple Inc.,

Defendant.

Civil Action No. 6:12-cv-855

Jury Trial Demanded

JOINT CLAIM CONSTRUCTION AND PREHEARING STATEMENT

Pursuant to Local Patent Rule 4-3, Plaintiffs, VirnetX Inc. and Leidos, Inc., formerly Science Applications International Corporation (collectively “VirnetX”) and Defendant, Apple Inc. (“Apple”) hereby file this Joint Claim Construction and Prehearing Statement in accordance with the Court’s Docket Control Order entered June 25, 2013 [Dkt. 56].

a) Terms on Which the Parties Agree

After several meet and confer telephone conferences, the parties were able to narrow the list of disputed claim terms and phrases for their P.R. 4-1 lists and P.R. 4-2 exchange of preliminary claim construction and extrinsic evidence. The parties, however, were unable to reach an agreement on the meaning of the disputed claim terms or phrases set forth in **Exhibit B** hereto.

b) Proposed Constructions

The parties have set forth their proposed constructions in four exhibits:

Exhibit A sets forth the proposed constructions of each agreed upon claim term of the VirnetX patents in suit, U.S. Patent No. 6,502,135 (“the ‘135 patent”), U.S. Patent No. 7,418,504 (“the ‘504 patent”), U.S. Patent No. 7,490,151 (“the ‘151 patent”), U.S. Patent No. 7,921,211 (“the ‘211 patent”), U.S. Patent No. 8,051,181 (“the ‘181 patent”) and 8,504,697 (“the ‘697 patent”) (collectively, “the Patents-in-Suit”). For those terms in Exhibit A previously construed by this Court, the parties request that those terms be given the meanings as adopted in the Court’s memorandum opinions in *VirnetX Inc. v. Cisco Sys. Inc.*, No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and *VirnetX Inc. v. Mitel Networks Corp.*, No. 6:11-cv-18-LED, Dkt. No. 307 (Aug. 1, 2012).

Exhibit B sets forth VirnetX’s and Apple’s proposed respective constructions of each disputed claim term of the Patents-in-Suit. VirnetX and Apple have agreed to rest on the prior claim construction briefing for many of the terms that have already been construed. See No. 6:10-CV-00417-LED, Dkt. Nos. 173, 182, 192, 209, 366, 424. Where a party proposes a construction that was previously adopted by the Court, that party requests that the term be given the meaning as adopted in the Court’s memorandum opinions in *VirnetX Inc. v. Cisco Sys. Inc.*, No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and *VirnetX Inc. v. Mitel Networks Corp.*, No. 6:11-cv-18-LED, Dkt. No. 307 (Aug. 1, 2012). The terms that the parties will rest on the prior briefing have been highlighted in green. The un-highlighted terms will be the subject of new briefing in this matter.

Exhibit C sets forth all references from the specification and prosecution history that support VirnetX’s proposed constructions and an identification of the extrinsic evidence known to VirnetX on which VirnetX intends to rely either to support its proposed construction of the claim language or to oppose Apple’s proposed construction of the claim language. VirnetX relies on the intrinsic

evidence as a whole relating to the Patents-in-Suit, including the claim language, the specification and figures, the file history, and the references cited on the face of the patent. In addition to the intrinsic and extrinsic evidence identified by VirnetX, VirnetX reserves the right to rely on the record of *VirnetX Inc. v. Microsoft Corp.*, No. 6:07-cv-80, *VirnetX Inc. v. Cisco Sys. Inc.*, No. 6:10-cv-417-LED, and *VirnetX Inc. v. Mitel Networks Corp.*, No. 6:11-cv-18-LED, and any intrinsic or extrinsic evidence identified by Apple in support of its proposed constructions. VirnetX may also rely upon intrinsic and extrinsic evidence, including the prosecution history and/or any re-examinations, to rebut the constructions proposed by Apple.

Exhibit D sets forth all references from the specification and prosecution history that support Apple's proposed constructions and an identification of the extrinsic evidence known to Apple on which Apple intends to rely either to support their proposed construction of the claim language or to oppose VirnetX's proposed construction of the claim language. Apple relies on the intrinsic evidence as a whole relating to the Patents-in-Suit, including the claim language, the specification and figures, the file history, and the references cited on the face of the patent. In addition to the intrinsic and extrinsic evidence identified by Apple, Apple reserves the right to rely on the record of *VirnetX Inc. v. Microsoft Corp.*, No. 6:07-cv-80, *VirnetX Inc. v. Cisco Sys. Inc.*, No. 6:10-cv-417-LED, and *VirnetX Inc. v. Mitel Networks Corp.*, No. 6:11-cv-18-LED, and any intrinsic or extrinsic evidence identified by VirnetX in support of its proposed constructions. Apple may also rely upon intrinsic and extrinsic evidence, including the prosecution history and/or any re-examinations, to rebut the constructions proposed by VirnetX.

c) Claim Construction Hearing Length

VirnetX anticipates that the length of time necessary for the Claim Construction Hearing is 1 hour, with the time being split equally between VirnetX and Apple.

Apple anticipates that the length of time necessary for the Claim Construction Hearing is 2 hours, with the time being split equally between VirnetX and Apple.

d) Witnesses, Including Experts, for the Claim Construction Hearing

Based on their current understanding of the parties' respective claim construction positions, as derived from the meet-and-confer process, VirnetX and Apple do not believe expert testimony is necessary for the Claim Construction Hearing. If testimony becomes necessary, VirnetX reserves the right to call Dr. Mark Jones and Apple reserves the right to call Dr. John Kelly.

e) Other Issues for the Hearing

VirnetX respectfully requests that the Court allow VirnetX to argue its motion to compel the production of Apple's source code [Dkt. No. 95] which is currently before the Court.

DATED: February 14, 2014

Respectfully submitted,

CALDWELL CASSADY & CURRY

/s/ Jason D. Cassady

Bradley W. Caldwell

Texas State Bar No. 24040630

E-mail: bcaldwell@caldwellcc.com

Jason D. Cassady

Texas State Bar No. 24045625

E-mail: jcassady@caldwellcc.com

John Austin Curry

Texas State Bar No. 24059636

E-mail: acurry@caldwellcc.com

Daniel R. Pearson

Texas State Bar No. 24070398

E-mail: dpearson@caldwellcc.com

Hamad M. Hamad

Texas State Bar No. 24061268

Email: hhamad@caldwellcc.com

Justin T. Nemunaitis

Texas State Bar No. 24065815

Email: jnemunaitis@caldwellcc.com

Christopher S. Stewart

Texas State Bar No. 24079399

E-mail: cstewart@caldwellcc.com

John F. Summers

Texas State Bar No. 24079417

E-mail: jsummers@caldwellcc.com

Jason S. McManis

Texas State Bar No. 24088032

E-mail: jmcmanis@caldwellcc.com

CALDWELL CASSADY CURRY P.C.

2101 Cedar Springs Road, Suite 1000

Dallas, Texas 75201

Telephone: (214) 888-4848

Facsimile: (214) 888-4849

Robert M. Parker

Texas State Bar No. 15498000

Email: rmparker@pbatyler.com

R. Christopher Bunt

Texas State Bar No. 00787165

Email: rcbunt@pbatyler.com

PARKER, BUNT & AINSWORTH, P.C.

100 East Ferguson, Suite 1114

Tyler, Texas 75702
Telephone: (903) 531-3535
Telecopier: (903) 533-9687

**ATTORNEYS FOR PLAINTIFF VIRNETX
INC.**

/s/ Andy Tindel

Andy Tindel (Lead Counsel)
State Bar No. 20054500
E-mail: atindel@andytindel.com
**MANN, TINDEL & THOMPSON –
ATTORNEYS AT LAW**
112 E Line, Suite 304
Tyler, Texas 75702
Telephone: (903) 596-0900
Facsimile: (903) 596-0909

Of Counsel:

Donald Urrabazo (*Pro Hac Vice*)
California State Bar No. 189509
Email: donaldu@ulawpc.com
Arturo Padilla (*Pro Hac Vice*)
California State Bar No. 188902
Email: apadilla@ulawpc.com
Ronald Wielkopolski (*Pro Hac Vice*)
District of Columbia Bar No. 1013586
Email: rwielkopolski@ulawpc.com
URRABAZO LAW, P.C.
2029 Century Park East, 14th Floor
Los Angeles, CA 90067
Telephone: (310) 388-9099
Facsimile: (310) 388-9088

**ATTORNEYS FOR PLAINTIFF LEIDOS,
INC., FORMERLY KNOWN AS SCIENCE
APPLICATIONS
INTERNATIONAL CORPORATION**

/s/ Akshay S. Deoras

Gregory S. Arovas (pro hac vice)
Robert A. Appleby (pro hac vice)
Jeanne M. Heffernan (pro hac vice)
Joseph A. Loy (pro hac vice)
Akshay S. Deoras (pro hac vice)
KIRKLAND & ELLIS LLP

601 Lexington Avenue
New York, NY 10022
Telephone: (212) 446-4800
Facsimile: (212) 446-4900

Danny L. Williams
Texas State Bar No. 21518050
Terry D. Morgan
Texas State Bar No. 14452430
Ruben S. Bains
Texas State Bar No. 24001678
Chris N. Cravey
Texas State Bar No. 24034398
Matthew R. Rodgers
Texas State Bar No. 24041802
Brian K Buss
Texas State Bar No. 00798089
Drew Kim
Texas State Bar No. 24007482)
WILLIAMS, MORGAN & AMERSON, P.C.
10333 Richmond, Suite 1100
Houston, TX 77042
Tel: (713) 934-7000
Fax: (713) 934-7011

ATTORNEYS FOR APPLE INC.

CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing document was filed electronically in compliance with Local Rule CV-5(a). As such, this document was served on all counsel who has consented to electronic service on this day, February 14, 2014. Local Rule CV-5(a)(3)(A).

/s/ Jason D. Cassady
Jason D. Cassady

EXHIBIT A: Agreed Upon Terms
P.R. 4-3 Joint Claim Construction and Prehearing Statement

Claim Term	Agreed Upon Construction
U.S. Patent No. 6,502,135	
secure target web site	a secure web site on the target computer
automatically initiating the VPN	initiating the VPN without involvement of a user
DNS proxy server	a computer or program that responds to a domain name inquiry in place of a DNS
U.S. Patent No. 7,490,151	
automatically initiating an encrypted channel	initiating the encrypted channel without involvement of a user
automatically creating a secure channel	creating the secure channel without involvement of a user
automatically creating an encrypted channel	creating the encrypted channel without involvement of a user
secure server	a server that requires authorization for access and that can communicate in an encrypted channel

EXHIBIT B: Disputed Claim Terms
P.R. 4-3 Joint Claim Construction and Prehearing Statement

Claim Term	VirnetX's Proposed Construction	Apple's Proposed Construction ¹
Terms Concerning Multiple Patents		
Domain Name Service (DNS) '135 Patent '504 Patent '211 Patent	a lookup service that returns an IP address for a requested domain name	a lookup service that returns an IP address for a requested domain name to the requester
domain name '135 Patent '504 Patent '151 Patent '211 Patent '697 Patent	a name corresponding to an IP address	a hierarchical sequence of words in decreasing order of specificity that corresponds to a numerical IP address
between the client and the secure server between the client computer and the target computer between a/the first computer and a/the second computer '135 Patent '504 Patent '151 Patent '211 Patent	[no construction necessary]	extending from [A] to [B]
secure communication link	a direct communication link that provides data security through	virtual private network communication link

¹ For the terms for which a party submits the construction previously issued by this Court, that party requests that those terms be given the meanings adopted in the Court's memorandum opinions in *VirnetX Inc. v. Cisco Sys. Inc.*, No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and *VirnetX Inc. v. Mitel Networks Corp.*, No. 6:11-cv-18-LED, Dkt. No. 307 (Aug. 1, 2012).

EXHIBIT B: Disputed Claim Terms
P.R. 4-3 Joint Claim Construction and Prehearing Statement

Claim Term	VirnetX's Proposed Construction	Apple's Proposed Construction ¹
'181 Patent '211 Patent '504 Patent '697 Patent	encryption	
U.S. Patent No. 6,502,135		
virtual private network (VPN)	a network of computers which privately communicate with each other by encrypting traffic on insecure communication paths between the computers	a network of computers which privately and directly communicate with each other by encrypting traffic on insecure paths between the computers where the communication is both secure and anonymous
web site	a computer associated with a domain name and that can communicate in a network	one or more related web pages at a location on the World Wide Web
secure web site	a computer associated with a domain name and that requires authorization for access and can communicate in a virtual private network	a web site that requires authorization for access and that can communicate in a VPN
generating from the client computer a Domain Name Service (DNS) request	[no construction necessary]	generating and transmitting from the client computer a DNS request
secure web computer	secure target computer	the target computer that hosts the secure web site
U.S. Patent No. 7,418,504		
an indication that the domain name service system supports establishing a secure communication link	[no construction necessary]	an affirmative signal beyond the mere returning of an IP address, public key, digital signature, or certificate that the domain name service system supports establishing a secure communication link

EXHIBIT B: Disputed Claim Terms
P.R. 4-3 Joint Claim Construction and Prehearing Statement

Claim Term	VirnetX's Proposed Construction	Apple's Proposed Construction ¹
U.S. Patent No. 7,921,211		
indicate in response to the query for a network address whether the domain name service system supports establishing a secure communication link	[no construction necessary]	in response to the query for a network address, affirmatively signaling beyond the mere returning of an IP address, public key, digital signature, or certificate that the domain name service system supports establishing a secure communication link
U.S. Patent No. 8,051,181		
unsecured name	a name that can be resolved by a conventional name service	Indefinite
secure name	an authenticated name that can be resolved by a secure name service and can be used for establishing a secure communication link	Indefinite
secure name service	lookup service that returns a network address for a requested secure name and facilitates establishing a secure communication link based on a secure name	Indefinite
message	a unit of information that can be transmitted electronically	a communication comprising one or more network packets
securely communicate	transmit information with data security	send a message over a secure communication link
securely sending a message	transmit information with data security	Send[ing] a message over a secure communication link
sending a message securely	transmit information with data security	Send[ing] a message over a secure communication link

EXHIBIT B: Disputed Claim Terms
P.R. 4-3 Joint Claim Construction and Prehearing Statement

Claim Term	VirnetX's Proposed Construction	Apple's Proposed Construction ¹
the desire[d]	[no construction necessary]	Indefinite
non-secure communication link	a communication link that is not a secure communication link	a communication link that transmits information in the clear
requesting and obtaining registration of a secure/unsecured name	[no construction necessary]	requesting and obtaining from a domain name registry service ownership of an secure/unsecured name
U.S. Patent No. 8,504,697		
intercept / intercepting	[no construction necessary]	access/accessing a communication addressed to another
[intercept / intercepting] ... a request to look up an internet protocol (IP) address	[no construction necessary]	no construction necessary beyond construction of "intercept[ing]"
wherein the secure communications service uses the secure communication link to communicate at least one of video data and audio data between the first network device and the second network device	[no construction necessary]	wherein the secure communications service uses the secure communication link to communicate at least one of video data and audio data extending from the first network device to the second network device
[determine/determining] ... is available for a secure communications service	[no construction necessary]	determine/determining whether a device is available to establish a secure communication link
initiate[ing] a secure communication link ... based on a determination that the second network device is available for the secure communications service	[no construction necessary]	initiate[ing] a secure communication link ... based on a determination that the second network device is available to establish a secure communication link

EXHIBIT B: Disputed Claim Terms
P.R. 4-3 Joint Claim Construction and Prehearing Statement

Claim Term	VirnetX's Proposed Construction	Apple's Proposed Construction ¹
domain name lookup	[no construction necessary]	a lookup service that returns an IP address for a requested domain name to the requester

EXHIBIT C: VirnetX's Proposed Construction of Claim Terms and Supporting Evidence**P.R. 4-3 Joint Claim Construction and Prehearing Statement**

U.S. Patent No. 6,502,135			
Term # ¹	Claim Term/Phrase	VirnetX's Proposed Construction	Extrinsic Evidence ²
1	virtual private network (VPN)	a network of computers which privately communicate with each other by encrypting traffic on insecure communication paths between the computers	"[A] VPN is simply defined as the 'emulation of a Wide Area Network (WAN) facility using IP facilities' (including the public Internet, or private IP backbones)." B. Gleeson et al., Request for Comments (RFC) 2764, A Framework for IP Based Virtual Private Networks (Feb. 2000) p. 4. "The key issue that separates WAN technologies from LAN technologies is scalability – a WAN must be able to grow as needed to connect many sites spread across large geographic distances, with many computers at each site." Douglas E. Comer, Computer Networks and Internets (2d ed. 1999) p. 168. "A Wide Area Network (WAN) can span sites in multiple cities, countries, or continents." Douglas E. Comer, Computer Networks and Internets (2d ed. 1999) p. 167. Dr. Mark Jones, a professor of Electrical and Computer Engineering at Virginia Tech, may offer expert testimony regarding the view of one of ordinary skill in the art as of the filing date of the '135 patent. Additionally, the named inventors may offer

¹ Dr. Jones may offer testimony regarding how the terms are used in the field, how the terms would be understood by one of ordinary skill in the art in light of the intrinsic and extrinsic evidence, and how the terms should be construed.

² VirnetX specifically incorporates VirnetX's briefing and extrinsic evidence from the prior claim construction briefings in *VirnetX Inc. v. Cisco Sys. Inc.*, No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and *VirnetX Inc. v. Mitel Networks Corp.*, No. 6:11-cv-18-LED, Dkt. No. 307 (Aug. 1, 2012).

EXHIBIT C: VirnetX’s Proposed Construction of Claim Terms and Supporting Evidence
P.R. 4-3 Joint Claim Construction and Prehearing Statement

			testimony regarding the view of one of ordinary skill in the art as of the filing date of the '135 patent. The following is a brief description of the substance of Dr. Jones’ and/or the named inventors’ testimony about the term “virtual private network (VPN)”: 1. what makes a virtual private network (VPN) “virtual”, “private” and a “network”; 2. network characteristics and functions, including capability to expand and how computers communicate with each other in a network; 3. why a “virtual” network includes computers that communicate through paths between them over another network; 4. how paths between computers in a private network are secure; 5. how paths between computers in a non-private network may be insecure; and 6. how encryption can be used for secure communications between computers on paths that may not otherwise be secure or private.
2	Domain Name Service (DNS)	a lookup service that returns an IP address for a requested domain name	See Extrinsic Evidence for “domain name.” “Domain Name System: Abbreviated DNS. 1. A system used on the Internet to map the easily remembered names of host computers (domain

EXHIBIT C: VirnetX’s Proposed Construction of Claim Terms and Supporting Evidence
P.R. 4-3 Joint Claim Construction and Prehearing Statement

		names) to their respective Internet Protocol (IP) numbers. 2. A software database program that converts domain names to Internet Protocol addresses, and vice versa.” McGraw- Hill Dictionary of Scientific and Technical Terms (6th ed. 2003) p. 638. “Domain Name System: Abbreviated DNS. 1. A system used on the Internet to map the easily remembered names of host computers (domain names) to their respective Internet Protocol (IP) numbers. 2. A software database program that converts domain names to Internet Protocol addresses, and vice versa.” McGraw- Hill Dictionary of Electrical & Computer Engineering (2003) p. 172. “Domain Name Service (DNS): In Internet, a program that keeps track of the alphabetic names of other machines and their corresponding numeric IP addresses. The <i>Domain Name Service</i> translates a request to a named machine into the numeric IP address necessary to make the connection.” Frank Hargrave, <i>Hargrave’s Communications Dictionary</i> (IEEE Press, 2001) p. 168. “DNS: An abbreviation of Domain Name Service. A TCP/IP protocol for collecting and maintaining network resource information that is distributed among various servers on the network. It includes a method of translating network host names into network addresses; that is, it can provide a machine’s IP address if given the
--	--	--

EXHIBIT C: VirnetX’s Proposed Construction of Claim Terms and Supporting Evidence
P.R. 4-3 Joint Claim Construction and Prehearing Statement

		machine’s domain names.” Frank Hargrave, <i>Hargrave’s Communications Dictionary</i> (IEEE Press, 2001) p. 167. “DNS: Abbreviation of Domain Name System, or Domain Name Service. Over the Internet, a system which translates a domain name, such as www.yipeeee.com, into an IP address, such as 91.2.133.206.” Steven M. Kaplan, <i>Wiley Electrical and Electronics Engineering Dictionary</i> (IEEE Press, 2004) p. 206. “Domain Name Service: On an Internet-connected computer, the software program that translates the domain name into the Internet Protocol (IP) address using a Domain Name Server.” Jonar C. Nader, <i>Prentice Hall’s Illustrated Dictionary of Computing</i> (3d. ed. 1998) p. 194. The following is a brief description of the substance of Dr. Jones’ and/or the named inventors’ testimony about the term “Domain Name Service (DNS)”: 1. how a Domain Name Service (DNS) is used in the Internet or World Wide Web; 2. characteristics and functionality of different types of DNS, including DNS according to the IETF RFCs; 3. examples of requests made to a DNS; and
--	--	---

EXHIBIT C: VirnetX's Proposed Construction of Claim Terms and Supporting Evidence
P.R. 4-3 Joint Claim Construction and Prehearing Statement

3	domain name	a name corresponding to an IP address	4. examples of different responses a DNS may provide. "The naming scheme used in the Internet is called the <i>Domain Name System</i> (DNS). Syntactically, each computer name consists of a sequence of alpha-numeric segments separated by periods." Douglas E. Comer, <i>Computer Networks and Internets</i> (2d ed. 1999) p. 366. "Domain Address: an Internet address in conveniently readable form, such as jones.com, as opposed to the IP address, which consists of numbers." Dictionary of Computer and Internet Terms (Barron's, 6th ed. 1998) p. 137. "An alphanumeric string which identifies a particular computer or a network on the Internet." McGraw-Hill Dictionary of Scientific and Technical Terms (6th ed. 2003) p. 638. "An alphanumeric string which identifies a particular computer or a network on the Internet." McGraw-Hill Dictionary of Electrical & Computer Engineering (2003) p. 172. The following is a brief description of the substance of Dr. Jones' and/or the named inventors' testimony about the term "domain name": 1. examples of domain names as a series of characters; 2. how a domain name is used in the Internet;
---	-------------	---------------------------------------	---

EXHIBIT C: VirnetX's Proposed Construction of Claim Terms and Supporting Evidence
P.R. 4-3 Joint Claim Construction and Prehearing Statement

			and	
4	web site		a computer associated with a domain name and that can communicate in a network	3. why a domain name corresponds either to a computer or a group of computers. See extrinsic evidence for "secure web site."
5	secure web site		a computer associated with a domain name and that requires authorization for access and can communicate in a virtual private network	"TCP/IP defines the term host computer to refer to any computer system that connects to an internet and runs applications." Douglas E. Comer, <i>Computer Networks and Internets</i> (2d ed. 1999) p. 231. "Host: An end-user's computer connected to a network. In an internet, each <i>Networks and Internets</i> (2d ed. 1999) p. 527. "A wide area network, or WAN, spans a large geographical area, often a country or continent. It contains a collection of machines intended for running user (i.e. application) programs. We will follow the traditional usage and call these machines hosts." Andrew S. Tanenbaum, <i>Computer Networks</i> (3d ed. 1996) p. 11. The following is a brief description of the substance of Dr. Jones' and/or the named inventors' testimony about the term "secure web site": 1. why the term "secure web site" (including the term "web site") has special meaning in the context of the patented invention;

EXHIBIT C: VirnetX's Proposed Construction of Claim Terms and Supporting Evidence**P.R. 4-3 Joint Claim Construction and Prehearing Statement**

			2. what makes a "web site" a computer or host in a computer network such as the Internet in the context of the patented invention; 3. examples of the various kinds of web sites in a computer network such as the Internet in the context of the patented invention; and 4. what makes a web site "secure" in a computer network such as the Internet in the context of the patented invention.
6	between the client computer and the target computer	[no construction necessary]	
7	generating from the client computer a Domain Name Service (DNS) request	[no construction necessary]	
8	secure web computer	secure target computer	
U.S. Patent No. 7,418,504			
Term #	Claim Term/Phrase	VirnetX's Proposed Construction	Extrinsic Evidence
1	Domain Name Service (DNS)	a lookup service that returns an IP address for a requested domain name	See Extrinsic Evidence for "domain name service" in the '135 patent.
2	domain name	a name corresponding to an IP address	See Extrinsic Evidence for "domain name" in the '135 patent.
3	secure communication link	a direct communication link that provides data security through encryption	
4	an indication that the domain name service system supports establishing a secure communication link	[no construction necessary]	
5	between a/the first computer and a/the second computer	[no construction necessary]	

EXHIBIT C: VirnetX's Proposed Construction of Claim Terms and Supporting Evidence
P.R. 4-3 Joint Claim Construction and Prehearing Statement

U.S. Patent No. 7,490,151			
Term #	Claim Term/Phrase	VirnetX's Proposed Construction	Extrinsic Evidence
1	between the client and the secure server	[no construction necessary]	
2	domain name	a name corresponding to an IP address	See Extrinsic Evidence for "domain name" in the '135 patent.
U.S. Patent No. 7,921,211			
Term #	Claim Term/Phrase	VirnetX's Proposed Construction	Extrinsic Evidence
1	Domain Name Service (DNS)	a lookup service that returns an IP address for a requested domain name	See Extrinsic Evidence for "domain name service" in the '135 patent.
2	domain name	a name corresponding to an IP address	See Extrinsic Evidence for "domain name" in the '135 patent.
3	indicate in response to the query for a network address whether the domain name service system supports establishing a secure communication link	[no construction necessary]	
4	secure communication link	a direct communication link that provides data security through encryption	
5	between a/the first computer and a/the second computer	[no construction necessary]	
U.S. Patent No. 8,051,181			
Term #	Claim Term/Phrase	VirnetX's Proposed Construction	Extrinsic Evidence
1	unsecured name	a name that can be resolved by a conventional name service	
2	secure name	an authenticated name that can be resolved by a secure name service and can be used for establishing a secure communication link	

EXHIBIT C: VirnetX's Proposed Construction of Claim Terms and Supporting Evidence**P.R. 4-3 Joint Claim Construction and Prehearing Statement**

3	secure communication link	a direct communication link that provides data security through encryption	
4	secure name service	lookup service that returns a network address for a requested secure name and facilitates establishing a secure communication link based on a secure name	
5	message	a unit of information that can be transmitted electronically	"1. In communications, a unit of information transmitted electronically from one device to another. A message can contain one or more blocks of text as well as beginning and ending characters, control characters, a software-generated header (destination address, type of message, and other such information), and error-checking or synchronizing information. A message can be routed directly from sender to receiver through a physical link, or it can be passed, either whole or in parts, through a switching system that routes it from one intermediate station to another. . . . 2. In software, a piece of information passed from the application or operating system to the user to suggest an action, indicate a condition, or inform that an event has occurred. 3. In message-based operating environments, such as Windows, a unit of information passed among running programs, certain devices in the system, and the operating system itself." Microsoft Computer Dictionary at 287 (4th ed. 1999).
6	securely communicate, securely	transmit information with data security	

EXHIBIT C: VirnetX's Proposed Construction of Claim Terms and Supporting Evidence
P.R. 4-3 Joint Claim Construction and Prehearing Statement

	sending a message, & sending a message securely		
7	the desire[d]	[no construction necessary]	
8	non-secure communication link	a communication link that is not a secure communication link	
9	requesting and obtaining registration of a secure/unsecured name	[no construction necessary]	
U.S. Patent No. 8,504,697			
Term #	Claim Term/Phrase	VirnetX's Proposed Construction	Extrinsic Evidence
1	intercept / intercepting	[no construction necessary]	
2	domain name	a name corresponding to an IP address	See Extrinsic Evidence for "domain name " in the '135 patent.
3	secure communication link	a direct communication link that provides data security through encryption	
4	[intercept / intercepting] ... a request to look up an internet protocol (IP) address	[no construction necessary]	
5	wherein the secure communications service uses the secure communication link to communicate at least one of video data and audio data between the first network device and the second network device	[no construction necessary]	
6	[determine/determining] ... is available for a secure communications service	[no construction necessary]	
7	initiate[ing] a secure	[no construction necessary]	

EXHIBIT C: VirnetX's Proposed Construction of Claim Terms and Supporting Evidence
P.R. 4-3 Joint Claim Construction and Prehearing Statement

	communication link ... based on a determination that the second network device is available for the secure communications service		
8	domain name lookup	[no construction necessary]	

EXHIBIT D: Apple's Intrinsic and Extrinsic Support**P.R. 4-3 Joint Claim Construction and Prehearing Statement**

Claim Term	Apple's Proposed Construction	Intrinsic and Extrinsic Support
Domain Name Service (DNS)	a lookup service that returns an IP address for a requested domain name to the requester	Apple incorporates by reference its prior briefing and submits that this term should be given the meanings adopted in the Court's memorandum opinions and orders in <i>VirnetX Inc. v. Cisco Sys. Inc.</i> , No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and <i>VirnetX Inc. v. Mitel Networks Corp.</i> , No. 6:11-cv-18-LED, Dkt. No. 307 (Aug. 1, 2012).
domain name	a hierarchical sequence of words in decreasing order of specificity that corresponds to a numerical IP address	Apple incorporates by reference its prior briefing. Case No. 10-cv-417, Dkt. No. 175, 182. '181 Patent, FIG. 25, cols. 38:54-60; 39:4-13. '697 Patent, FIG. 25, cols. 39:32-37, 39:49-58.
between the client and the secure server between the client computer and the target computer between a/the first computer and a/the second computer	extending from [A] to [B]	Apple incorporates by reference its prior briefing and submits that this term should be given the meanings adopted in the Court's memorandum opinions and orders in <i>VirnetX Inc. v. Cisco Sys. Inc.</i> , No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and <i>VirnetX Inc. v. Mitel Networks Corp.</i> , No. 6:11-cv-18-LED, Dkt. No. 307 (Aug. 1, 2012).

Claim Term	Apple's Proposed Construction	Intrinsic and Extrinsic Support
secure communication link	virtual private network communication link	Apple incorporates by reference its prior briefing. Case No. 10-cv-417, Dkt. No. 175, 182. '181 Patent, FIGs. 1, 2, 3a, 27, 33-35, cols. 1:28-49, 6:7-9, 6:32-7:6, 7:14-37, 21:43-48, 48:50-52:58. '697 Patent, figs 1, 2, 3a, 27, 33-35, cols. 1:35-56, 6:13-16, 6:38-7:12, 7:19-42, 22:13-18, 49:27-53:35.
virtual private network (VPN)	a network of computers which privately and directly communicate with each other by encrypting traffic on insecure paths between the computers where the communication is both secure and anonymous	Apple incorporates by reference its prior briefing and submits that this term should be given the meanings adopted in the Court's memorandum opinions and orders in <i>VirnetX Inc. v. Cisco Sys. Inc.</i>, No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and <i>VirnetX Inc. v. Mitel Networks Corp.</i>, No. 6:11-cv-18-LED, Dkt. No. 307 (Aug. 1, 2012). To the extent VirnetX seeks a different construction from the one the Court issued in the previous cases, Apple incorporates by reference the intrinsic and extrinsic evidence listed in the Joint Claim Construction Statement filed in the -417 case (Dkt. No. 175, Ex. D).
web site	one or more related web pages at a location on the World Wide Web	Apple incorporates by reference its prior briefing and submits that this term should be given the meanings adopted in the Court's memorandum opinions and orders in <i>VirnetX Inc. v. Cisco Sys. Inc.</i>, No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and <i>VirnetX Inc. v. Mitel Networks Corp.</i>, No. 6:11-cv-18-LED, Dkt. No. 307

Claim Term	Apple's Proposed Construction	Intrinsic and Extrinsic Support
secure web site	a web site that requires authorization for access and that can communicate in a VPN	(Aug. 1, 2012). Apple incorporates by reference its prior briefing and submits that this term should be given the meanings adopted in the Court's memorandum opinions and orders in <i>VirnetX Inc. v. Cisco Sys. Inc.</i> , No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and <i>VirnetX Inc. v. Mitel Networks Corp.</i> , No. 6:11-cv-18-LED, Dkt. No. 307 (Aug. 1, 2012).
generating from the client computer a Domain Name Service (DNS) request	generating and transmitting from the client computer a DNS request	Apple incorporates by reference its prior briefing and submits that this term should be given the meanings adopted in the Court's memorandum opinions and orders in <i>VirnetX Inc. v. Cisco Sys. Inc.</i> , No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and <i>VirnetX Inc. v. Mitel Networks Corp.</i> , No. 6:11-cv-18-LED, Dkt. No. 307 (Aug. 1, 2012). To the extent VirnetX seeks a different construction from the one the Court issued in the previous cases, Apple incorporates by reference the intrinsic and extrinsic evidence listed in the Joint Claim Construction Statement filed in the -417 case (Dkt. No. 175, Ex. D).
secure web computer	the target computer that hosts the secure web site	Apple incorporates by reference its prior briefing and submits that this term should be given the meanings adopted in the Court's memorandum opinions and orders in <i>VirnetX Inc. v. Cisco Sys. Inc.</i> , No. 6:10-cv-417-LED, Dkt. No. 266 (Apr. 25, 2012) and <i>VirnetX Inc. v. Mitel</i>

Claim Term	Apple's Proposed Construction	Intrinsic and Extrinsic Support
		<i>Networks Corp.</i> , No. 6:11-cv-18-LED, Dkt. No. 307 (Aug. 1, 2012).
an indication that the domain name service system supports establishing a secure communication link	an affirmative signal beyond the mere returning of an IP address, public key, digital signature, or certificate that the domain name service system supports establishing a secure communication link	'504 Patent, Abstract, figs. 33-35, cols. 49:1-53:9, claims 1, 17, 24, 36, 41, 48, 60, office action and amendments of March 21, 2007 and July 11, 2007. '504 Reexamination, 95/001,788, Patent Owner's Response of December 26, 2012; Right of Appeal Notice of June 25, 2013; Patent Owner's Appeal Brief of December 26, 2013. '211 Reexamination, 95/001,789, Patent Owner's Response of December 26, 2012.
indicate in response to the query for a network address whether the domain name service system supports establishing a secure communication link	in response to the query for a network address, affirmatively signaling beyond the mere returning of an IP address, public key, digital signature, or certificate that the domain name service system supports establishing a secure communication link	'211 Patent, figs. 33-35, cols. 6:17-7:37, 48:55-52:67, claims 1, 17, 24, 36, 41, 48, 60, office actions and amendments of March 19, 2010, June 28, 2010, August 6, 2010, October 21, 2010, December 22, 2010. '504 Reexamination, 95/001,788, Patent Owner's Response of December 26, 2012; Right of Appeal Notice of June 25, 2013; Patent Owner's Appeal Brief of December 26, 2013. '211 Reexamination, 95/001,789, Patent Owner's Response of December 26, 2012.
unsecured name	Indefinite	'181 Patent, figs. 26, 33, cols. 39:26-52; 50:19-35; 52:142-27, claims 1-5, 8, 10, 11, 21-29

Claim Term	Apple's Proposed Construction	Intrinsic and Extrinsic Support
		'181 File History, Application of February 27, 2007, USPTO Non-Final Rejection of June 8, 2009, Amendment "A" of December 8, 2009, USPTO Final Rejection of April 8, 2010, Applicants' Response of October 8, 2010, USPTO Non-Final Rejection of December 7, 2010, Applicants' Response and Request for Reconsideration of June 7, 2011 '181 Reexamination, 95/001,949, Patent Owner's Response of September 4, 2012
secure name	Indefinite	'181 Patent, figs. 26, 33, cols. 39:26-52; 50:19-35; 52:142-27, claims 1-5, 8, 10, 11, 21-29 '181 Reexamination, 95/001,949, Patent Owner's Response of September 4, 2012 '181 File History, Application of February 27, 2007, USPTO Non-Final Rejection of June 8, 2009, Amendment "A" of December 8, 2009, USPTO Final Rejection of April 8, 2010, Applicants' Response of October 8, 2010, USPTO Non-Final Rejection of December 7, 2010, Applicants' Response and Request for Reconsideration of June 7, 2011 '181 Reexamination, 95/001,949, Patent Owner's Response of September 4, 2012
secure name service	Indefinite	'181 Patent, figs. 26, 33, cols. 39:26-52; 50:19-35;

Claim Term	Apple's Proposed Construction	Intrinsic and Extrinsic Support
		52:142-27, claims 1-5, 8, 10, 11, 21-29 '181 File History, Application of February 27, 2007, USPTO Non-Final Rejection of June 8, 2009, Amendment "A" of December 8, 2009, USPTO Final Rejection of April 8, 2010, Applicants' Response of October 8, 2010, USPTO Non-Final Rejection of December 7, 2010, Applicants' Response and Request for Reconsideration of June 7, 2011 '181 Reexamination, 95/001,949, Patent Owner's Response of September 4, 2012
message	a communication comprising one or more network packets	'181 Patent, figs. 1, 2, 3a, 5, 6, 7, cols. 1:28-49, 3:9-57, 4:52-67, 5:37-55, 7:38-8:3, 9:37-10:12, 10:34-46, 10:63-11:3, 11:13-62, 12:12-47, 14:44-16:18, 53:45-54:31, 55:5-12, claims 1, 2, 5, 6, 8, 10, 11, 12, 13, 22, 24, 25, 26, 28, 29. '181 Reexamination, 95/001,949, Patent Owner's Response of September 4, 2012
securely communicate	send a message over a secure communication link	'181 patent, Abstract, figs. 1, 2, 3a, 8, 25, 33, 34, cols. 1:28-49, 3:9-29, 6:17-7:6, 7:38-8:3, 9:37-10:12, 17:61-18:32, 20:51-21:14, 24:62-65, 25:16, 49:13-50:18, 51:16-29, 52:7-13, 53:45-54:22, claims 1, 2, 22, 24, 25, 26, 28, 29
securely sending a message	sending a message over a secure	'181 patent, Abstract, figs. 1, 2, 3a, 8, 25, 33, 34, cols.

Claim Term	Apple's Proposed Construction	Intrinsic and Extrinsic Support
	communication link	1:28-49, 3:9-29, 6:17-7:6, 7:38-8:3, 9:37-10:12, 17:61-18:32, 20:51-21:14, 24:62-65, 25:16, 49:13-50:18, 51:16-29, 52:7-13, 53:45-54:22, claims 1, 2, 22, 24, 25, 26, 28, 29
sending a message securely	sending a message over a secure communication link	'181 patent, Abstract, figs. 1, 2, 3a, 8, 25, 33, 34, cols. 1:28-49, 3:9-29, 6:17-7:6, 7:38-8:3, 9:37-10:12, 17:61-18:32, 20:51-21:14, 24:62-65, 25:16, 49:13-50:18, 51:16-29, 52:7-13, 53:45-54:22, claims 1, 2, 22, 24, 25, 26, 28, 29
the desire[d]	Indefinite	'181 patent, claims 1, 24, 26, 29
non-secure communication link	a communication link that transmits information in the clear	'181 Patent, figs. 12A, 25, 26, 33, 34, cols. 21:43-48, 26:10-13, 27:8-16, 38:61-39:42, 40:5-15, 49:28-40, 51:30-43, 52:7-13, claim 7. '181 Reexamination, 95/001,949, Patent Owner's Response of September 4, 2012
requesting and obtaining registration of a secure/unsecured	requesting and obtaining from a domain name registry service	'181 Patent, Fig. 35, cols. 23:6-16, 50:60-51:15, 52:14-58.

Claim Term	Apple's Proposed Construction	Intrinsic and Extrinsic Support
name	ownership of an secure/unsecured name	U.S. Patent No. 6,298,341 at Abstract, cols. 1:14-2:3.
intercept / intercepting	access/accessing a communication addressed to another	'697 Patent, figs. 25-27, cols. 3:16-63, 21:21-39, 29:55-65, 39:26-42:16, claims 1, 10, 15, 16, 29, 30. '697 File History, Applicant-Initiated Interview Summary of October 18, 2012, USPTO Non-Final Rejection of July 30, 2012, Applicants' Reply of October 30, 2012, USPTO Final Rejection of December 10, 2012, Applicants' Amendment and Remarks of February 27, 2013, Notice of Allowance of May 16, 2013. The American Heritage Dictionary of the English Language 911 (3d ed. 2000), APP_VX855-00159883 - APP_VX855-00159885; Webster's II New College Dictionary 577 (1999), APP_VX855-00159886 - APP_VX855-00159888.
[intercept / intercepting] ... a request to look up an internet protocol (IP) address	no construction necessary beyond construction of "intercept[ing]"	See "intercept."
wherein the secure communications service uses the secure communication link to	wherein the secure communications service uses the secure communication link to communicate	See "between [A] and [B]." '697 Patent, Abstract, figs. 25-27, cols. 1:35-43, 10:26-49, 17:9-33, 18:32-19:3, 20:45-58, 26:17-26, 28:56-65,

Claim Term	Apple's Proposed Construction	Intrinsic and Extrinsic Support
communicate at least one of video data and audio data between the first network device and the second network device	at least one of video data and audio data extending from the first network device to the second network device	35:28-36, 35:64-36:8, 36:63-37:13, 39:26-42:16, claims 1 and 16. <i>VirnetX Inc. v. Cisco Sys., Inc.</i> , 6:11-cv-417, Dkt. No. 266 (Claim Construction Opinion) at 26 (construction of “between [A] and [B]”).
[determine/determining] ... is available for a secure communications service	determine/determining whether a device is available to establish a secure communication link	‘697 Patent, Abstract, figs. 1, 33, and 34, cols. 1:35-56, 3:16-35, 6:23-7:12, 7:43-8:41, 10:7-49, 21:21-51, 25:33-36, 25:54, 40:4-9, 51:60-52:6, 52:51-57, claims 1, 4, 5, 10, 13, 14, 16, 18, 19, 28, 29.
initiate[ing] a secure communication link ... based on a determination that the second network device is available for the secure communications service	initiate[ing] a secure communication link ... based on a determination that the second network device is available to establish a secure communication link	‘697 Patent, Abstract, figs. 1, 33, and 34, cols. 1:35-56, 3:16-35, 6:23-7:12, 7:43-8:41, 10:7-49, 21:21-51, 25:33-36, 25:54, 51:60-52:6, 52:51-57, claims 1, 4, 5, 10, 13, 14, 16, 18, 19, 28, 29.
domain name lookup	a lookup service that returns an IP address for a requested domain name to the requester	See “domain name service.” <i>VirnetX Inc. v. Cisco Sys., Inc.</i> , 6:11-cv-417, Dkt. No. 266 (Claim Construction Opinion) at 14-15 (construction of

Claim Term	Apple’s Proposed Construction	Intrinsic and Extrinsic Support
		“domain name service”). '697 Patent, figs. 25-27, cols. 39:26-42:16.