

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

INTERNATIONAL LICENSE  
EXCHANGE OF AMERICA, LLC

Plaintiff,

v.

NOKIA OYJ, ALCATEL-LUCENT S.A.  
and ALCATEL-LUCENT USA INC.,

Defendants.

Civil Action No. \_\_\_\_\_

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff International License Exchange of America (“ILEA” or “Plaintiff”), for its Complaint against Defendants Nokia Oyj (“Nokia”), Alcatel-Lucent S.A. (“Alcatel”) and Alcatel-Lucent USA Inc. (“Alcatel-Lucent”), (individually each a “Defendant” and collectively “Defendants”), alleges the following:

**NATURE OF THE ACTION**

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

**THE PARTIES**

2. Plaintiff is a corporation organized under the laws of the State of Delaware with a place of business at 10 Balligomingo Rd., West Conshohocken, PA 19428.

3. Upon information and belief, Nokia is a corporation organized and existing under the laws of Finland, with a place of business at Karaportti 3 Espoo, 02610 Finland. Upon information and belief, Nokia sells and offers to sell products and services throughout the United States, including in this judicial district, and introduces products and services that into the stream

of commerce and that incorporate infringing technology knowing that they would be sold in this judicial district and elsewhere in the United States.

4. Upon information and belief, Alcatel is a corporation organized and existing under the laws of France, with a place of business at Siege social, 148/152 route de la Reine, 92100 Boulogne-Billancourt France. Upon information and belief, Alcatel sells and offers to sell products and services throughout the United States, including in this judicial district, and introduces products and services that into the stream of commerce and that incorporate infringing technology knowing that they would be sold in this judicial district and elsewhere in the United States.

5. Upon information and belief, Alcatel-Lucent is a corporation organized and existing under the laws of Delaware, with a place of business at 600 Mountain Ave. Suite 700, New Providence, NJ, 07974, and can be served through its registered agent, Corporation Service Company at 2711 Centerville Rd. Suite 400, Wilmington DE 19808. Upon information and belief, Alcatel-Lucent sells and offers to sell products and services throughout the United States, including in this judicial district, and introduces products and services that into the stream of commerce and that incorporate infringing technology knowing that they would be sold in this judicial district and elsewhere in the United States.

#### **JURISDICTION AND VENUE**

6. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

7. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

8. Venue is proper in this judicial district under 28 U.S.C. §§ 1391(b), (c), (d) and/or 1400(b). On information and belief, each Defendant conducts business in this District, the

claims alleged in this Complaint arise in this District, and the acts of infringement have taken place and are continuing to take place in this District.

9. On information and belief, each Defendant is subject to this Court's general and specific personal jurisdiction because each Defendant has sufficient minimum contacts within the State of Delaware and this District, pursuant to due process and/or the Delaware Long Arm Statute because each Defendant purposefully availed itself of the privileges of conducting business in the State of Delaware and in this District, because each Defendant regularly conducts and solicits business within the State of Delaware and within this District, and because Plaintiff's causes of action arise directly from each Defendant's business contacts and other activities in the State of Delaware and this District. Further, Alcatel-Lucent is incorporated in Delaware and has thus purposely availed itself of the privileges and benefits of the laws of the State of Delaware.

**COUNT I – INFRINGEMENT OF U.S. PATENT NO. 7,158,515**

10. The allegations set forth in the foregoing paragraphs 1 through 9 are incorporated into this First Claim for Relief.

11. On January 2, 2007, U.S. Patent No. 7,158,515 ("the '515 patent"), entitled "Method of Optical Network Bandwidth Representation for Optical Label Switching Networks," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '515 patent is attached as Exhibit 1.

12. The inventions of the '515 patent resolve technical problems related to data communication networks, including, for example, optical label switching networks and methods of bandwidth representation for such networks. For example, the invention embodiments include assigning an optical label to a group of channels or channel group and encoding the optical label.

13. The claims of the '515 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on

the Internet. Instead, the claims of the '515 patent recite one or more inventive concepts that are rooted in optical communication network technology and related devices, or the use of such devices for data transport and communications, and overcome problems specifically arising in the realm of communication networks and systems.

14. The claims of the '515 patent recite an invention that is not merely the routine or conventional use of communication networks. Instead, the invention adds new features that overcome network problems. For example, the '515 patent claims thus include an optical switching router that assigns an optical label to a channel group and encodes the optical label with a component that indicates whether each channel is available for use to yield a desired result.

15. The technology claimed in the '515 patent does not preempt all ways of using optical communication network devices, nor preempt any other well-known or prior art technology.

16. Accordingly, each claim of the '515 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

17. Plaintiff is the assignee and owner of the right, title and interest in and to the '515 patent, including the right to assert all causes of action arising under the patents and the right to any remedies for infringement of them.

18. Upon information and belief, each Defendant has and continues to directly infringe at least claims 11, 12, 14, and 15 of the '515 patent by making, using, selling, importing and/or providing and causing to be used without authority within the United States, for example,

an improved optical label switching router (the “’515 Accused Instrumentalities”). The ’515 Accused Instrumentalities include at least Alcatel-Lucent 1626 and 1850 Light Managers.

19. In particular, claim 11 of the ’515 patent generally recites an optical label switching router having a computer that stores instructions to assign an optical label to a channel group; the channel group uses one of the fiber optic links and has a plurality of channels; the label represents an ingress to egress mapping. The stored instructions further encode the optical label with a type field, a length field and a value field, where the value field has a label component; and the label component indicates whether each channel of the plurality of channels is available for use in a label switched path.

20. On information and belief, the ’515 Accused Instrumentalities infringe at least claim 11 of the ’515 patent. (*See, e.g.*, 1626 Light Manager (LM) Release 6.1 User Provisioning Guide (3AL75196QAAATQZZA July 11, 2014) (*e.g.* p. 1-2, 1-7, 2-2, 2-16, 2-19, 2-20) (*available at* <https://support.alcatel-lucent.com/portal/web/support/product-result?entryId=1-0000000002227>); and Internet Engineering Task Force (“IETF”) RFC 3471 (*e.g.* p. 11, 12) (*available at* <https://tools.ietf.org/html/rfc3471>); and RFC 2205 (*e.g.* p. 33) (*available at* <https://tools.ietf.org/html/rfc2205>); and RFC 3473 (*e.g.* p. 3) (*available at* <https://tools.ietf.org/html/rfc3473>).

21. Claim 12 of the ’515 patent generally recites an optical label switching router having a computer storing executable instructions to encode a representation of characteristics of an optical trail of a channel group having a type field, a length field and a value field, where the value field includes a description of the channel group; and the description of the channel group includes an indication of a type of the channel group and an indication of a number of members in the channel group; and the label represents an ingress to egress mapping.

22. On information and belief, the '515 Accused Instrumentalities infringe at least claim 12 of the '515 patent. (*See, e.g.*, 1626 Light Manager (LM) Release 6.1 User Provisioning Guide (3AL75196QAAATQZZA July 11, 2014) (*e.g.* p. 1-2, 1-7, 2-2, 2-16, 2-19, 2-20) (*available at* <https://support.alcatel-lucent.com/portal/web/support/product-result?entryId=1-0000000002227>); and RFC 3471 (*e.g.* p. 11, 12) (*available at* <https://tools.ietf.org/html/rfc3471>); and RFC 2205 (*e.g.* p. 33) (*available at* <https://tools.ietf.org/html/rfc2205>); and RFC 3473 (*e.g.* p. 3) (*available at* <https://tools.ietf.org/html/rfc3473>).

23. Claim 14 of the '515 patent generally recites a computer for providing program control of an optical label switching router; the computer stores executable instructions that cause the optical label switching router to assign an optical label to a channel group: the channel group using one of a plurality of fiber optic links and having a plurality of channels, where the optical label represents an ingress to egress mapping; the instructions encode the optical label with a type field, a length field and a value field, where the value field includes a label component that has an indication of whether each channel of the plurality of channels is available for use in a label switched path.

24. On information and belief, the '515 Accused Instrumentalities infringe at least claim 14 of the '515 patent. (*See, e.g.*, 1626 Light Manager (LM) Release 6.1 User Provisioning Guide (3AL75196QAAATQZZA July 11, 2014) (*e.g.* p. 1-2, 1-7, 2-2, 2-16, 2-19, 2-20) (*available at* <https://support.alcatel-lucent.com/portal/web/support/product-result?entryId=1-0000000002227>); and RFC 3471 (*e.g.* p. 11, 12) (*available at* <https://tools.ietf.org/html/rfc3471>); and RFC 2205 (*e.g.* p. 33) (*available at* <https://tools.ietf.org/html/rfc2205>); and RFC 3473 (*e.g.* p. 3) (*available at* <https://tools.ietf.org/html/rfc3473>).

25. Claim 15 of the '515 patent generally recites a computer for providing program control of an optical label switching router; the label represents an ingress to egress mapping, the computer stores executable instructions that cause the optical label switching router to encode a representation of characteristics of an optical trail of a channel group to include a type field, a length field and a value field, where the value field includes a description of the channel group; and where the description of the channel group includes an indication of a type of channel group and an indication of a number of members in the channel group.

26. On information and belief, the '515 Accused Instrumentalities infringe at least claim 15 of the '515 patent. (*See, e.g.*, 1626 Light Manager (LM) Release 6.1 User Provisioning Guide (3AL75196QAAATQZZA July 11, 2014) (*e.g.* p. 1-2, 1-7, 2-2, 2-16, 2-19, 2-20) (*available at* <https://support.alcatel-lucent.com/portal/web/support/product-result?entryId=1-0000000002227>); and RFC 3471 (*e.g.* p. 11, 12) (*available at* <https://tools.ietf.org/html/rfc3471>); and RFC2205 (*e.g.* p. 33) (*available at* <https://tools.ietf.org/html/rfc2205>); and RFC 3473 (*e.g.* p. 3) (*available at* <https://tools.ietf.org/html/rfc3473>).

27. On information and belief, these '515 Accused Instrumentalities are used, marketed, provided to, and/or used by or for each Defendant's partners, clients, customers and end users across the country and in this District.

28. Upon information and belief, each Defendant was made aware of the '515 patent and its infringement thereof at least as early as the prosecution of Alcatel's U.S. Patent No. 7,813,375. During Alcatel's prosecution of Patent No. 7,813,375, the examiner cited the '515 patent. Further, Nortel Networks Ltd. was the original applicant and assignee of the '515 patent, which was granted in 2003. In 2006, Alcatel acquired Nortel Networks Corporation's Universal Mobile Telecommunications System radio access business, employees and associated patents.

On information and belief, Alcatel-Lucent would have gained knowledge of the '515 patent as part of the due diligence investigation by a sophisticated company prior to an acquisition.

29. Upon information and belief, since at least the time each Defendant received notice, each Defendant has induced and continues to induce others to infringe at least one claim of the '515 patent under 35 U.S.C. § 271(b) for example, with specific intent or willful blindness, by actively aiding and abetting others to infringe, including but not limited to each Defendant's partners, clients, customers, and end users, whose use of the '515 Accused Instrumentalities constitutes direct infringement of at least one claim of the '515 patent.

30. In particular, each Defendant's actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the '515 Accused Instrumentalities and providing instruction materials, training, and services regarding the '515 Accused Instrumentalities. On information and belief, each Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because each Defendant has had actual knowledge of the '515 patent and knowledge that its acts were inducing infringement of the '515 patent since at least the date each Defendant received notice that such activities infringed the '515 patent.

31. Upon information and belief, each Defendant is liable as a contributory infringer of the '515 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States computerized trading platforms to be especially made or adapted for use in an infringement of the '515 patent. The '515 Accused Instrumentalities are a material component for use in practicing the '515 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

32. On information and belief, each of each Defendants' infringement has been and continues to be willful.

33. Plaintiff has been harmed by each Defendant's infringing activities.

**COUNT II – INFRINGEMENT OF U.S. PATENT NO. RE40,999**

34. The allegations set forth in the foregoing paragraphs 1 through 33 are incorporated into this Second Claim for Relief.

35. On November 24, 2009, U.S. Patent No. RE40,999 (“the '999 patent”), entitled “VLAN Frame Format,” was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '999 patent is attached as Exhibit 2.

36. The inventive embodiments of the '999 patent resolve technical problems related to virtual local area network (“VLAN”) and methods to format a data frame in VLAN network devices.

37. The claims of the '999 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on the Internet. Instead, the claims of the '999 patent recite one or more inventive concepts that are rooted in computerized electronic data communications networks, and an improved method operate such networks and to maintain the interoperability of different physical configurations of such networks.

38. The claims of the '999 patent recite an invention that is not merely the routine or conventional use of electronic devices for communications. Instead, for example, the invention adds new features to integrate Ethernet and other protocols together on a shared network. The '999 patent claims thus include improvements for, for example, formatting data frames to yield a desired result.

39. The technology claimed in the '999 patent does not preempt all ways of using computerized devices or transmitting information over networks, nor preempt any other well-known or prior art technology.

40. Accordingly, each claim of the '999 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

41. Plaintiff is the assignee and owner of the right, title and interest in and to the '999 patent, including the right to assert all causes of action arising under the patents and the right to any remedies for infringement of them.

42. Upon information and belief, each Defendant has and continues to directly infringe at least claims 1, 7, 11 and 12 of the '999 patent by making, using, selling, importing and/or providing and causing to be used without authority within the United States, a method to format a data frame in VLAN network devices; for example, depending on the physical configuration of a VLAN, the embodiments include a method to adjust the format of a data frame to reflect the characteristics of the particular physical configuration of the VLAN (the "'999 Accused Instrumentalities"). The '999 Accused Instrumentalities include at least Alcatel-Lucent's 1643 Access Multiplexer and 1643 Access Multiplexer Small; 1663 Add Drop Multiplexer (ADM-Universal); 1850 transport service switch (1850TSS-320); 5620 Service Aware Manager; 7210 Service Access Switch; 7705 Service Aggregation Router; 7750 Service Router or mobile gateway; 7450 Ethernet switches; 7950 Extensible Routing System (XRS); AnyMedia Access System; Alcatel-Lucent VPN Firewall Brick 150 that support IEEE 802.1Q; Alcatel-Lucent OmniSwitch 6850E (and other OmniSwitch series) switches; .

43. In particular, claim 1 of the '999 patent generally recites a method of identifying a virtual network associated with a data frame when transmitting the data frame between a communications medium and a shared communications medium; where the method comprises: a) receiving the data frame from the communications medium, where the data frame includes a first type field and a data field; b) inserting a second type field at a location within the data frame preceding the first type field, a value of the second type field indicating the data frame include a virtual network identifier field, c) inserting the virtual network identifier field at a location between the second type field and the first type field; d) assigning a first value to the virtual network identifier field, the first value corresponding to the virtual network; and e) transmitting the data frame over the shared communications medium.

44. On information and belief, the '999 Accused Instrumentalities infringe at least claim 1 of the '999 patent. (*See, e.g.*: [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312807R7.2\\_V1\\_1643%20Access%20Multiplexer%20and%201643%20Access%20Multiplexer%20Small%20\(Formerly%20Metropolis%20AM%20and%20Metropolis%20AMS\)%20Release%201.0%20through%207.2%20User%20Operations%20Guide.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312807R7.2_V1_1643%20Access%20Multiplexer%20and%201643%20Access%20Multiplexer%20Small%20(Formerly%20Metropolis%20AM%20and%20Metropolis%20AMS)%20Release%201.0%20through%207.2%20User%20Operations%20Guide.pdf) (*e.g.* p. 8 – 14); and [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312841R6.1\\_V1\\_1663%20ADD%20DROP%20MULTIPLEXER-.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312841R6.1_V1_1663%20ADD%20DROP%20MULTIPLEXER-.pdf) (*e.g.* p. 2 – 56); and [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA\\_V1\\_ALCATEL-LUCENT%20TRANSPORT.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA_V1_ALCATEL-LUCENT%20TRANSPORT.pdf) (*e.g.* p. 40, 528); and [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE06993AAABTQZZA01\\_V1\\_5620%20SAM%20RELEASE%201.0%20R2%20U.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE06993AAABTQZZA01_V1_5620%20SAM%20RELEASE%201.0%20R2%20U.pdf) (*e.g.* p. 20-9, 12-43); and [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9303740101\\_V1\\_7210%20SAS%20D,%20E%20OS%20SERVICES.p](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9303740101_V1_7210%20SAS%20D,%20E%20OS%20SERVICES.p)

df (e.g. p. 26); and [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE05969AAAATQZZA01\\_V1\\_ALCATEL-LUCENT%207705%20SAR%20OS.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE05969AAAATQZZA01_V1_ALCATEL-LUCENT%207705%20SAR%20OS.pdf) (e.g. p. 12, 183); and [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09838AAAATQZZA01\\_V1\\_7750%20SR%20Services%20Overview%20Guide%20R13.0.R1.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09838AAAATQZZA01_V1_7750%20SR%20Services%20Overview%20Guide%20R13.0.R1.pdf) (e.g. p. 28); and [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09862AAABTQZZA01\\_V1\\_7950%20XRS%20INTERFACE%20CONFIGU.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09862AAABTQZZA01_V1_7950%20XRS%20INTERFACE%20CONFIGU.pdf) (e.g. p. 224, 462); and [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/363211587\\_V1\\_ANYMEDIA%20ACCESS%20SYSTEM.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/363211587_V1_ANYMEDIA%20ACCESS%20SYSTEM.pdf) (e.g. p. 1-30, 5-3); and <http://www.atstelcom.cz/pdf/Brick0150.pdf> (e.g. p. 2) (all accessed April 11, 2016); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9304150101\\_V1\\_7210%20SAS%20D,%20E%20OS%20INTERFACE.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9304150101_V1_7210%20SAS%20D,%20E%20OS%20INTERFACE.pdf); <https://www.manualslib.com/manual/354045/Alcatel-Lucent-Omniswitch-6850-48.html?page=112>; [http://enterprise.alcatel-lucent.com/assets/documents/os6850e\\_hdw\\_revA.pdf](http://enterprise.alcatel-lucent.com/assets/documents/os6850e_hdw_revA.pdf); Network World Middle East, September 13, 2011 “Cisco unveils routers, takes swipe at Juniper”. *Also see* the IEEE Standard for Local and metropolitan area networks: Media Access Control (MAC) Bridges and Virtual Bridge Local Area Networks, IEEE Std 802.1QTM-2011 (Revision of IEEE Std 802.1Q-2005), 31 August 2011 (e.g. p. 1, 23, 98, 103-105, 149-150, 1269); IEEE Std 802.1QTM-2014; and IEEE Std 802.3TM-2012 (e.g. p. 53); IEEE 802.1Q VLAN Tutorial (Graham Shaw, *available at* <http://www.microhowto.info/tutorials/802.1q.html>, accessed April 4, 2016).)

45. Claim 7 of the '999 patent generally recites the method of identifying a virtual network associated with a data frame when transmitting the data frame between a

communications medium and a shared communications medium, where the method comprises:

a) receiving the data frame from the communications medium, the data frame including a length field and a data field; b) inserting a type field at a location within the data frame preceding the length field, a value of the type field indicating the data frame includes a virtual network identifier field; c) inserting the virtual network identifier field at a location between the type field and the length field, d) assigning a first value to the virtual network identifier field, the first value corresponding to the virtual network; and e) transmitting the data frame over the shared communications medium.

46. On information and belief, the '999 Accused Instrumentalities infringe at least claim 7 of the '999 patent. (*See, e.g.*: [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312807R7.2\\_V1\\_1643%20Access%20Multiplexer%20and%201643%20Access%20Multiplexer%20Small%20\(Formerly%20Metropolis%20AM%20and%20Metropolis%20AMS\)%20Release%201.0%20through%207.2%20User%20Operations%20Guide.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312807R7.2_V1_1643%20Access%20Multiplexer%20and%201643%20Access%20Multiplexer%20Small%20(Formerly%20Metropolis%20AM%20and%20Metropolis%20AMS)%20Release%201.0%20through%207.2%20User%20Operations%20Guide.pdf) (*e.g.* p. 8 – 14); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312841R6.1\\_V1\\_1663%20ADD%20DROP%20MULTIPLEXER-.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312841R6.1_V1_1663%20ADD%20DROP%20MULTIPLEXER-.pdf) (*e.g.* p. 2 – 56); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA\\_V1\\_ALCATEL-LUCENT%20TRANSPORT.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA_V1_ALCATEL-LUCENT%20TRANSPORT.pdf) (*e.g.* p. 40, 528); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE06993AAABTQZZA01\\_V1\\_5620%20SAM%20RELEASE%2010.0%20R2%20U.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE06993AAABTQZZA01_V1_5620%20SAM%20RELEASE%2010.0%20R2%20U.pdf) (*e.g.* p. 20-9, 12-43); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9303740101\\_V1\\_7210%20SAS%20D,%20E%20OS%20SERVICES.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9303740101_V1_7210%20SAS%20D,%20E%20OS%20SERVICES.pdf) (*e.g.* p. 26); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE05969AAAATQZZA01\\_V1\\_ALCATEL-](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE05969AAAATQZZA01_V1_ALCATEL-)

LUCENT%207705%20SAR%20OS.pdf (e.g. p. 12, 183); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09838AAAATQZZA01\\_V1\\_7750%20SR%20Services%20Overview%20Guide%20R13.0.R1.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09838AAAATQZZA01_V1_7750%20SR%20Services%20Overview%20Guide%20R13.0.R1.pdf) (e.g. p. 28); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09862AAABTQZZA01\\_V1\\_7950%20XRS%20INTERFACE%20CONFIGU.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09862AAABTQZZA01_V1_7950%20XRS%20INTERFACE%20CONFIGU.pdf) (e.g. p. 224, 462); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/363211587\\_V1\\_ANYMEDIA%20ACCESS%20SYSTEM.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/363211587_V1_ANYMEDIA%20ACCESS%20SYSTEM.pdf) (e.g. p. 1-30, 5-3); and <http://www.atstelcom.cz/pdf/Brick0150.pdf> (e.g. p. 2) (all accessed April 11, 2016). *Also see* the IEEE Standard for Local and metropolitan area networks: Media Access Control (MAC) Bridges and Virtual Bridge Local Area Networks, IEEE Std 802.1QTM-2011 (Revision of IEEE Std 802.1Q-2005), 31 August 2011 (e.g. p. 1, 23, 98, 103-105, 149-150, 1269); IEEE Std 802.1QTM-2014; and IEEE Std 802.3TM-2012 (e.g. p. 53); IEEE 802.1Q VLAN Tutorial (Graham Shaw, *available at* <http://www.microhowto.info/tutorials/802.1q.html>, accessed April 4, 2016).)

47. Claim 11 of the '999 patent generally recites, in a network device, a method of transmitting a virtual network identifier in a data frame transmitted on a shared communications medium coupled to the network device, comprising: a) transmitting a preamble field, b) transmitting a destination and source media access control address field; c) transmitting a first type field whose contents indicate the virtual network identifier is present in the data frame; d) transmitting a virtual network identifier field containing the virtual network identifier; e) transmitting a second type field whose contents indicate a protocol type associated with the data frame; and, f) transmitting a data field.

48. On information and belief, the '999 Accused Instrumentalities infringe at least claim 11 of the '999 patent. (*See, e.g.*: [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312807R7.2\\_V1\\_1643%20Access%20Multiplexer%20and%201643%20Access%20Multiplexer%20Small%20\(Formerly%20Metropolis%20AM%20and%20Metropolis%20AMS\)%20Release%201.0%20through%207.2%20User%20Operations%20Guide.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312807R7.2_V1_1643%20Access%20Multiplexer%20and%201643%20Access%20Multiplexer%20Small%20(Formerly%20Metropolis%20AM%20and%20Metropolis%20AMS)%20Release%201.0%20through%207.2%20User%20Operations%20Guide.pdf) (*e.g.* p. 8 – 14); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312841R6.1\\_V1\\_1663%20ADD%20DROP%20MULTIPLEXER-.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312841R6.1_V1_1663%20ADD%20DROP%20MULTIPLEXER-.pdf) (*e.g.* p. 2 – 56); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA\\_V1\\_ALCATEL-LUCENT%20TRANSPORT.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA_V1_ALCATEL-LUCENT%20TRANSPORT.pdf) (*e.g.* p. 40, 528); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE06993AAABTQZZA01\\_V1\\_5620%20SAM%20RELEASE%2010.0%20R2%20U.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE06993AAABTQZZA01_V1_5620%20SAM%20RELEASE%2010.0%20R2%20U.pdf) (*e.g.* p. 20-9, 12-43); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9303740101\\_V1\\_7210%20SAS%20D,%20E%20OS%20SERVICES.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9303740101_V1_7210%20SAS%20D,%20E%20OS%20SERVICES.pdf) (*e.g.* p. 26); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE05969AAAATQZZA01\\_V1\\_ALCATEL-LUCENT%207705%20SAR%20OS.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE05969AAAATQZZA01_V1_ALCATEL-LUCENT%207705%20SAR%20OS.pdf) (*e.g.* p. 12, 183); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09838AAAATQZZA01\\_V1\\_7750%20SR%20Services%20Overview%20Guide%20R13.0.R1.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09838AAAATQZZA01_V1_7750%20SR%20Services%20Overview%20Guide%20R13.0.R1.pdf) (*e.g.* p. 28); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09862AAABTQZZA01\\_V1\\_7950%20XRS%20INTERFACE%20CONFIGU.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09862AAABTQZZA01_V1_7950%20XRS%20INTERFACE%20CONFIGU.pdf) (*e.g.* p. 224, 462); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/363211587\\_V1\\_ANYMEDIA%20ACCESS%20SYSTEM.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/363211587_V1_ANYMEDIA%20ACCESS%20SYSTEM.pdf) (*e.g.* p. 1-30, 5-3); and <http://www.atstelcom.cz/pdf/Brick0150.pdf> (*e.g.* p. 2) (all accessed April 11,

2016). *Also see* the IEEE Standard for Local and metropolitan area networks: Media Access Control (MAC) Bridges and Virtual Bridge Local Area Networks, IEEE Std 802.1QTM-2011 (Revision of IEEE Std 802.1Q-2005), 31 August 2011 (*e.g.* p. 1, 23, 98, 103-105, 149-150, 1269); IEEE Std 802.1QTM-2014; and IEEE Std 802.3TM-2012 (*e.g.* p. 53); IEEE 802.1Q VLAN Tutorial (Graham Shaw, *available at* <http://www.microhowto.info/tutorials/802.1q.html>, accessed April 4, 2016).)

49. Claim 12 of the '999 patent generally recites the method of claim 11, wherein the virtual network identifier field is 4 bytes.

50. On information and belief, the '999 Accused Instrumentalities infringe at least claim 12 of the '999 patent. (*See, e.g.*: [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312807R7.2\\_V1\\_1643%20Access%20Multiplexer%20and%201643%20Access%20Multiplexer%20Small%20\(Formerly%20Metropolis%20AM%20and%20Metropolis%20AMS\)%20Release%201.0%20through%207.2%20User%20Operations%20Guide.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312807R7.2_V1_1643%20Access%20Multiplexer%20and%201643%20Access%20Multiplexer%20Small%20(Formerly%20Metropolis%20AM%20and%20Metropolis%20AMS)%20Release%201.0%20through%207.2%20User%20Operations%20Guide.pdf) (*e.g.* p. 8 – 14); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312841R6.1\\_V1\\_1663%20ADD%20DROP%20MULTIPLEXER-.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365312841R6.1_V1_1663%20ADD%20DROP%20MULTIPLEXER-.pdf) (*e.g.* p. 2 – 56); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA\\_V1\\_ALCATEL-LUCENT%20TRANSPORT.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA_V1_ALCATEL-LUCENT%20TRANSPORT.pdf) (*e.g.* p. 40, 528); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE06993AAABTQZZA01\\_V1\\_5620%20SAM%20RELEASE%2010.0%20R2%20U.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE06993AAABTQZZA01_V1_5620%20SAM%20RELEASE%2010.0%20R2%20U.pdf) (*e.g.* p. 20-9, 12-43); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9303740101\\_V1\\_7210%20SAS%20D,%20E%20OS%20SERVICES.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/9303740101_V1_7210%20SAS%20D,%20E%20OS%20SERVICES.pdf) (*e.g.* p. 26); [Page 16 of 33](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE05969AAAATQZZA01_V1_ALCATEL-</a></p></div><div data-bbox=)

LUCENT%207705%20SAR%20OS.pdf (e.g. p. 12, 183); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09838AAAATQZZA01\\_V1\\_7750%20SR%20Services%20Overview%20Guide%20R13.0.R1.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09838AAAATQZZA01_V1_7750%20SR%20Services%20Overview%20Guide%20R13.0.R1.pdf) (e.g. p. 28); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09862AAABTQZZA01\\_V1\\_7950%20XRS%20INTERFACE%20CONFIGU.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/3HE09862AAABTQZZA01_V1_7950%20XRS%20INTERFACE%20CONFIGU.pdf) (e.g. p. 224, 462); [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/363211587\\_V1\\_ANYMEDIA%20ACCESS%20SYSTEM.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/363211587_V1_ANYMEDIA%20ACCESS%20SYSTEM.pdf) (e.g. p. 1-30, 5-3); and <http://www.atstelcom.cz/pdf/Brick0150.pdf> (e.g. p. 2) (all accessed April 11, 2016). *Also see* the IEEE Standard for Local and metropolitan area networks: Media Access Control (MAC) Bridges and Virtual Bridge Local Area Networks, IEEE Std 802.1QTM-2011 (Revision of IEEE Std 802.1Q-2005), 31 August 2011 (e.g. p. 1, 23, 98, 103-105, 149-150, 1269); IEEE Std 802.1QTM-2014; and IEEE Std 802.3TM-2012 (e.g. p. 53); IEEE 802.1Q VLAN Tutorial (Graham Shaw, *available at* <http://www.microhowto.info/tutorials/802.1q.html>, accessed April 4, 2016).)

51. On information and belief, these '999 Accused Instrumentalities are used, marketed, provided to, and/or used by or for each Defendant's partners, clients, customers and end users across the country and in this District.

52. Upon information and belief, each Defendant was made aware of the parent patents of the '999 patent and its infringement thereof during the prosecution of certain of each Defendant's patents. The '999 patent is a reissue of the Patent No. 6,111,876 (the "'876 patent"), both having the same disclosure and including identical or substantially identical claims. The examiner cited the '876 patent during the prosecution of each Defendant's U.S. Patent Publication No. 20110228776. Further, during the prosecution of each Defendant's U.S.

Patent Nos. 7,006,499 and 8,693,482 and Patent Publication No. 20110228776, the examiner cited Patent No. 5,959,990 (the “’990 patent”). The ’990 patent is the parent of the ’876 patent, having substantively the same disclosure and including certain claims similar to the ’999 patent.

53. Nortel Networks Ltd. was the original applicant and assignee of the ’876 patent that was granted in 2000. In 2006, Alcatel acquired Nortel Networks Corporation’s Universal Mobile Telecommunications System radio access business, employees and associated patents. On information and belief, Alcatel-Lucent would have gained knowledge of the ’515 patent as part of the due diligence investigation by a sophisticated company prior to an acquisition.

54. Upon information and belief, since at least the time each Defendant received notice, each Defendant has induced and continues to induce others to infringe at least one claim of the ’999 patent under 35 U.S.C. § 271(b), for example, and with specific intent or willful blindness, by actively aiding and abetting others to infringe, including but not limited to each Defendant’s partners, clients, customers, and end users, whose use of the ’999 Accused Instrumentalities constitutes direct infringement of at least one claim of the ’999 patent.

55. In particular, each Defendant’s actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the ’999 Accused Instrumentalities and providing instruction materials, training, and services regarding the ’999 Accused Instrumentalities. On information and belief, each Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because each Defendant has had actual knowledge of the ’999 patent and knowledge that its acts were inducing infringement of the ’999 patent since at least the date each Defendant received notice that such activities infringed the ’999 patent.

56. Upon information and belief, each Defendant is liable as a contributory infringer of the '999 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States computerized trading platforms to be especially made or adapted for use in an infringement of the '999 patent. The '999 Accused Instrumentalities are a material component for use in practicing the '999 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

57. On information and belief, each of each Defendants' infringement has been and continues to be willful.

58. Plaintiff has been harmed by each Defendant's infringing activities.

59. Because patents such as the '999 patent are necessary to practice a standard such as IEEE 802.1Q technology, ILEA agrees to license users of IEEE 802.1Q technology under the '999 patent on reasonable, and non-discriminatory (RAND) terms. ILEA intends to abide by such terms by furnishing a courtesy copy of this Complaint upon filing, in advance of service, so that the Parties may amicably agree to such a RAND royalty. ILEA intends to negotiate such RAND terms in good faith, and will be amenable to a delay of service and/or an immediate stay of the matter if Defendants also negotiates in good faith, so that no party need bear any unnecessary cost or expense. If Defendants contest the obligation to abide by such terms, through action or inaction, then Plaintiff shall proceed against Defendants as an unwilling licensee and pursue the highest damages and/or other relief available under the law.

**COUNT III – INFRINGEMENT OF U.S. PATENT NO. 6,222,848**

60. The allegations set forth in the foregoing paragraphs 1 through 58 are incorporated into this Third Claim for Relief.

61. On April 24, 2001, U.S. Patent No. 6,222,848 ("the '848 patent"), entitled "Gigabit Ethernet Interface to Synchronous Optical Network (SONET) Ring," was duly and

legally issued by the United States Patent and Trademark Office. A true and correct copy of the '848 patent is attached as Exhibit 3.

62. The inventive embodiments of the '848 patent resolve technical problems related to the transmission of data packets over a network.

63. The claims of the '848 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on the Internet. Instead, the claims of the '848 patent recite one or more inventive concepts that are rooted in optical data communications networks (*e.g.* Synchronous Optical Network (“SONET”)), and improved methods and devices to transport the data and/or identify optimal data routing paths, including when there is bursty data traffic.

64. The claims of the '848 patent recite an invention that is not merely the routine or conventional use of electronic devices for data transmission networks. Instead, for example, the invention includes a method and network device that process SONET payloads and transport the data packets. The '848 patent claims thus include improved methods and devices, for example, where the data packets are removed from the SONET payloads and queued.

65. The technology claimed in the '848 patent does not preempt all ways of using computerized devices or transmitting information over networks, nor preempt any other well-known or prior art technology.

66. Accordingly, each claim of the '848 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

67. Plaintiff is the assignee and owner of the right, title and interest in and to the '848 patent, including the right to assert all causes of action arising under the patents and the right to any remedies for infringement of them.

68. Upon information and belief, each Defendant has and continues to directly infringe at least claims 1 and 14 of the '848 patent by making, using, selling, importing and/or providing and causing to be used without authority within the United States, a method and device that have an improved way of transporting data on a SONET network (the "'848 Accused Instrumentalities"). The '848 Accused Instrumentalities include at least Alcatel-Lucent's 1665 Data Multiplexer Extend DMXtend and 1850 TSS-320 transport switch.

69. In particular, claim 1 of the '848 patent generally recites a method for routing data packets at a transport node of a SONET network having: (a) receiving SONET payloads with data packets at the transport node; (b) removing the data packets for the SONET payloads; (c) for each data packet: (i) determining a destination address; (ii) determining if an entry exists in a table associated with the transport node matching the destination address; and (iii) if a matching entry does not exist, queuing each data packet on a first queue for a first output path and a copy of the each data packet on a second queue for a second output path; (d) transmitting selected data packets from the first queue on the first output path; and (e) transmitting selected data packets from the second queue into the second output path.

70. On information and belief, the '848 Accused Instrumentalities infringe at least claim 1 of the '848 patent. (*See, e.g.*, [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365372302R8.0\\_V1\\_ALCATEL-LUCENT%201665%20DATA.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365372302R8.0_V1_ALCATEL-LUCENT%201665%20DATA.pdf) (*e.g.* p. 2-16); and [Page 21 of 33](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365372328R10.0_V1_ALCATEL-</a></p></div><div data-bbox=)

LUCENT%201665%20DATA%20M.pdf (e.g. p. 544, 1326); and [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA\\_V1\\_ALCATEL-LUCENT%20TRANSPORT.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA_V1_ALCATEL-LUCENT%20TRANSPORT.pdf) (e.g. p. 24-25, 39, 130) (all accessed April 11, 2016). *Also see* IEEE Std 802.17™ 2011, IEEE Standard Resilient Packet Ring, <http://standards.ieee.org/getieee802/download/802.17-2011.pdf> (e.g. p. 1, 25, 27-28, 33-35, 42-43, 53, 148, 159, 189-190, 195-196, 652).)

71. Claim 14 of the '848 patent generally recites an apparatus for routing data packets at a transport node of a SONET network having (a) means for receiving SONET payloads with data packets at the transport node; (b) means for removing the data packets from the SONET payloads, (c) for each of the data packets: (i) means for determining a destination address; (ii) determining if an entry exists in a table associated with the transport node matching the destination address; (iii) if a matching entry does not exist, queuing each of the data packets on a first queue for a first output path and a copy of the each of the data packets on a second queue for a second output path; (d) means for transmitting selected data packets from the first queue onto the first output path and selected data packets from the second queue onto the second output path.

72. On information and belief, the '848 Accused Instrumentalities infringe at least claim 14 of the '848 patent. (*See, e.g.*, [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365372302R8.0\\_V1\\_ALCATEL-LUCENT%201665%20DATA.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365372302R8.0_V1_ALCATEL-LUCENT%201665%20DATA.pdf) (e.g. p. 2-16) and [https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365372328R10.0\\_V1\\_ALCATEL-LUCENT%201665%20DATA%20M.pdf](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/365372328R10.0_V1_ALCATEL-LUCENT%201665%20DATA%20M.pdf) (e.g. p. 544, 1326); and [Page 22 of 33](https://infoproducts.alcatel-lucent.com/cgi-bin/dbaccessfilename.cgi/8DG08136AAAA_V1_ALCATEL-</a></p></div><div data-bbox=)

LUCENT%20TRANSPORT.pdf (e.g. p. 24-25, 39, 130) (all accessed April 11, 2016). *Also see* IEEE Std 802.17™ 2011, IEEE Standard Resilient Packet Ring, <http://standards.ieee.org/getieee802/download/802.17-2011.pdf> (e.g. p. 1, 25, 27-28, 33-35, 42-43, 53, 148, 159, 189-190, 195-196, 652).)

73. On information and belief, these '848 Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of each Defendant's partners, clients, customers and end users across the country and in this District.

74. Upon information and belief, each Defendant was made aware of the '848 patent and its infringement thereof at least as early as prosecution of Lucent Technologies Inc.'s ("Lucent") U.S. Patent No. 7,088,679. During Lucent's prosecution of Patent No. 7,088,679, the examiner cited the '848 patent. Further, Nortel Networks Ltd. was the original applicant and assignee of the '848 patent, which was granted in 2003. In 2006, Alcatel acquired Nortel Networks Corporation's Universal Mobile Telecommunications System radio access business, employees and associated patents; and earlier in the same year, Alcatel and Lucent merged to form Alcatel-Lucent. On information and belief, Alcatel-Lucent would have gained knowledge of the '515 patent as part of the due diligence investigation by a sophisticated company prior to an acquisition.

75. Upon information and belief, since at least the time each Defendant received notice, each Defendant has induced and continues to induce others to infringe at least one claim of the '848 patent under 35 U.S.C. § 271(b), for example, with specific intent or willful blindness, by actively aiding and abetting others to infringe, including but not limited to each Defendant's partners, clients, customers, and end users, whose use of the '848 Accused Instrumentalities constitutes direct infringement of at least one claim of the '848 patent.

76. In particular, each Defendant's actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the '848 Accused Instrumentalities and providing instruction materials, training, and services regarding the '848 Accused Instrumentalities. On information and belief, each Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because each Defendant has had actual knowledge of the '848 patent and knowledge that its acts were inducing infringement of the '848 patent since at least the date each Defendant received notice that such activities infringed the '848 patent.

77. Upon information and belief, each Defendant is liable as a contributory infringer of the '848 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States computerized trading platforms to be especially made or adapted for use in an infringement of the '848 patent. The '848 Accused Instrumentalities are a material component for use in practicing the '848 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

78. On information and belief, each of each Defendants' infringement has been and continues to be willful.

79. Plaintiff has been harmed by each Defendant's infringing activities.

**COUNT IV – INFRINGEMENT OF U.S. PATENT NO. 6,578,086**

80. The allegations set forth in the foregoing paragraphs 1 through 78 are incorporated into this Fourth Claim for Relief.

81. On June 10, 2003, U.S. Patent No. 6,578,086 ("the '086 patent"), entitled "Dynamically Managing the Topology of a Data Network," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '086 patent is attached as Exhibit 4.

82. The inventive embodiments of the '086 patent resolve technical problems related to dynamically managing the topology of a data network.

83. The claims of the '086 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on the Internet. Instead, the claims of the '086 patent recite one or more inventive concepts that are rooted in computerized electronic data communications networks, for example an improved device to identify optimal data routing paths or convergence times, including when there is heavy data traffic or a fault (*e.g.* blocked path).

84. The claims of the '086 patent recite an invention that is not merely the routine or conventional use of electronic devices for data transmission networks. Instead for example, the invention includes a network device that determines an optimal path to transport the data in the network (*e.g.* one that may have multiple paths). The '086 patent claims thus include improved devices, for example, where the controller processes data received from remote network devices based, at least in part, on distance vector information stored in a filtering database, link state information stored in a link state database, and/or the content of the received data to yield an optimal path.

85. The technology claimed in the '086 patent does not preempt all ways of using computerized devices or transmitting information over networks, nor preempt any other well-known or prior art technology.

86. Accordingly, each claim of the '086 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

87. Plaintiff is the exclusive licensee of the '086 patent, including the right to assert all causes of action arising under the patents and the right to remedies for infringement of them.

88. Upon information and belief, each Defendant has and continues to directly infringe at least claim 13 of the '086 patent by making, using, selling, importing and/or providing and causing to be used without authority within the United States, for example, a network device that aids in finding an optimal path to transport the data (the "'086 Accused Instrumentalities"). For example, the '086 Accused Instrumentalities include at least Alcatel-Lucent's optical service routers 7750 SR, 7450 ESS Ethernet service switch, and 7950 XRS extensible routing system.

89. In particular, claim 13 of the '086 patent generally recites a network device having a link state protocol database including records, where each record includes link state information. The network device also has a controller coupled to the link state protocol database, and the controller dynamically manages an active topology of a network based on network topology information including the link state information. The network device also has a filtering database coupled to the controller, where the filtering database includes a plurality of filtering records denoting at least the distance vector information for a corresponding plurality of communication links of the data network.

90. On information and belief, the '086 Accused Instrumentalities infringe at least claim 13 of the '086 patent. (*See, e.g.*, [https://infoproducts.alcatel-lucent.com/html/0\\_add-h-f/93-0267-HTML/7X50\\_Advanced\\_Configuration\\_Guide/IS-IS\\_Link\\_Bundling.html#1008064](https://infoproducts.alcatel-lucent.com/html/0_add-h-f/93-0267-HTML/7X50_Advanced_Configuration_Guide/IS-IS_Link_Bundling.html#1008064).)

91. On information and belief, these '086 Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of each Defendant's partners, clients, customers and end users across the country and in this District.

92. Upon information and belief, each Defendant was made aware of the '086 patent and its infringement thereof at least as early as the prosecution of Alcatel's U.S. Patent No. 7,944,858. During Alcatel's prosecution of Patent No. 7,944,858, the examiner cited the '086 patent. Further, Nortel Networks Ltd. was the original applicant and assignee of the '086 patent, which was granted in 2003. In 2006, Alcatel acquired Nortel Networks Corporation's Universal Mobile Telecommunications System radio access business, employees and associated patents. On information and belief, Alcatel-Lucent would have gained knowledge of the '515 patent as part of the due diligence investigation by a sophisticated company prior to an acquisition.

93. Upon information and belief, since at least the time each Defendant received notice, each Defendant has induced and continues to induce others to infringe at least one claim of the '086 patent under 35 U.S.C. § 271(b), for example, with specific intent or willful blindness, by actively aiding and abetting others to infringe, including but not limited to each Defendant's partners, clients, customers, and end users, whose use of the '086 Accused Instrumentalities constitutes direct infringement of at least one claim of the '086 patent.

94. In particular, each Defendant's actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the '086 Accused Instrumentalities and providing instruction materials, training, and services regarding the '086 Accused Instrumentalities. On information and belief, each Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because each Defendant has had actual knowledge of the '086 patent and knowledge that its acts were inducing infringement of the '086 patent since at least the date each Defendant received notice that such activities infringed the '086 patent.

95. Upon information and belief, each Defendant is liable as a contributory infringer of the '086 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States computerized trading platforms to be especially made or adapted for use in an infringement of the '086 patent. The '086 Accused Instrumentalities are a material component for use in practicing the '086 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

96. On information and belief, each of each Defendants' infringement has been and continues to be willful.

97. Plaintiff has been harmed by each Defendant's infringing activities.

**COUNT V – INFRINGEMENT OF U.S. PATENT NO. 6,697,325**

98. The allegations set forth in the foregoing paragraphs 1 through 96 are incorporated into this Fifth Claim for Relief.

99. On February 24, 2004, U.S. Patent No. 6,697,325 ("the '325 patent"), entitled "System, Device, and Method for Expediting Reconvergence in a Communication Network," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '325 patent is attached as Exhibit 5.

100. The inventive embodiments of the '325 patent resolve technical problems related to reconvergence in a communication network.

101. The claims of the '325 patent do not merely recite the performance of some business practice known from the pre-Internet world along with a requirement to perform it on the Internet. Instead, the claims of the '325 patent recite one or more inventive concepts that are rooted in computerized electronic data communications networks, and improved methods and devices to expedite convergence times, for example, after a communication link failure.

102. The claims of the '325 patent recite an invention that is not merely the routine or conventional use of electronic devices for data transmission networks. Instead, for example, the invention includes a network device and method that expedite reconvergence after a communication link failure. The '325 patent claims thus include improved devices and methods, for example, including a topology database having a list of communication links and the database is coupled to a routing logic, and including microprocessors embedded at nodes of the network.

103. The technology claimed in the '325 patent does not preempt all ways of using computerized devices or transmitting information over networks, nor preempt any other well-known or prior art technology.

104. Accordingly, each claim of the '325 patent recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent on an ineligible concept.

105. Plaintiff is the assignee and owner of the right, title and interest in and to the '325 patent, including the right to assert all causes of action arising under the patents and the right to any remedies for infringement of them.

106. Upon information and belief, each Defendant has and continues to directly infringe at least claims 1 and 10 of the '325 patent by making, using, selling, importing and/or providing and causing to be used without authority within the United States, for example, a network device and method that aids expediting reconvergence to transport the data (the "325 Accused Instrumentalities"). For example, the '325 Accused Instrumentalities include at least Alcatel-Lucent's optical service routers 7750 SR, 7450 ESS Ethernet service switch, and 7950 XRS extensible routing system.

107. In particular, claim 1 of the '325 patent generally recites a method for expediting reconvergence by a node in a communication network. The method includes receiving a first indication of a communication link failure from a first supporting node; determining a second supporting node that is associated with the failed communication link by maintaining a topology database including a list of communication links associated with each of a plurality of nodes, and using the topology database to determine that the second supporting node is associated with the failed communication link; disassociating the failed communication link from the first supporting node and the second supporting node; and computing new routes accounting for the disassociation of the failed communication link from the first supporting node and the second supporting node.

108. On information and belief, the '325 Accused Instrumentalities infringe at least claim 1 of the '325 patent. (*See, e.g.*, [https://infoproducts.alcatel-lucent.com/html/0\\_add-h-f/93-0267-HTML/7X50\\_Advanced\\_Configuration\\_Guide/IS-IS\\_Link\\_Bundling.html#1008064](https://infoproducts.alcatel-lucent.com/html/0_add-h-f/93-0267-HTML/7X50_Advanced_Configuration_Guide/IS-IS_Link_Bundling.html#1008064).)

109. Claim 10 of the '325 patent generally recites a device for expediting reconvergence in a communication network. The device includes routing logic operably coupled to receive a first indication of a communication link failure from a first supporting node, determines a second supporting node that is associated with the failed communication link, disassociates the failed communication link from the first supporting node and the second supporting node, and computes new routes accounting for the disassociation of the failed communication link from the first supporting node and the second supporting node, and wherein the routing logic is operably coupled to use a topology database to determine that the second supporting node is associated with the failed communication link, and the topology database includes a list of communication links associated with each of a plurality of nodes.

110. On information and belief, the '325 Accused Instrumentalities infringe at least claim 10 of the '325 patent. (*See, e.g.*, [https://infoproducts.alcatel-lucent.com/html/0\\_add-h-f/93-0267-HTML/7X50\\_Advanced\\_Configuration\\_Guide/IS-IS\\_Link\\_Bundling.html#1008064](https://infoproducts.alcatel-lucent.com/html/0_add-h-f/93-0267-HTML/7X50_Advanced_Configuration_Guide/IS-IS_Link_Bundling.html#1008064).)

111. On information and belief, these '325 Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of each Defendant's partners, clients, customers and end users across the country and in this District.

112. Upon information and belief, each Defendant was made aware of the '325 patent and its infringement thereof at least as early as the prosecution of each Defendant's U.S. Patent No. 8,516,152. During each Defendant's prosecution of Patent No. 8,516,152, the examiner cited the '325 patent. Further, Nortel Networks Ltd. was the original applicant and assignee of the '325 patent, which was granted in 2003. In 2006, Alcatel acquired Nortel Networks Corporation's Universal Mobile Telecommunications System radio access business, employees and associated patents. On information and belief, Alcatel-Lucent would have gained knowledge of the '515 patent as part of the due diligence investigation by a sophisticated company prior to an acquisition.

113. Upon information and belief, since at least the time each Defendant received notice, each Defendant has induced and continues to induce others to infringe at least one claim of the '325 patent under 35 U.S.C. § 271(b), for example, with specific intent or willful blindness, by actively aiding and abetting others to infringe, including but not limited to each Defendant's partners, clients, customers, and end users, whose use of the '325 Accused Instrumentalities constitutes direct infringement of at least one claim of the '325 patent.

114. In particular, each Defendant's actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the

'325 Accused Instrumentalities and providing instruction materials, training, and services regarding the '325 Accused Instrumentalities. On information and belief, Defendant has engaged in such actions with specific intent to cause infringement or with willful blindness to the resulting infringement because each Defendant has had actual knowledge of the '325 patent and knowledge that its acts were inducing infringement of the '325 patent since at least the date each Defendant received notice that such activities infringed the '325 patent.

115. Upon information and belief, each Defendant is liable as a contributory infringer of the '325 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States computerized trading platforms to be especially made or adapted for use in an infringement of the '325 patent. The '325 Accused Instrumentalities are a material component for use in practicing the '325 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

116. On information and belief, each of each Defendants' infringement has been and continues to be willful.

117. Plaintiff has been harmed by each Defendant's infringing activities.

#### **JURY DEMAND**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff demands judgment for itself and against each Defendant as follows:

A. An adjudication that each Defendant has infringed the '515, '999, '848, '086, and '325 patents;

B. An award of damages to be paid by each Defendant adequate to compensate Plaintiff for each Defendant's past infringement of the '515, '999, '848, '086, and '325 patents, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff's reasonable attorneys' fees; and

D. An award to Plaintiff of such further relief at law or in equity as the Court deems just and proper.

Dated: November 22, 2016

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