

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

INTERNATIONAL LICENSE
EXCHANGE OF AMERICA, LLC

Plaintiff,

v.

CINCINNATI BELL INC.,

Defendant.

Civil Action No. _____

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff International License Exchange of America, LLC (“ILEA” or “Plaintiff”), for its Complaint against Defendant Cincinnati Bell Inc. (“Cincinnati Bell” or “Defendant”), 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, Cincinnati Bell is a corporation organized and existing under the laws of Ohio, with a place of business at 221 East Fourth Street Cincinnati, OH 45202, and can be served through its registered agent, CSC-Lawyers Incorporating Service at 50 W. Broad St., Suite 1800, Columbus, OH 43215. Upon information and belief, Cincinnati Bell sells and offers to sell products and services throughout the United States, including in this judicial district, and introduces products and services 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

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

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

6. Venue is proper in this judicial district under 28 U.S.C. §§ 1391(b), (c), (d) and/or 1400(b). On information and belief, 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.

7. On information and belief, Defendant is subject to this Court's general and specific personal jurisdiction because 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 Defendant purposefully availed itself of the privileges of conducting business in the State of Delaware and in this District, because 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 Defendant's business contacts and other activities in the State of Delaware and this District. Further, Cincinnati Bell incorporated at least eight subsidiaries (*e.g.* Cincinnati Bell Any Distance Inc., Cincinnati Bell Technology Solutions Inc., CBTS Software LLC, Data Center Investments Inc., *etc.*) in Delaware and 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. 6,970,461

8. The allegations set forth in the foregoing paragraphs 1 through 7 are incorporated into this First Claim for Relief.

9. On November 29, 2005, U.S. Patent No. 6,970,461 (“the ’461 patent”), entitled “Access Control Enhancements for Delivery of Video and Other Service,” was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the ’461 patent is attached as Exhibit 1.

10. The inventions of the ’461 patent resolve technical problems related to shared medium access networks such as for satellites, video services, cable modem and optic fiber networks. For example, the invention embodiments provide secure multicast service over a shared medium access network by using an Internet Group Management Protocol (“IGMP”) vetting function in the customer premises equipment. The methods include controlling data traffic transmitted over the network or other communication system when there are multiple users attempting to transmit data over the shared network or system.

11. The claims of the ’461 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 ’461 patent recite one or more inventive concepts that are rooted in wired or wireless electronic or opto-electronic communication network technology and related devices, or the use of such devices for electronic communications, and overcome problems specifically arising in the realm of electronic or opto-electronic communication networks and systems.

12. The claims of the ’461 patent recite an invention that is not merely the routine or conventional use of communication networks. Instead, among other things, the invention adds new features that overcome network problems. The ’461 patent claims thus include methods for adding features to customer premise equipment to perform a vetting function to yield a desired result.

13. The technology claimed in the '461 patent does not preempt all ways of using communication network devices, nor preempt any other well-known or prior art technology.

14. Accordingly, each claim of the '461 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.

15. Plaintiff is the assignee and owner of the right, title and interest in and to the '461 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

16. Upon information and belief, Defendant has and continues to directly infringe at least claim 11 of the '461 patent by making, using, selling, importing and/or providing and causing to be used without authority within the United States, an improved method of providing a secure multicast service over a shared medium access network such as by using an IGMP vetting function (the "Accused Instrumentalities I"). The Accused Instrumentalities I include at least Cincinnati Bell using the Westell UltraLine Series 3 wireless routers used in various shared networks.

17. In particular, claim 11 of the '461 patent generally recites a method of providing a secure multicast service over a shared medium access network through using an IGMP vetting function in customer premises equipment.

18. On information and belief, the Accused Instrumentalities I infringe at least claim 11 of the '461 patent. (*See, e.g.*, http://www.cincinnati-bell.com/fioptics/downloads/ultraline3_ds.pdf; and Westell Technologies Inc. Form 10-K (*available at* <http://globaldocuments.morningstar.com/documentlibrary/document/80461a6983b81422.msdoc/>

original (*e.g.* p. 7)); and RFC4605 (*available at* <http://www.rfc-base.org/txt/rfc-4605.txt>) and <https://tools.ietf.org/html/rfc4605>); and RFC 3376 (*available at* <https://tools.ietf.org/html/rfc3376> and <https://tools.ietf.org/html/rfc3376>) (all accessed April 8, 2016).)

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

20. Defendant was made aware of the '461 patent and its infringement thereof at least as early as the filing of this Complaint.

21. Upon information and belief, since at least the time Defendant received notice, Defendant has induced and continues to induce others to infringe at least one claim of the '461 patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Defendant's partners, clients, customers, and end users, whose use of the Accused Instrumentalities I constitutes direct infringement of at least one claim of the '461 patent.

22. In particular, Defendant's actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the Accused Instrumentalities I and providing instruction materials, training, and services regarding the Accused Instrumentalities I. 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 Defendant has had actual knowledge of the '461 patent and knowledge that its acts were inducing infringement of the '461 patent since at least the date Defendant received notice that such activities infringed the '461 patent.

23. Upon information and belief, Defendant is liable as a contributory infringer of the '461 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 '461 patent. The Accused Instrumentalities I are a material component for use in practicing the '461 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

24. Plaintiff has been harmed by Defendant's infringing activities.

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

25. The allegations set forth in the foregoing paragraphs 1 through 7 are incorporated into this Second Claim for Relief.

26. 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.

27. 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.

28. 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.

29. The claims of the '999 patent recite an invention that is not merely the routine or conventional use of electronic devices for communications. Instead, among other things, 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.

30. 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.

31. 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.

32. 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 said patents and the right to any remedies for infringement of them.

33. Upon information and belief, 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 "Accused Instrumentalities II"). The Accused Instrumentalities II include at least Cincinnati Bell's Enterprise Ethernet Services that support IEEE 802.1Q.

34. 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.

35. On information and belief, the Accused Instrumentalities II infringe at least claim 1 of the '999 patent. (*See, e.g.*, https://www.cincinnati-bell.com/business/enterprise/data_and_internet/data_network_services/ethernet_services.asp; https://www.cincinnati-bell.com/shared_content/pdf/business/contract/ethernet_ofm2.pdf; and https://www.cincinnati-bell.com/aboutus/regulatory_affairs/documents/tariffs/cbet/oh/Oh%20CBET%20State%20Access%20tariff.pdf (*e.g.* p.325) (all accessed April 8, 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).)

36. 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.

37. On information and belief, the Accused Instrumentalities II infringe at least claim 7 of the '999 patent. (*See, e.g.*, https://www.cincinnati-bell.com/business/enterprise/data_and_internet/data_network_services/ethernet_services.asp; https://www.cincinnati-bell.com/shared_content/pdf/business/contract/ethernet_ofm2.pdf; and https://www.cincinnati-bell.com/aboutus/regulatory_affairs/documents/tariffs/cbet/oh/Oh%20CBET%20State%20Access%20tariff.pdf (p.325) (all accessed April 8, 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); and IEEE Std 802.1QTM-2014; 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).)

38. 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.

39. On information and belief, the Accused Instrumentalities II infringe at least claim 11 of the '999 patent. (*See, e.g.*, https://www.cincinnati-bell.com/business/enterprise/data_and_internet/data_network_services/ethernet_services.asp; https://www.cincinnati-bell.com/shared_content/pdf/business/contract/ethernet_ofm2.pdf; and https://www.cincinnati-bell.com/aboutus/regulatory_affairs/documents/tariffs/cbet/oh/Oh%20CBET%20State%20Access%20tariff.pdf (p.325) (all accessed April 8, 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; 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).)

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

41. On information and belief, the Accused Instrumentalities II infringe at least claim 12 of the '999 patent. (*See, e.g.*, https://www.cincinnati-bell.com/business/enterprise/data_and_internet/data_network_services/ethernet_services.asp; https://www.cincinnati-bell.com/shared_content/pdf/business/contract/ethernet_ofm2.pdf; and https://www.cincinnati-bell.com/aboutus/regulatory_affairs/documents/tariffs/cbet/oh/Oh%20CBET%20State%20Access%20tariff.pdf (p.325) (all accessed April 8, 2016).)

ET%20State%20Access%20tariff.pdf (*e.g.* p.325) (all accessed April 8, 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; 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).)

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

43. Plaintiff has been harmed by Defendant's infringing activities.

COUNT III – INFRINGEMENT OF U.S. PATENT NO. 7,478,167

44. The allegations set forth in the foregoing paragraphs 1 through 7 are incorporated into this Third Claim for Relief.

45. On January 13, 2009, U.S. Patent No. 7,478,167 ("the '167 patent"), entitled "Resource Allocation Using An Auto-Discovery Mechanism For Provider-Provisioned Layer-2 and Layer-3 Virtual Private Networks," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '167 patent is attached as Exhibit 3.

46. The inventive embodiments of the '167 patent resolve technical problems related to Virtual Private Networks ("VPN") that includes a method for resource allocation for implementing VPN services using an auto-discovery process.

47. The claims of the '167 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 '167 patent recite one or more inventive concepts that are

rooted in computerized electronic data communications networks, and an improved method to establish or maintain VPN data-transmission tunnels.

48. The claims of the '167 patent recite an invention that is not merely the routine or conventional use of electronic devices for data transmission networks. Instead, among other things, the invention adds new features to advertise and/or auto-discover a tunnel parameter. The '167 patent claims thus include improvements for, for example, formatting data frames to yield a desired result.

49. The technology claimed in the '167 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.

50. Accordingly, each claim of the '167 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.

51. Plaintiff is the assignee and owner of the right, title and interest in and to the '167 patent, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

52. Upon information and belief, Defendant has and continues to directly infringe at least claim 1 of the '167 patent by making, using, selling, importing and/or providing and causing to be used without authority within the United States, a method of establishing a VPN tunnel between provider edge devices based on VPN capability discovery information (the "Accused Instrumentalities III"). The Accused Instrumentalities III include at least the Cincinnati Bell MPLS IP VPN Services (MPLS Edge) that support RFC 4110.

53. In particular, claim 1 of the '167 patent generally recites a method of establishing a VPN tunnel between provide edge ("PE") devices. The method includes advertising at least one tunnel-based parameter to one or more PE devices over a network backbone using an extension to an auto-discovery protocol, and determining VPN capability discovery information that includes at least one tunnel-based parameter; and negotiating between the PE devices to automatically establish and configure a VPN tunnel between the PE devices based on the VPN capability discovery information.

54. On information and belief, the Accused Instrumentalities III infringe at least claim 1 of the '167 patent. (*See, e.g.*, <http://www.anydistance.com/pdf/AnyDistance-MPLS.pdf> (accessed February 2012). *Also see* RFC6514: BGP Encodings and Procedures for Multicast in MPLS/BGP IP VPNs (*available at* <http://tools.ietf.org/pdf/rfc6514.pdf> (*e.g.* p. 10 – 12)); and RFC4110: A Framework for Layer 3 Provider-Provisioned Virtual Private Networks (PPVPNs) (*available at* <http://tools.ietf.org/search/rfc4110> (*e.g.* p. 2, 3, 15, 35, 42, 43)); and RFC6348: Requirements for Point-to-Multipoint Extensions to the Label Distribution Protocol (*available at* <http://tools.ietf.org/search/rfc6348> (*e.g.* p. 12 – 13)).)

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

56. Defendant was made aware of the '167 patent and its infringement thereof at least as early as the filing of this Complaint.

57. Upon information and belief, since at least the time Defendant received notice, Defendant has induced and continues to induce others to infringe at least one claim of the '167 patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful

blindness, actively aiding and abetting others to infringe, including but not limited to Defendant's partners, clients, customers, and end users, whose use of the Accused Instrumentalities I constitutes direct infringement of at least one claim of the '167 patent.

58. In particular, Defendant's actions that aid and abet others such as its partners, customers, clients, and end users to infringe include advertising and distributing the Accused Instrumentalities I and providing instruction materials, training, and services regarding the Accused Instrumentalities I. 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 Defendant has had actual knowledge of the '167 patent and knowledge that its acts were inducing infringement of the '167 patent since at least the date Defendant received notice that such activities infringed the '167 patent.

59. Upon information and belief, Defendant is liable as a contributory infringer of the '167 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 '167 patent. The Accused Instrumentalities III are a material component for use in practicing the '167 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

60. Plaintiff has been harmed by 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 Defendant as follows:

A. An adjudication that Defendant has infringed the '461, '999 and '167 patents;

B. An award of damages to be paid by Defendant adequate to compensate Plaintiff for Defendant's past infringement of the '461, '999 and '167 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: August 12, 2016

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