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

COMMWORKS SOLUTIONS, LLC,
 	
       Plaintiff
 	
  -against-
 	
AMG TECHNOLOGY INVESTMENT
GROUP, LLC., d/b/a NEXTLINK,
 	
       Defendant.
	Civil Action No.: 2:20-CV-160
	
	Jury Trial Demanded

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff CommWorks Solutions, LLC ("CommWorks" or "Plaintiff"), by way of this Complaint against Defendant AMG Technology Investment Group, LLC d/b/a NextLink ("NextLink" or "Defendant"), alleges as follows:

PARTIES

1. Plaintiff CommWorks Solutions, LLC is a limited liability company organized and existing under the laws of the State of Georgia, having its principal place of business at 44 Milton Avenue, Suite 254, Alpharetta, GA 30009.

2. On information and belief, Defendant NextLink is a limited liability company organized and existing under the laws of the State of Texas, having its principal place of business at 95 Parker Oaks Lane, Hudson Oaks, TX 76087.

JURISDICTION AND VENUE

3. This is an action under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.*, for infringement by NextLink of claims of U.S. Patent No. 6,832,249; U.S. Patent No. 6,891,807; U.S.

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Patent No. 7,027,465; U.S. Patent No. 7,177,285; U.S. Patent No. 7,463,596; U.S. Patent No. 7,760,664; U.S. Patent No. 7,911,979; U.S. Patent No. 8,116,315 and U.S. Patent No. RE44,904. (collectively "the Patents-in-Suit").

4.   This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5.   NextLink is subject to personal jurisdiction of this Court because, *inter alia*, on information and belief, (i) NextLink has committed and continues to commit acts of patent infringement in the State of Texas, including by using, offering to sell, selling, and/or importing the Accused Products and Services in providing its broadband internet services to customers in the State of Texas and in this Judicial District; (ii) NextLink maintains a regular and established place of business within the State of Texas and in this Judicial District, in order to provide its services to customers in the State of Texas, including customers in this Judicial District.

6.   Venue is proper as to NextLink in this Judicial District under 28 U.S.C. § 1400(b) because, *inter alia*, on information and belief, NextLink has a regular and established place of business in this Judicial District located at 249 Heritage Court, Sulphur Springs, TX and has committed acts of infringement in this Judicial District and/or has contributed to or induced acts of patent infringement by others in this District by providing its broadband internet services, including the Accused Products and Services, to customers within and transacting business in this Judicial District.

BACKGROUND

7.   On December 14, 2004, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 6,832,249 ("the '249 Patent"), entitled "Globally Accessible Computer Network-Based Broadband Communication System With User-Controllable Quality of Information Delivery and Flow Priority." A true and correct copy of the '249 Patent is attached

hereto as Exhibit A.

8.   On May 10, 2005, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 6,891,807 ("the '807 Patent"), entitled "Time Based Wireless Access Provisioning." A true and correct copy of the '807 Patent is attached hereto as Exhibit B.

9.   On April 11, 2006, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 7,027,465 ("the '465 Patent"), entitled "Method for Contention Free Traffic Detection." A true and correct copy of the '465 Patent is attached hereto as Exhibit C.

10.   On February 13, 2007, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 7,177,285 ("the '285 Patent"), entitled "Time Based Wireless Access Provisioning." A true and correct copy of the '285 Patent is attached hereto as Exhibit D.

11.   On December 9, 2008, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 7,463,596 ("the '596 Patent"), entitled "Time Based Wireless Access Provisioning." A true and correct copy of the '596 Patent is attached hereto as Exhibit E.

12.   On July 20, 2010, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 7,760,664 ("the '664 Patent"), entitled "Determining and Provisioning Paths in a Network." A true and correct copy of the '664 Patent is attached hereto as Exhibit F.

13.   On March 22, 2011, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 7,911,979 ("the '979 Patent"), entitled "Time Based Access Provisioning System and Process. A true and correct copy of the '979 Patent is attached hereto as Exhibit G.

14.   On February 14, 2012, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 8,116,315 ("the '315 Patent"), entitled "System and Method for Packet Classification." A true and correct copy of the '315 Patent is attached hereto as Exhibit H.

15.   On May 20, 2014, the United States Patent and Trademark Office duly and lawfully

reissued U.S. Patent No. RE44,904 ("the '904 Reissue Patent"), entitled "Method for Contention Free Traffic Detection." A true and correct copy of the '904 Patent is attached hereto as Exhibit I.

16.   CommWorks is the assignee and owner of the right, title, and interest in and to the Patents-in-Suit, including the right to assert all causes of action arising under said patents and the right to any remedies for infringement of them.

NOTICE

17.   By letter and email dated April 17, 2020, CommWorks notified NextLink of the existence of the Patents-in-Suit, and of infringement thereof by NextLink, identifying exemplary infringed claims and infringing products and services. CommWorks' April 17 letter invited NextLink to hold a licensing discussion with CommWorks.

18.   By letter and email dated April 24, 2020, CommWorks again reached out to NextLink enclosing a proposed Non-Disclosure Agreement and inviting NextLink to hold a licensing discussion.

19.   As of the date of this Complaint, CommWorks has not received any response from NextLink to its letter.

COUNT I: INFRINGEMENT OF THE '249 PATENT BY NEXTLINK

20.   Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

21.   On information and belief, NextLink has infringed the '249 Patent, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by providing services to its customers that make, use, offer to sell, sell in the United States or import into the United States Ciena devices that run the Service Aware Operating System (SAOS) and/or Juniper devices that run Junos OS, as well as all other equipment utilizing substantially similar methods of providing broadband communications over a multi-layered network used by NextLink to provide services to its

customers ("Accused Products and Services").

22.   For example, on information and belief, NextLink has infringed and continues to infringe

at least claim 11 of the '249 Patent by making, using, offering to sell, selling, and/or importing the

Accused Products and Services, which perform a method for providing broadband

communications over a multi-layered network having a plurality of Open System Interconnection

(OSI) reference model layers functioning therein. *See* Ex. 1 (showing that Ciena devices running

SAOS supporting IEEE 802.3ah); Ex. 2(showing that Juniper devices running Junos OS

supporting IEEE 802.3ah); Ex. 3 (IEEE 802.3ah functioning over a plurality of the OSI reference

model layers). The method of providing broadband communications over a multi-layered network

of each of the Accused Products and Services comprises monitoring at least one OSI reference

model layer functioning in the multi-layered network. *See* Ex. 3 at 439 (e.g., Discovery

Processing). The method of providing broadband communications over a multi-layered network

of each of the Accused Products and Services further comprises determining that a quality of

service event has occurred in the multi-layered network. *See* Ex. 3 at 440 ("The process is driven

by the OLT, which periodically makes available Discovery Time Windows during which off-line

ONU's are given the opportunity to make themselves known to the OLT."). The method of

providing broadband communications over a multi-layered network of each of the Accused

Products and Services further comprises responding to the quality of service event in the multi-

layered network by changing network provisioning at a layer less than N, such as the physical

layer. *See* Ex. 3 at 421 ("To avoid data collisions and increase the efficiency of the subscriber

access network, ONU's transmissions are arbitrated. This arbitration is achieved by allocating a

transmission window (grant) to each ONU"); *Id.* at 455 ("An ONU will conclude its transmission

with sufficient margin to ensure that the laser is turned off before the grant length interval has

elapsed.") The method of providing broadband communications over a multi-layered network of each of the Accused Products and Services further comprises signaling that the network provisioning at the layer less than N has been changed. *See* Ex. 3 at 421 (*e.g.* GATE[2] Message).

23.   As another example, on information and belief, NextLink has infringed and continues to infringe at least claim 31 of the '249 Patent by making, using, offering to sell, selling, and/or importing the Accused Products and Services, which perform a method for providing broadband communications over a multi-layered network having a plurality of Open System Interconnection (OSI) reference model layers functioning therein. *See* Exs. 1 at 4, 4 (showing Ciena devices that run SAOS implementing RFC 4090, which provides label switching for IP packets); Exs. 5 at 372-373, 4 (showing Juniper devices running Junos OS implementing RFC 4090). The method of providing broadband communications over a multi-layered network of each of the Accused Products and Services comprises monitoring at least one OSI reference model layer functioning in the multi-layered network. *See* Ex. 4 at 1 (". . . to establish backup label-switch path (LSP) tunnels for local repair for LSP tunnels. These mechanisms enable the re-direction of traffic onto backup LSP tunnels in 10s of milliseconds, in the event of a failure."). The method of providing broadband communications over a multi-layered network of each of the Accused Products and Services further comprises determining that a quality of service event has occurred in layer 3 of the OSI model (related to the Internet Protocol) in the multi-layered network. On information and belief, the Ciena devices running SAOS and Juniper devices running Junos OS detect network or link failure on the IP layer. The method of providing broadband communications over a multi-layered network of each of the Accused Products and Services further comprises responding to the quality of service event in the multi-layered network by changing network provisioning at layer 2 in the OSI reference model, wherein the change at layer 2 includes resolving the quality of service event

using multiprotocol label switching (MPLS). For example, the Accused Products and Services redirects packets to a backup MPLS tunnel. *See* Ex. 4 at 1 ("These mechanisms enable the re-direction of traffic onto backup LSP tunnels in 10s of milliseconds, in the event of a failure"). The method of providing broadband communications over a multi-layered network of each of the Accused Products and Services further comprises signaling that the network provisioning at layer 2 of the OSI reference model has been changed. *See* Ex. 4 at 25 (sending various messages when "a link or/and node failure conditions" is detected).

24.   On information and belief, NextLink has induced infringement of the '249 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, customers, and end users, to use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products and Services by, among other things, providing the Accused Products and Services, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

25.   On information and belief, NextLink has committed the foregoing infringing activities without a license.

26.   On information and belief, NextLink knew the '249 Patent existed and knew of exemplary infringing NextLink products and services while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '249 Patent.

COUNT II: INFRINGEMENT OF THE '807 PATENT BY NEXTLINK

27.   Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

28.   On information and belief, NextLink has infringed the '807 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering for sale, selling, and/or importing into the United States Wi-Fi enabled modems and routers and Wi-Fi services,

such as the Nextlink Calix GigaCenter wireless router (included in the "Accused Products and Services").

29.   For example, on information and belief, NextLink has infringed and continues to infringe at least claim 17 of the '807 Patent by making, using, offering to sell, selling, and/or importing the Accused Products and Services, which include a time based network access provisioning system between a wireless device and a network. *See* Ex. 6 (showing that Wi-Fi Protected Service ("WPS") comprises a time based network access provisioning system between a wireless device and a network). The time based network access provisioning system comprises a network access point connected to the network, the network access point comprising logic for tracking operation of the wireless device. *See* Ex. 7 (showing, for example, that WPS access points comprise logic for tracking operation of a wireless device seeking to join a WLAN domain and that WPS access points track requests to join the network from a wireless device). The time based network access provisioning system further comprises logic for provisioning the wireless device if the operation of the wireless device occurs within an activatible time interval. *See* Ex. 7 (showing, for example, WPS access points include logic that provision wireless devices if the WPS button on the wireless device is pressed within 120 seconds of the press of the WPS button on the access point (activatable time period)).

30.   On information and belief, NextLink has induced infringement of the '807 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, customers, and end users, to use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products and Services by, among other things, providing the Accused Products and Services, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation,

set up, use, operation, and maintenance of said products.

31.   On information and belief, NextLink has committed the foregoing infringing activities without a license.

32.   On information and belief, NextLink knew the '807 Patent existed and knew of exemplary infringing NextLink products and services while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '807 Patent.

COUNT III: INFRINGEMENT OF THE '465 PATENT BY NEXTLINK

33.   Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

34.   On information and belief, NextLink has infringed the '465 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering for sale, selling, and/or importing into the United States Wi-Fi enabled modems and routers and Wi-Fi services, such as the Nextlink Calix GigaCenter wireless router (included in the "Accused Products and Services").

35.   For example, on information and belief, NextLink has infringed and continues to infringe at least claim 1 of the '465 Patent by making, using, offering to sell, selling, and/or importing the Accused Products and Services, which perform a method for detecting priority of data frames in a network. *See* Ex. 8(showing, for example, that in Wi-Fi enabled modems and routers, 802.11-2007+ compliant Access Points detect priority of data frames in a network via Enhanced Distributed Channel Access (EDCA)). The method for detecting priority of data frames comprises the step of extracting a bit pattern from a predetermined position in a frame. *See* Ex. 8 (showing, for example, that in Wi-Fi enabled modems and routers, 802.11-2007+ compliant Access Points extract a bit pattern, such as an EDCA Parameter Set from a predetermined position in a frame, such as in the QoS Control field). The method for detecting priority of data frames further comprises the step of comparing said extracted bit pattern with a search pattern. *See* Ex. 8

(showing, for example, that in Wi-Fi enabled modems and routers, the access points compare the extracted User Priority bit pattern (000-111) with the search pattern (000-111)). The method for detecting priority of data frames further comprises the step of identifying a received frame as a priority frame in case said extracted bit pattern matches with said search pattern. *See* Ex. 8 (showing, for example, that in Wi-Fi enabled modems and routers, if the extracted bit pattern matches UP 4-7 bit patterns, the access points identify the received frame as a priority Video or Voice frame). In the method for detecting priority of data frames, the predetermined position in said frame is defined by the offset of said bit pattern in said frame. *See* Ex. 8 (showing, for example, the predetermined position of the QoS Control field in the frame is defined by the offset of the above bit pattern in the MAC Header of the frame).

36.   On information and belief, NextLink has induced infringement of the '465 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, customers, and end users, to use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products and Services by, among other things, providing the Accused Products and Services, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

37.   On information and belief, NextLink has committed the foregoing infringing activities without a license.

38.   On information and belief, NextLink knew the '465 Patent existed and knew of exemplary infringing NextLink products and services while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '465 Patent.

COUNT IV: INFRINGEMENT OF THE '285 PATENT BY NEXTLINK

39.   Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

40.   On information and belief, NextLink has infringed the '285 Patent pursuant to 35 U.S.C. §

271(a), literally or under the doctrine of equivalents, by making, using, offering for sale, selling,

and/or importing into the United States Wi-Fi enabled modems and routers and Wi-Fi services,

such as the Nextlink Calix GigaCenter wireless router (included in the "Accused Products and

Services").

41.   For example, on information and belief, NextLink has infringed and continues to infringe

at least claim 1 of the '285 Patent by making, using, offering to sell, selling, and/or importing the

Accused Products and Services, which perform a process for provisioning between a wireless

device and a network. *See* Ex. 6 (showing that Wi-Fi Protected Service ("WPS") access points

perform a process for provisioning between a wireless device and a network). The process for

provisioning comprises the step of tracking an operating parameter of the wireless device within a

service area, wherein the operating parameter of the wireless device comprises an onset of a signal

transmission of the wireless device. *See* Ex. 7 (showing that, for example, WPS access points

track a parameter transmitted with an access request sent by a wireless device seeking access to

the network, and the parameter includes a signal transmission initiated by a press of a button on

the wireless device).   The process for provisioning further comprises the step of initiating

provisioning of the wireless device if the tracked operating parameter occurs within a time interval.

See Ex. 7 (showing that, for example, WPS access points initiate provisioning of the wireless

device if the tracked operating parameter (transmission of signal seeking access) occurs within the

120-second time period).

42.   On information and belief, NextLink has induced infringement of the '285 Patent pursuant

to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging

others, including, but not limited to, its partners, customers, and end users, to use, sell, and/or offer

to sell in the United States, and/or import into the United States, the Accused Products and Services by, among other things, providing the Accused Products and Services, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

43.   On information and belief, NextLink has committed the foregoing infringing activities without a license.

44.   On information and belief, NextLink knew the '285 Patent existed and knew of exemplary infringing NextLink products and services while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '285 Patent.

COUNT V: INFRINGEMENT OF THE '596 PATENT BY NEXTLINK

45.   Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

46.   On information and belief, NextLink has infringed the '596 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering for sale, selling, and/or importing into the United States Wi-Fi enabled modems and routers and Wi-Fi services, such as the Nextlink Calix GigaCenter wireless router (included in the "Accused Products and Services").

47.   For example, on information and belief, NextLink has infringed and continues to infringe at least claim 1 of the '596 Patent by making, using, offering to sell, selling, and/or importing the Accused Products and Services, which perform a process for associating devices. *See* Ex. 6 (showing, for example, that Wi-Fi Protected Service ("WPS") access points perform a process for associating devices). The process for associating devices comprises the step of tracking an operating parameter of a first device, wherein the operating parameter of the first device comprises any of a power on of the first device, and an onset of a signal transmission of the first device. *See* Ex. 7 (showing, for example, WPS access points track a parameter transmitted with an access

request sent by a wireless device seeking access to the network, and the parameter includes a signal transmission initiated by a press of a button on the wireless device). The process for associating devices further comprises the step of automatically associating the first device with at least one other device if the tracked operating parameter occurs within a time interval. *See* Ex. 7 (showing, for example, WPS access points automatically associate the wireless device seeking access with the access point if the signal transmission initiated by a button on the wireless device occurs within the 120-second time period).

48.   On information and belief, NextLink has induced infringement of the '596 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, customers, and end users, to use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products and Services by, among other things, providing the Accused Products and Services, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

49.   On information and belief, NextLink has committed the foregoing infringing activities without a license.

50.   On information and belief, NextLink knew the '596 Patent existed and knew of exemplary infringing NextLink products and services while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '596 Patent.

COUNT VI: INFRINGEMENT OF THE '664 PATENT BY NEXTLINK

51.   Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

52.   On information and belief, NextLink has infringed the '664 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by providing services to its customers that make, use, offer to sell, sell in the United States or import into the United States the Ciena Blue

Planet Intelligent Automation Platform ("the Ciena Platform") and the Juniper Contrail Network

("the Juniper Contrail"), as well as all other equipment utilizing substantially similar methods of

routing traffic used by NextLink to provide services to its customers ("Accused Products").

53.   For example, on information and belief, NextLink has infringed and continues to infringe

at least claim 7 of the '664 Patent by making, using, offering to sell, selling, and/or importing the

Accused Products, which perform a method for routing network traffic between a first network

and a second network, each of the of the networks comprising a plurality of network elements. *See*

Ex. 9 at p. 404; Ex. 13 at p. 66. The plurality of network elements of the Accused Products are

connected by a digital cross connect. *See* Ex. 9 at p. 404 (showing, for example, Ciena 8700 as a

digital cross-connect); Exs. 10-13 (explaining the composition of the "fabric"). The method for

routing network traffic of each of the Accused Products comprises the step of determining, with a

network configuration management system, the interconnections created by said digital cross

connect between at least two network elements in said plurality of network elements. *See* Exs. 9,

19, 21-22 (showing the Ciena Platform's Manage, Control and Plan (MCP) network configuration

management system determining and/or configuring cross connections between at least two

network elements using Zero Touch Provisioning); Exs. 9 and 19 (showing that the exemplary

Ciena 8700 interconnects at least two network elements and/or equipment); Exs. 10, 12-15

(showing the Juniper Contrail determining and/or configuring digital cross connections between

network elements using Zero Touch Provisioning (ZTP) and/or VXLAN tunneling). The method

for routing network traffic of each of the Accused Products further comprises representing each of

said interconnections as a link between said at least two network elements. *See* Exs. 9, 17-22; see

Exs. 10-16. The method for routing network traffic of each of the Accused Products further

comprises storing a status of each of said interconnections in a cross connection status database,

wherein the status indicates whether a cross-connection using said digital cross connect was successfully provisioned. *See* Exs. 9, 17-22 (showing that the Ciena Management Platform stores a status of each of the interconnections in a database, with the status indicating whether a cross-connection using the digital cross connect was successfully provisioned); Exs. 10, 12, 16 (showing that the Juniper Contrail logs and stores the status of each provisioned interconnection in a database).

54.   On information and belief, NextLink has induced infringement of the '664 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, customers, and end users, to use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products and Services by, among other things, providing the Accused Products and Services, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

55.   On information and belief, NextLink has committed the foregoing infringing activities without a license.

56.   On information and belief, NextLink knew the '664 Patent existed and knew of exemplary infringing NextLink products and services while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '664 Patent.

COUNT VII: INFRINGEMENT OF THE '979 PATENT BY NEXTLINK

57.   Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

58.   On information and belief, NextLink has infringed the '979 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering for sale, selling, and/or importing into the United States Wi-Fi enabled modems and routers and Wi-Fi services, such as the Nextlink Calix GigaCenter wireless router (included in the "Accused Products and

Services").

59.   For example, on information and belief, NextLink has infringed and continues to infringe

at least claim 19 of the '979 Patent by making, using, offering to sell, selling, and/or importing the

Accused Products and Services, which include a network access devices, comprising: access

control logic. *See* Ex. 6 (showing, for example, that Wi-Fi Protected Service ("WPS") access

points are network access devices comprising access control logic). The access control logic of

the Accused Products and Services is configured to track an operating parameter of a first device,

wherein the operating parameter of the first device includes any of an indication of a power-on of

the first device, and an onset of a signal transmission from the first device. *See* Ex. 7 (showing,

for example, WPS access points track a parameter transmitted with an access request sent by a

wireless device seeking access to the network, and the parameter includes a signal transmission

initiated by a press of a button on the wireless device). The access control logic of the Accused

Products and Services is further configured to send a signal to initiate provisioning of the first

device with a network if the tracked operating parameter occurs within a designated time interval.

See Ex. 7 (showing that, for example, WPS access points send a "Probe Response {WSC IE,

PBC}" signal to initiate provisioning of the wireless device if the signal transmission initiated by

pressing of the button on the wireless device occurs within the 120-second time period). The

access control logic of the Accused Products and Services comprise a transceiver configured to

wirelessly communicate with the first device. *See* Ex. 6 (showing that WPS access points comprise

a transceiver configured to wirelessly communicate with the first device).

60.   On information and belief, NextLink has induced infringement of the '979 Patent pursuant

to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging

others, including, but not limited to, its partners, customers, and end users, to use, sell, and/or offer

to sell in the United States, and/or import into the United States, the Accused Products and Services by, among other things, providing the Accused Products and Services, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

61.   On information and belief, NextLink has committed the foregoing infringing activities without a license.

62.   On information and belief, NextLink knew the '979 Patent existed and knew of exemplary infringing NextLink products and services while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '979 Patent.

COUNT VIII: INFRINGEMENT OF THE '315 PATENT BY NEXTLINK

63.   Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

64.   On information and belief, NextLink has infringed the '315 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by providing services to its customers that make, use, offer to sell, sell in the United States or import into the United States the Ciena devices using SAOS and the Juniper devices using Junos OS, as well as all other equipment utilizing substantially similar methods of routing traffic used by NextLink to provide services to its customers ("Accused Products").

65.   For example, on information and belief, NextLink has infringed and continues to infringe at least claim 7 of the '315 Patent by making, using, offering to sell, selling, and/or importing the Accused Products, which perform method for data packet processing in a telecommunications system. *See* Ex. 23 (showing Ciena devices using SAOS implementing Class of Service (CoS)); Ex. 29 (showing that Juniper implementing CoS). The method for data packet processing in a telecommunication system of each of the Accused Products comprises, at an ingress edge unit of a router, determining a set of classification parameters for a data packet arriving at the ingress edge

unit, wherein the classification parameters include destination information and one or more quality

of service (QoS) parameters for the data packet, and wherein the destination information includes

a destination egress port of the router. *See* Exs. 24-28 (showing that at an ingress edge unit of a

router, Ciena devices using SAOS determine a set of classification parameters, such as CoS and

egress port as part of the routing/switching processing); Exs. 29-30 (showing that at an ingress

edge unit of a router, Juniper devices using Junos OS determine a set of classification parameters,

such as CoS and egress port as part of the routing/switching processing). The method for data

packet processing in a telecommunications system of each of the Accused Products further

comprises constructing a classification index including the set of classification parameters for a

plurality of data packets, and also including information about a plurality of queues associated

with the QoS parameters. *See* Exs. 24 and 27 (showing, for example, that Ciena SAOS constructs

classification index, such as an ingress-to-egress-qmap); Exs. 29-31 (showing that Juniper Junos

OS constructs a classification index, such as one or more scheduler maps). The method for data

packet processing in a telecommunications system of each of the Accused Products further

comprises forwarding the classification index to at least one destination edge unit of the router,

including a destination edge unit associated with the destination egress port associated with the

data packet. *See* Exs. 24-25 and 27-28 (showing ingress-to-egress-qmap being applied to the

egress port); Exs. 29 and 31 (showing that in Juniper, the schedule map is assigned to an interface

or a group of interfaces serving s egress). The method for data packet processing in a

telecommunications system of each of the Accused Products further comprises forwarding the data

packet to the destination egress port according to the classification parameters determined at the

ingress edge unit and without requiring reclassification of the data packet. See Exs. 24-25, 28

(showing Ciena devices running SAOS forwarding the data packet to the egress port according to

the CoS parameters and without requiring to remark the packet); Ex. 29 (showing Juniper devices running Junos OS forwarding the data packet to the egress port according to the CoS parameters, where settings such as rewrite rules are optional).

66.   On information and belief, NextLink has induced infringement of the '315 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, customers, and end users, to use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products and Services by, among other things, providing the Accused Products and Services, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

67.   On information and belief, NextLink has committed the foregoing infringing activities without a license.

68.   On information and belief, NextLink knew the '315 Patent existed and knew of exemplary infringing NextLink products and services while committing the foregoing infringing acts while committing the foregoing infringing acts, thereby willfully, wantonly and deliberately infringing the '315 Patent.

COUNT IX: INFRINGEMENT OF THE '904 REISSUE PATENT BY NEXTLINK

69.   Plaintiff incorporates the preceding paragraphs as if fully set forth herein.

70.   On information and belief, NextLink has infringed the '904 Reissue Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering for sale, selling, and/or importing into the United States Wi-Fi enabled modems and routers and Wi-Fi services, such as the Nextlink Calix GigaCenter wireless router (included in the "Accused Products and Services").

For example, on information and belief, NextLink has infringed and continues to infringe at least

claim 7 of the '904 Reissue Patent by making, using, offering to sell, selling, and/or importing the Accused Products and Services, which perform a method comprising: detecting a received frame is a priority frame based, at least in part, on information in the received frame. *See* Ex. 8 (showing that in the Accused Products and Services, for example, 802.11-2007+ compliant Access Points detect that a received frame is a priority frame based, at least in part, on Enhanced Distributed Channel Access (EDCA) and QoS information included in the frame). The method includes extracting a bit pattern from a predetermined position in the received frame. *See* Ex. 8 (showing that in the Accused Products and Services, for example, 802.11-2007+ compliant Access Points extract a bit pattern, such as an EDCA Parameter Set from a predetermined position in a frame, such as in the QoS Control field). The method further includes comparing the extracted bit pattern with a search pattern. See Ex. 8 (showing that in the Accused Products and Services, for example, the 802.11-2007+ compliant Access Points compare the extracted User Priority bit pattern (000-111) with the search pattern (000-111)). In the method, the detecting is based on a match between the extracted bit pattern and the search pattern. *See* Ex. 8 (showing that in the Accused Products and Services, for example, in the 802.11-2007+ compliant Access Points if the extracted bit pattern matches UP 4-7 bit patterns, the access points identify the received frame as a priority Video or Voice frame). The method transmits the received frame in a transmit period reserved for priority frames in response to the detecting. *See* Ex. 8 (showing that in the Accused Products and Services, for example, 802.11-2007+ compliant Access Points transmit the received frame in a transmit period reserved for AC_VI or AC_VO frames in response to detecting their priority). The method adjusts a duration of the transmit period reserved for priority frames based on statistic information regarding sent priority frames. *See* Exs. 8 and 32 (showing that in the Accused Products and Services, for example, 802.11-2007+ compliant Access Points collect statistic information

regarding transmitted frames for each priority, including instances where a failure was detected, and uses that information to calculate CWMin and CWMax values).

71.   On information and belief, NextLink has induced infringement of the '904 Reissue Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, customers, and end users, to use, sell, and/or offer to sell in the United States, and/or import into the United States, the Accused Products and Services by, among other things, providing the Accused Products and Services, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products.

72.   On information and belief, NextLink has committed the foregoing infringing activities without a license.

73.   On information and belief, NextLink knew the '904 Reissue Patent existed and knew of exemplary infringing NextLink products and services while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '904 Reissue Patent.

PRAYER FOR RELIEF

WHEREFORE, CommWorks prays for judgment in its favor against NextLink for the following relief:

A.   Entry of judgment in favor of CommWorks against NextLink on all counts;

B.   Entry of judgment that NextLink has infringed the Patent-in-Suit;

C.   Entry of judgment that NextLink's infringement of the Patents-in-Suit has been willful;

D.   An order permanently enjoining NextLink from infringing the Patent-in-Suit;

E.   Award of compensatory damages adequate to compensate CommWorks for NextLink's infringement of the Patent-in-Suit, in no event less than a reasonable royalty trebled as provided by 35 U.S.C. § 284;

F.   Award of reasonable attorneys' fees and expenses against NextLink pursuant to 35 U.S.C. § 285;

G.   CommWorks' costs;

H.   Pre-judgment and post-judgment interest on CommWorks' award; and

I.   All such other and further relief as the Court deems just or equitable.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38 of the Fed. R. Civ. Proc., Plaintiff hereby demands trial by jury in this action of all claims so triable.

Dated: May 27, 2020   Respectfully submitted,

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