**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

COMMWORKS SOLUTIONS, LLC,
 	
                      Plaintiff
 	
           -against-
 	
SKYBEAM ACQUISITION CORP. d/b/a RISE BROADBAND, SKYBEAM, LLC d/b/a RISE BROADBAND, and JAB WIRELESS, INC d/b/a RISE BROADBAND.
 	
                   Defendants.
	Civil Action No.: 6:21-cv-00368
	
	Jury Trial Demanded

<u>**COMPLAINT FOR PATENT INFRINGEMENT**</u>

Plaintiff CommWorks Solutions, LLC ("CommWorks" or "Plaintiff"), by way of this Complaint against Defendants Skybeam Acquisition Corp. d/b/a Rise Broadband, Skybeam, LLC d/b/a Rise Broadband, and JAB Wireless, Inc. d/b/a Rise Broadband (collectively "Rise" or "Defendants"), alleges as follows:

<u>**PARTIES**</u>

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 Skybeam Acquisition Corp. d/b/a Rise Broadband is a corporation organized and existing under the laws of the State of Colorado, having its principal place of business at 61 Inverness Drive East, Suite 250, Englewood, CO 80112. Skybeam Acquisition Corp. d/b/a Rise Broadband may be served through its registered agent CT

Corporation System, at 7700 E. Arapahoe Road, Ste. 220, Centennial, CO 80112.

3.   On information and belief, Defendant Skybeam, LLC d/b/a Rise Broadband is a limited

liability company organized and existing under the laws of the State of Colorado, having its

principal place of business at 61 Inverness Drive East, Suite 250, Englewood, CO 80112.

Skybeam, LLC d/b/a Rise Broadband may be served through its registered agent Paracorp Inc.,

at 14001 W Hwy 29, Suite 102, Liberty Hill, TX 78642. On information and belief, Skybeam,

LLC d/b/a Rise Broadband is registered to do business in the State of Texas and has been since at

least January 26, 2016.

4.   On information and belief, Defendant JAB Wireless, Inc. d/b/a Rise Broadband is a

corporation organized and existing under the laws of the State of Colorado, having its principal

place of business at 61 Inverness Drive East, Suite 250, Englewood, CO 80112. JAB Wireless,

Inc. d/b/a Rise Broadband may be served through its registered agent Air Canopy Internet

Services, Inc., at 3261 FM 663, Suite D, Midlothian, TX 76065. On information and belief, JAB

Wireless, Inc. is registered to do business in the State of Texas and has been since at least April

15, 2009.

JURISDICTION AND VENUE

5.   This is an action under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.*, for

infringement by Rise of claims of U.S. Patent No. 6,832,249; U.S. Patent No. 7,027,465; U.S.

Patent No. 7,177,285; U.S. Patent No. 7,911,979; and U.S. Patent No. 8,116,315. (collectively

"the Patents-in-Suit").

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

7.   Rise is subject to personal jurisdiction of this Court because, *inter alia*, on information

and belief, (i) Rise maintains regular and established places of business in Texas; (ii) Rise sells

products and services to customers in this Judicial District; and (iii) the patent infringement

claims arise directly from Rise's continuous and systematic activity in this Judicial District.

8.   Venue is proper as to Rise in this Judicial District under 28 U.S.C. § 1400(b) because,

inter alia, on information and belief, Rise has regular and established places of business in this

Judicial District, and has committed acts of patent infringement in this Judicial District and/or

has contributed to or induced acts of patent infringement by others in this District.

BACKGROUND

9.   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.

10.   At the time of the invention, millions of Internet users being online simultaneously,

causing congestion (too many users) and latency (long pauses and delays), presented a difficult

bandwidth load management challenge. Exhibit A at col. 1:32-34, 2:34-36. No conventional

routing system existed that avoided the congestion and best effort delivery methods then used by

the Internet. *Id.* at col. 2:8-10. Conventional routing systems relating to multiple OSI layers also

did not consistently ensure quality of service. *Id.* at col. 6:53-63.

11.   The invention of the '249 Patent improved upon the conventional services delivery

systems by enabling quality of service control by content providers, Application Service

Providers (ASPs), ISPs, and, by extension, their customers. *Id.* at col. 3:60-63. Additional

improvements over the conventional services delivery systems afforded by the invention of

the '249 Patent included bridging the gaps between the layers of the OSI reference model;

ensuring more control by users over the priority of their information flow; more control by

network administrators over the congestion of their networks; and more control by content

providers over costs and the experiences they provide to their users. *Id.* at col. 3:65-4:2, 6:53-63.

12.   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 B.

13.   At the time of the invention, "conventionally … transmission differentiation based on

priority was not conducted at all." Exhibit B at col. 2:9-10. Obtaining priority information for

traffic transmitted through an Access Point (AP) required searching all fields in all frames for

indications of the priority state of the actual data frame, resulting in all fields in all frames being

checked and all headers being analyzed, starting from the outer most headers, until the right field

in the header had been found. *Id.* at col. 1:53-59. This measure was very complex, took a long

time, and required a large amount of processing, especially for complex tunneling protocols. *Id.*

at col. 1:62-65. All the frame headers and protocols which can be included in the data frames

transmitted via the network had to be known, hence, the amount of information needed for

identifying the data was huge. *Id.* at col. 1:66-2:4. Such a huge amount of information was

typically too heavy to handle in small and low price equipment like WLAN access points (AP).

Id. Further, then existing systems according to the IEEE 802.11 standard did not separate traffic

based on priority. *Id.* at col. 2:11-15.

14.   The invention of the '465 Patent improved upon conventional network traffic routing

systems by providing methods by which priority traffic can easily be distinguished from normal

traffic without the need of complex processing making it possible to execute in a low cost and

possibly low performance AP. *Id.* at col. 2:19-23, 2:60-62, 3:43. The methods of the invention

of the '465 Patent further improved upon conventional network traffic routing systems by easily

finding higher priority traffic from the stream of MAC layer frames without necessarily requiring

knowledge of the upper layer protocols. *Id.* at col. 2:53-56. The methods of the invention of

the '465 Patent further improved upon conventional network traffic routing systems by being

protocol-independent and flexible such that their configuration may be done in an external

configuration program; with the Access Point not needing to know anything about the processed

traffic; further alleviating the need of complex structure of the device. *Id.* at col. 2:63-66, Col.

3:5-11. A further advantage over conventional network traffic routing systems is that installation

of new software or hardware in the network element would not be required when new protocols

or modified protocols are introduced in the network. *Id.* at col. 3:12-21.

15.   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 C.

16.   At the time of the invention, wireless access to data networks was not yet conventional.

Then existent systems for provisioning access to a network were impractical, such as for wireless

devices which lacked a user interface configured for communicating provisioning information, or

for simple home-based intranets, such as a wireless picture frame device lacking a control

interface to read or extract identification information, such as a MAC address, to facilitate

wireless access provisioning. Exhibit C at col. 3:13-26. Further, wireless devices that did have a

dedicated user interface were incapable of, or cumbersome in, communicating device

identification and exchanging provisioning information, still requiring a user to be technically

proficient to properly initiate and complete a provisioning process. *Id.* at col. 3:27-36.

17.   The invention of the '285 Patent improved upon existent network provisioning systems

by enabling provisioning without requiring a user interface for the initiation of a provisioning

process—"a major technological advance." *Id.* at col. 3:37-41. The invention of the '285 Patent

further improved upon existent provisioning systems by providing a wireless access provisioning

structure and process with minimal device requirements and/or user proficiency, whereby a

wireless device is readily provisioned by the provisioning system, and whereby other

unauthorized devices within an access region are prevented from being provisioned by the

provisioning system. *Id.* at col. 3:42-49. The invention of the '285 Patent further improved upon

existent provisioning systems by providing a time-based wireless access provisioning system

integrated with easily monitored parameters of a wireless device, such as the time monitoring of

power on and/or start of signal transmission, for provisioning secure encrypted communication.

Id. at col. 3:50-58.

18.   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 D.

19.   At the time of the invention wireless access to data networks was not yet conventional.

Then existent systems for provisioning access to a network were impractical, such as for wireless

devices which lacked a user interface configured for communicating provisioning information, or

for simple home-based intranets, such as a wireless picture frame device lacking a control

interface to read or extract identification information, such as a MAC address, to facilitate

wireless access provisioning. Exhibit D at col. 3:19-31. Further, wireless devices that did have a

dedicated user interface were incapable of, or cumbersome in, communicating device

identification and exchanging provisioning information, still requiring a user to be technically

proficient to properly initiate and complete a provisioning process. *Id.* at col. 3:32-41.

20.   The invention of the '979 Patent improved upon existent network provisioning systems by enabling provisioning without requiring a user interface for the initiation of a provisioning process—"a major technological advance." *Id.* at col. 3:42-46. The invention of the '979 Patent further improved upon existent provisioning systems by providing a wireless access provisioning structure and process with minimal device requirements and/or user proficiency, whereby a wireless device is readily provisioned by the provisioning system, and whereby other unauthorized devices within an access region are prevented from being provisioned by the provisioning system. *Id.* at col. 3:47-53. The invention of the '979 Patent further improved upon existent provisioning systems by providing a time-based wireless access provisioning system integrated with easily monitored parameters of a wireless device, such as the time monitoring of power on and/or start of signal transmission, for provisioning secure encrypted communication. *Id.* at col. 3:54-62.

21.   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 E.

22.   At the time of the invention, conventional optical routers or switches did not typically retain the classification of a data packet once the data packet left the ingress edge unit in route to the egress edge unit. Exhibit E at col. 1:48-51. Conventional routers and switches required the classification process to be repeated at both the ingress and egress interfaces of a switch or router. *Id.* at col. 1:48-2:4. Such an approach would conventionally require specialized classification hardware at both units. *Id*.

23.   The invention of the '315 Patent improved upon the conventional routers and switches by reducing the duplicative hardware and processing requirements used in packet classification. *Id.*

at col. 2:8-43. The invention of the '315 Patent further improved upon conventional routers and switches by eliminating delay caused by the reclassification of data packets. *Id*. The invention of the '315 Patent further improved upon conventional routers and switches by enabling sending of data packets to a destination egress edge node based on classification parameters determined at the ingress edge unit. *Id.*

NOTICE

24.   By letter and email dated April 17, 2020, CommWorks notified Rise of the existence of its patent portfolio, including the Patents-in-Suit, notified Rise that it infringes at least the Patents-in-Suit, identified exemplary infringed claims and infringing Rise products and services, and invited Rise to hold a licensing discussion with CommWorks.

25.   By letter and email dated April 24, 2020, CommWorks again notified Rise of the existence of its patent portfolio, including the Patents-in-Suit, and again invited Rise to hold a licensing discussion with CommWorks.

COUNT I: INFRINGEMENT OF THE '249 PATENT BY RISE

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

27.   On information and belief, Rise 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 the ZTE devices that run Router Operating System (ROS/ZXROS) and other equipment utilizing substantially similar methods of providing broadband communications over a multi-layered network used by Rise to provide services to its customers ("Accused Products and Services").

28.   For example, on information and belief, Rise 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

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

Interconnection (OSI) reference model layers functioning therein. *See* Ex. 1 (showing a "Rise

Broadband" "Lead Network Engineer" performed "troubleshooting daily with multiple

technologies … including … ZTE … switches & routers."); Ex. 2 (showing that ZTE devices

running Router Operating System (ROS/ZXROS), including the ZTE ZXCTN 6000 Packet

Transport Networks Series, facilitate broadband communications over an OSI model multi-

layered network, e.g., a network having at least OSI model layers 2 and 3, and have MPLS Fast

Reroute functionality as standardized in IETF 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. 3 (showing that ZTE devices with MPLS Fast Reroute monitor and detect a

failure of a node and/or link associated with the Internet Protocol (IP) layer, *i.e.*, OSI model layer

3, in the communications network). 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

(showing that ZTE devices with MPLS Fast Reroute determine the occurrence of a quality of

service event, *i.e.*, a failure condition, such as packet loss and/or latency, of a node and/or link

associated with an IP address, thereby affecting network quality of service with particular effect

on the quality of real time application services). The method of providing broadband

communications over a multi-layered network of each of the Accused Products and Services

further comprises determining that the quality of service event occurred at a layer N in the OSI

reference model. *See* Ex. 3 (showing that ZTE devices with MPLS Fast Reroute determine that a

node and/or link associated with an IP address has failed in OSI model layer 3 thereby affecting

network quality of service). 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. *See* Ex. 3 (showing that ZTE devices with MPLS Fast Reroute respond to the quality of service event by changing the provisioning of the data traffic path at OSI model layer 2 which is less than OSI model layer 3 by switching the routing of packets to a pre-established backup LSP detour using a one-to-one backup method and/or backup LSP tunnel using a facility backup method). 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 (showing that ZTE devices with MPLS Fast Reroute send messages and/or notifications signaling that the data traffic path has changed to the backup LSP tunnel at OSI model layer 2).

29.   On information and belief, Rise 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. *See ¶* 24 above (explaining that CommWorks notified Rise of infringement by notice letter dated April 17, 2020); Ex. 1 (showing a "Rise Broadband" "Lead Network Engineer" performed "troubleshooting daily with multiple technologies … including … ZTE … switches & routers."); Ex. 2 (showing that ZTE devices running Router Operating System (ROS/ZXROS), including

the ZTE ZXCTN 6000 Packet Transport Networks Series, facilitate broadband communications over an OSI model multi-layered network, e.g., a network having at least OSI model layers 2 and 3, and have MPLS Fast Reroute functionality as standardized in IETF RFC 4090).

30.   On information and belief, Rise has committed the foregoing infringing activities without a license.

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

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COUNT II: INFRINGEMENT OF THE '465 PATENT BY RISE

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

33.   On information and belief, Rise 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, for example, the TP-Link Deco M4 Wireless Router (included in the "Accused Products and Services").

34.   For example, on information and belief, Rise has infringed 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. 4 (showing that the TP-Link "Deco M4 wireless router" is rented to Rise Broadband customers for a monthly fee); Ex. 5 (showing the "tp-link" "Deco M4" "AC1200 Whole Home Mesh Wi-Fi System" supports Wi-Fi Multimedia ("WMM")); Ex. 6 (showing that Rise's WMM compatible Access Points, such as the exemplary TP-Link Deco M4 Wireless Router, detect the priority of data frames in a network by mapping to the Access Category ("AC") of the Enhanced Distributed Channel Access ("EDCA") mechanism); *see also* Ex. 7 (showing another example in

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which Rise's 802.11-2007+ compatible Access Points detect priority data frames in a network by

mapping the AC of the EDCA mechanism). 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. 6

(showing, for example, that in Wi-Fi enabled modems and routers, Rise's WMM compatible

Access Points extract a bit pattern from a predetermined position in a data frame, such as in the

QoS Control field); Ex. 7 (showing, for example, that in Wi-Fi enabled modems and routers,

Rise's 802.11-2007+ compatible Access Points extract a bit pattern from a predetermined

position in a data 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. 6 (showing, for example, that Rise's WMM compatible Access Points compare

the extracted UP bit pattern with a search pattern, such as the Access Category ("AC")); Ex. 7

(showing, for example, that Rise's 802.11-2007+ compatible Access Points compare the

extracted TID bit pattern User Priority ("UP") with the Access Category ("AC") search pattern).

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. 6 (showing, for example, that Rise's WMM compatible Access Points identify

the priority Access Category ("AC") of the WMM Data frame if the UP of said frame matches

an AC search pattern); Ex. 7 (showing, for example, that Rise's 802.11-2007+ compatible

Access Points identify the priority Access Category ("AC") of the data frame if the TID UP bit

pattern matches an AC search pattern). 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. 6 (showing, for example, Rise's WMM compatible Access Points predetermine the

position of the bit pattern by inspecting the Frame Control field to anticipate which non-minimal

field has data present in the frame MAC Header so the offset of the UP bit pattern can be determined); Ex. 7 (showing, for example, Rise's 802.11-2007+ compatible Access Points predetermine the position of the bit pattern by inspecting the Frame Control field to anticipate which non-minimal field has data present in the frame MAC Header so the offset of the TID bit pattern can be determined).

35.   On information and belief, Rise 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. *See ¶* 24 above (explaining that CommWorks notified Rise of infringement by notice letter dated April 17, 2020); Ex. 4 (showing that the TP-Link "Deco M4 wireless router" is rented to Rise Broadband customers for a monthly fee); Ex. 5 (showing the "tp-link" "Deco M4" "AC1200 Whole Home Mesh Wi-Fi System" supports Wi-Fi Multimedia ("WMM")).

36.   On information and belief, Rise has committed the foregoing infringing activities without a license.

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

COUNT III: INFRINGEMENT OF THE '285 PATENT BY RISE

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

39.   On information and belief, Rise 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, for example, the TP-Link Deco M4 Wireless Router (included in the "Accused Products and Services").

40.   For example, on information and belief, Rise 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. 4 (showing that the TP-Link "Deco M4 wireless router" is rented to Rise Broadband customers for a monthly fee); Ex. 5 (showing the "tp-link" "Deco M4" "AC1200 Whole Home Mesh Wi-Fi System" has an accompanying Deco mobile application); Ex. 8 (showing the TP-Link Deco M4 wireless router supports Wi-Fi Protected Setup ("WPS") which is managed through the Deco mobile application); Ex. 9 (showing that Rise's WPS access points perform a process for provisioning between a wireless device and a network, such as a WLAN). 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. 9 (showing that, for example, WPS access points monitors Probe Request {WSC IE, PBC}, wherein said Probe Requests include an onset of a signal transmission and PBC operating parameter in the onset signal Probe Request {WSC IE PBC} transmitted from an in range wireless device (enrollee) seeking access to the network). 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. 9 (showing that, for example, WPS access points initiate provisioning of the wireless device if the tracked operating parameter (transmission of signal seeking access)

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occurs within the 120-second time period ("Walk Time")).

41.   On information and belief, Rise 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. *See ¶* 24 above

(explaining that CommWorks notified Rise of infringement by notice letter dated April 17,

2020); Ex. 4 (showing that the TP-Link "Deco M4 wireless router" is rented to Rise Broadband

customers for a monthly fee); Ex. 5 (showing the "tp-link" "Deco M4" "AC1200 Whole Home

Mesh Wi-Fi System" has an accompanying Deco mobile application); Ex. 8 (showing the TP-

Link Deco M4 wireless router supports Wi-Fi Protected Setup ("WPS") which is managed

through the Deco mobile application).

42.   On information and belief, Rise has committed the foregoing infringing activities without

a license.

43.   On information and belief, Rise knew the '285 Patent existed and knew of exemplary

infringing Rise products and services while committing the foregoing infringing acts thereby

willfully, wantonly and deliberately infringing the '285 Patent.

COUNT IV: INFRINGEMENT OF THE '979 PATENT BY RISE

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

45.   On information and belief, Rise 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, for example, the TP-Link Deco M4 Wireless Router (included in the "Accused Products and Services").

46.   For example, on information and belief, Rise has infringed and continues to infringe at least claim 1 of the '979 Patent by making, using, offering to sell, selling, and/or importing the Accused Products and Services, which include a provisioning process performed by a provisioning system having provisioning logic. *See* Ex. 4 (showing that the TP-Link "Deco M4 wireless router" is rented to Rise Broadband customers for a monthly fee); Ex. 5 (showing the "tp-link" "Deco M4" "AC1200 Whole Home Mesh Wi-Fi System" has an accompanying Deco mobile application); Ex. 8 (showing the TP-Link Deco M4 wireless router supports Wi-Fi Protected Setup ("WPS") which is managed through the Deco mobile application); Ex. 9 (showing, for example, that Rise's WPS access points, such as the exemplary TP-Link Deco M4 Wireless Router, include a provisioning system having a provisioning logic (i.e. software and/or hardware components used to implement) that performs the PushButton Configuration ("PBC") provisioning process). The provisioning process of the Accused Products and Services comprises tracking by the provisioning logic, an operating parameter of a first device, wherein the operating parameter of the first device comprises an onset of a signal transmission of the first device. *See* Ex. 9 (showing, for example, Rise's WPS access point's provisioning logic, i.e., Interface E, monitors a PBC operating parameter, such as an onset of a Probe Request {WSC IE PBC} sent by the first device (enrollee)). The provisioning process of the Accused Products and Services further comprises sending 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. 9 (showing that, for example, Rise's WPS access point's provisioning logic, such as Interface E sends a Probe Response {WSC IE, PBC} signal to initiate provisioning of the first device

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(enrollee) if the Probe Request {WSC IE PBC} occurs within the 120-second walk time).

47.   On information and belief, Rise 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. *See ¶* 24 above (explaining that CommWorks notified Rise of infringement by notice letter dated April 17, 2020); Ex. 4 (showing that the TP-Link "Deco M4 wireless router" is rented to Rise Broadband customers for a monthly fee); Ex. 5 (showing the "tp-link" "Deco M4" "AC1200 Whole Home Mesh Wi-Fi System" has an accompanying Deco mobile application); Ex. 8 (showing the TP-Link Deco M4 wireless router supports Wi-Fi Protected Setup ("WPS") which is managed through the Deco mobile application).

48.   On information and belief, Rise has committed the foregoing infringing activities without a license.

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

COUNT V: INFRINGEMENT OF THE '315 PATENT BY RISE

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

51.   On information and belief, Rise 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 ZTE devices

that run Router Operating System (ROS/ZXROS) and all other equipment utilizing substantially

similar methods of routing traffic used by Rise to provide services to its customers ("Accused

Products and Services").

52.   For example, on information and belief, Rise has infringed and continues to infringe at

least claim 1 of the '315 Patent by making, using, offering to sell, selling, and/or importing the

Accused Products and Services, which perform a method of routing a plurality of data packets

through a network. *See* Ex. 1 (showing a "Rise Broadband" "Lead Network Engineer"

performed "troubleshooting daily with multiple technologies … including … ZTE … switches &

routers."); Ex. 10 (showing that ZTE devices running "Router Operating System"

(ROS/ZXROS) support Quality of Service ("QOS"); Ex. 11 (showing ZTE devices running

ROS/ZXROS process and route data packets through a network, such as by classifying packets

of traffic based on QoS parameters). The method of routing a plurality of data packets through a

network comprises at an ingress edge unit: determines a set of classification parameters for each

of the plurality of data packets arriving at the ingress edge unit, wherein the set of classification

parameters includes destination in formation and one or more quality of service (QoS)

parameters for the respective data packet and wherein the destination information includes a

destination egress edge unit; and constructing a classification index including the QoS

parameters and information about a plurality of queues associated with the QoS parameter. *See*

Exs. 11-13 (showing that at an ingress edge unit of a router, ZTE devices running ROS/ZXROS

determine a set of QoS classification parameters, *e.g.*, IEEE 802.1p Class of Service (CoS)

priority values, for a data packet arriving at the ingress edge unit, and assign the packet to a CoS

queue, and that determined classification parameters include destination information wherein the

destination information includes a destination egress edge unit of the router, when for example,

data packets are assigned to a CoS Queue of a specified egress port on a specified egress edge

unit based on their QoS classification parameters, and that the ZTE devices running

ROS/ZXROS construct a classification index by using one or more mapping tables and/or

scheduler maps to associate QoS parameters of a data packet to a CoS queue of an egress port on

a destination egress edge unit, and assign varying weights to each of the CoS queues associated

with the egress port). The method of routing a plurality of data packets through a network

further comprises transporting the plurality of data packets and the classification index to the

destination egress edge unit; and at the destination egress edge unit, routing each of the plurality

of data packets to an associated destination egress port within the destination egress edge unit

based on the classification parameters determined at the ingress edge unit and without

reclassifying any data packet at the destination egress edge unit. *See* Exs. 11 and 14 (showing

that in the ZTE devices running ROS/ZXROS, the mapping tables and/or scheduler maps are

assigned to a designated one or more egress ports on a designated destination egress edge unit,

and that ZTE devices running ROS/ZXROS forward data packets to the designated egress port

on the destination egress edge unit according to the packets' QoS classification parameters, and

by default, the data packets are not reclassified at the destination egress port, *i.e.*, the QoS

classifiers are not remarked at the egress interface).

53.   On information and belief, Rise 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. *See ¶* 24 above

(explaining that CommWorks notified Rise of infringement by notice letter dated April 17,

2020); Ex. 1 (showing a "Rise Broadband" "Lead Network Engineer" performed

"troubleshooting daily with multiple technologies … including … ZTE … switches & routers.");

Ex. 10 (showing that ZTE devices running "Router Operating System" (ROS/ZXROS) support

Quality of Service ("QOS"); Ex. 11 (showing ZTE devices running ROS/ZXROS process and

route data packets through a network, such as by classifying packets of traffic based on QoS

parameters).

54.   On information and belief, Rise has committed the foregoing infringing activities without

a license.

55.   On information and belief, Rise knew the '315 Patent existed and knew of exemplary

infringing Rise products and services while committing the foregoing infringing acts while

committing the foregoing infringing acts, thereby willfully, wantonly and deliberately infringing

the '315 Patent.

PRAYER FOR RELIEF

WHEREFORE, CommWorks prays for judgment in its favor against Rise for the

following relief:

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

B.   Entry of judgment that Rise has infringed the Patents-in-Suit;

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

D.   An order permanently enjoining Rise from infringing the Patents-in-Suit;

E.   Award of compensatory damages adequate to compensate CommWorks for

Rise's infringement of the Patents-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 Rise 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: April 15, 2021   Respectfully submitted,

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