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

COMMWORKS SOLUTIONS, LLC,

Plaintiff,

v.

ASUSTEK COMPUTER INC.

Defendant.

Civil Action No. 2:24-cv-00931

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff CommWorks Solutions, LLC ("CommWorks" or "Plaintiff") files this complaint against Defendant ASUSTeK Computer Inc. ("ASUS" or "Defendant"), alleging, based on its own knowledge as to itself and its own actions, and based on information and belief as to all other matters, as follows:

NATURE OF THE ACTION

1. This is a patent infringement action for Defendant's infringement of the following United States Patents (collectively, the "Asserted Patents"), issued by the United States Patent and Trademark Office ("USPTO"):

	Patent No.	Title	Reference
1.	7,177,285	Time Based Wireless Access Provisioning	https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7177285, https://patentcenter.uspto.gov/applications/10961959
2.	7,463,596	Time Based Wireless Access Provisioning	https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7463596, https://patentcenter.uspto.gov/applications/11673513
3.	7,911,979	Time Based Access Provisioning System And Process	https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7911979, https://patentcenter.uspto.gov/applications/12323399

	Patent No.	Title	Reference
4.	RE44,904	Method For Contention Free Traffic Detection	https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/RE44904 , https://patentcenter.uspto.gov/applications/13171882
5.	7,027,465	Method For Contention Free Traffic Detection	https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7027465, https://patentcenter.uspto.gov/applications/10167986
6.	6,891,807	Time Based Wireless Access Provisioning	https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/6891807, https://patentcenter.uspto.gov/applications/10341847
7.	6,433,742	Diversity Antenna Structure For Wireless Communications	https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/6433742 https://patentcenter.uspto.gov/applications/09693465
8.	6,456,242	Conformal Box Antenna	https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/6456242 https://patentcenter.uspto.gov/applications/09799411
9.	6,456,245	Card-Based Diversity Antenna Structure For Wireless Communications	https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/6456245 https://patentcenter.uspto.gov/applications/09735977
10.	9,554,304	Scalable Media Access Control For Multi-Hop High Bandwidth Communications	https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/9554304 https://patentcenter.uspto.gov/applications/14090760

2. Plaintiff seeks monetary damages.

PARTIES

3. CommWorks is a limited liability company formed under the laws of the State of Georgia with its registered office address located in Alpharetta, Georgia (Fulton County).

4. On information and belief based on public information, Defendant ASUSTeK

Computer Inc. is a foreign company organized and existing under the laws of Taiwan, and has a principal place of business at No. 15, Li-Te Road, Beitou District, Taipei 112, Taiwan. ASUSTeK Computer Inc. may also be served with process by serving the Texas Secretary of State, 1019 Brazos Street, Austin, Texas 78701, as its agent for service because it engages in business in Texas but has not designated or maintained a resident agent for service of process in Texas as required by statute. This action arises out of that business.

5. Defendant describes itself as a "global technology leader" that is "known for the world's best motherboards and high-quality personal computers, monitors, graphics cards, routers and other technology solutions."[1] One of its American affiliates is ASUS Computer International.

6. Defendant and its affiliate share the same management, common ownership, advertising platforms, facilities, distribution chains and platforms, and accused product lines and products involving related technologies.

7. Defendant and its affiliate regularly contracts with customers regarding products made for or on behalf of those customers.

8. Thus, Defendant and its affiliate operates as a unitary business venture and is liable for the acts of patent infringement alleged herein.

JURISDICTION AND VENUE

9. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

10. This is an action for infringement of a United States patent arising under 35 U.S.C. §§ 271, 281, and 284–85, among others. This Court has subject matter jurisdiction of the action under

[1] *See ASUS History*, ASUS, *available at* https://www.asus.com/about-asus-history/ (last visited Nov. 7, 2024).

28 U.S.C. § 1331 and § 1338(a).

11. Defendant is subject to this Court's specific and general personal jurisdiction under due process due at least to Defendant's substantial business in this judicial district, in the State of Texas and in the United States, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly transacting, doing, and/or soliciting business, engaging in other persistent courses of conduct, or deriving substantial revenue from goods and services provided to individuals in Texas and in this District.

12. Specifically, Defendant intends to do and does business in, and has committed acts of infringement in this District, in this State of Texas, and in the United States, directly, through intermediaries, by contributing to and through its inducement of third parties, and offering its products or services, including those accused of infringement here, to customers and potential customers located in this District.

13. Defendant has purposefully directed infringing activities at residents of the State of Texas, and this litigation results from those infringing activities. Defendant regularly sells (either directly or indirectly), its products within this District. For example, upon information and belief, Defendant has placed its products into the stream of commerce *via* an affiliate, *see* ¶¶ 5-8, *supra*, with the knowledge or understanding that such products are being sold in this Judicial District and the State of Texas. Defendant is subject to this Court's specific and/or general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due to its substantial and pervasive business in this State and District, including its infringing activities alleged herein, from which Defendant derives substantial revenue from goods sold to residents and consumers.

14. Defendant sells, offers for sale, uses, makes and/or imports products that are and have been used, offered for sale, sold, and purchased in the Eastern District of Texas, and Defendant

has committed acts of infringement in the Eastern District of Texas, has conducted business in the Eastern District of Texas, and/or has engaged in continuous and systematic activities in the Eastern District of Texas.

15. Venus is proper in this District pursuant to 28 U.S.C. § 1391 because, among other things, Defendant is not a resident of the United States, and thus may be sued in any judicial district, including this one, pursuant to 28 U.S.C. § 1391(c)(3). See also *In re: HTC Corporation*, 889 F.3d 1349, 1357 (Fed. Cir. 2018) (holding that "[t]he Court's recent decision in *TC Heartland* does not alter" the alien-venue rule).

THE ACCUSED PRODUCTS

16. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

17. Defendant uses, causes to be used, manufactures, provides, supplies, or distributes one or more ASUS Systems-on-Chips (SoCs), and/or devices, including, but not limited to the "Accused Products," set forth below:

- The ASUS Wi-Fi Routers, ZenWiFi WiFi System, and ROG – Republic of Gamers (collectively, the "Wi-Fi Mesh Accused Products"):

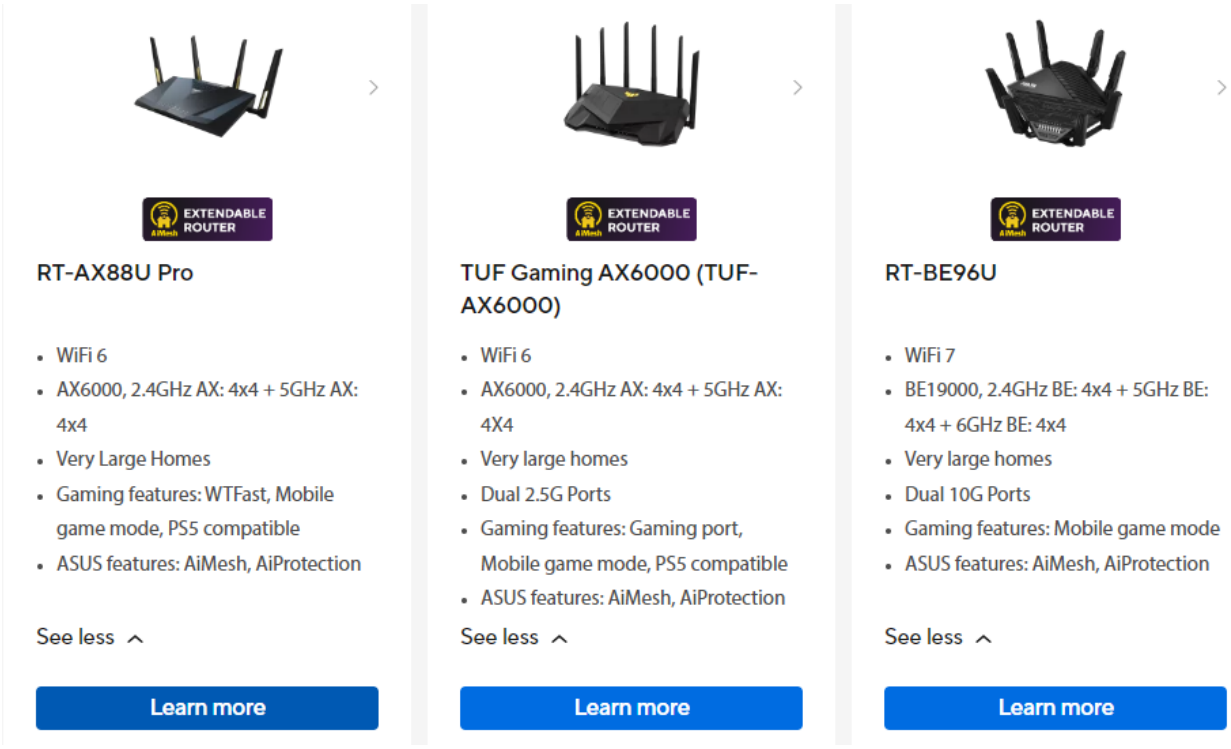


Figure 1A (*ASUS Gaming Routers*, ASUS, *available at* https://www.asus.com/networking-iot-servers/wifi-routers/all-series/filter?Series=ASUS-Gaming-Routers (last visited Nov. 7, 2024)).

Figure 1B (*ASUS Zen WiFi Systems*, ASUS, *available at* https://www.asus.com/networking-iot-servers/whole-home-mesh-wifi-system/all-series/filter?Series=ZenWiFi-WiFi-Systems (last visited Nov. 7, 2024)).

- The ASUS Lyra Trio:

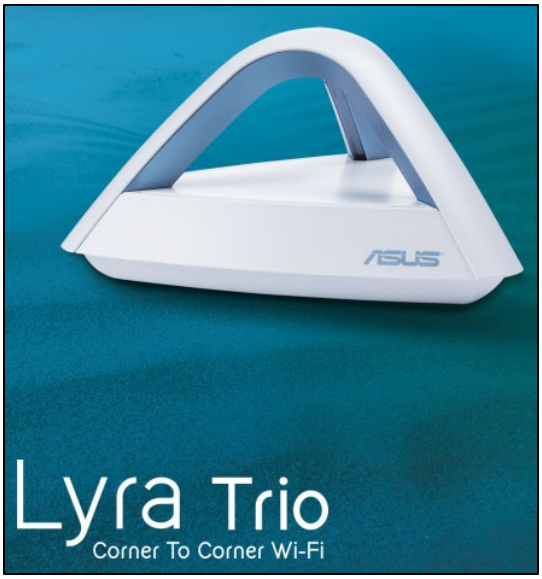


Figure 2 (*Lyra Trio: Corner to Corner Wi-Fi*, ASUS, *available at* A15964_Lyra_Trio_booklet_130x90mm_QSG_V4_WEB.pdf (last visited Nov. 13, 2024)).

- The ASUS CM32 WiFi Router:

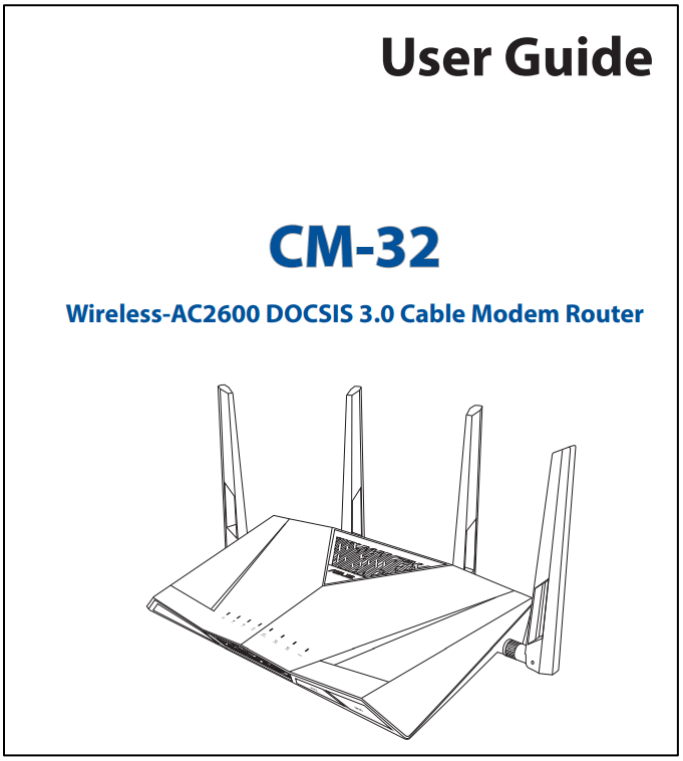


Figure 3 (*CM-32: Wireless-AC2600 DOCSIS 3.0 Cable Modem Router*, ASUS, *available at* https://dlsvr04.asus.com.cn/pub/ASUS/wireless/CM-32/E15854_CM-32_UM_V5_WEB.pdf (last visited Nov. 13, 2024)).

- The ASUS PCE-AC56:

Figure 4 (*PCE-AC56 2x2 802.11ac Wifi AC1300 PC*, ASUS, *available at* https://www.asus.com/us/networking-iot-servers/adapters/all-series/pceac56/ (last visited Nov. 7, 2024)

- ASUS SoCs, and/or devices supporting **Wi-Fi Multimedia and 802.11-2007+** functionality, including, but not limited to: the RT-BE Series, ROG Rapture GT-BE Series, ASUS ZenWiFi BQ Series, ASUS ZenWiFi BT Series, ROG STRIX GS-AX Series, TUF Gaming AX Series, RT-AX Series, RT-AXE Series, RT-AC Series, BRT-AC Series, ASUS ZenWiFi BD Series, ASUS ZenWiFi ET Series, ASUS ZenWiFi AX Hybrid Series, ASUS ZenWiFi XD Series, ASUS ZenWiFi AC Mini Series, 4G-AX Series, 4G-AC Series, DSL-AX Series, DSL-AC Series. The RT-BE Series is illustrated below as exemplary of the Accused Products supporting Wi-Fi Multimedia and 802.11-2007+ functionality.

- **RT-BE58U**

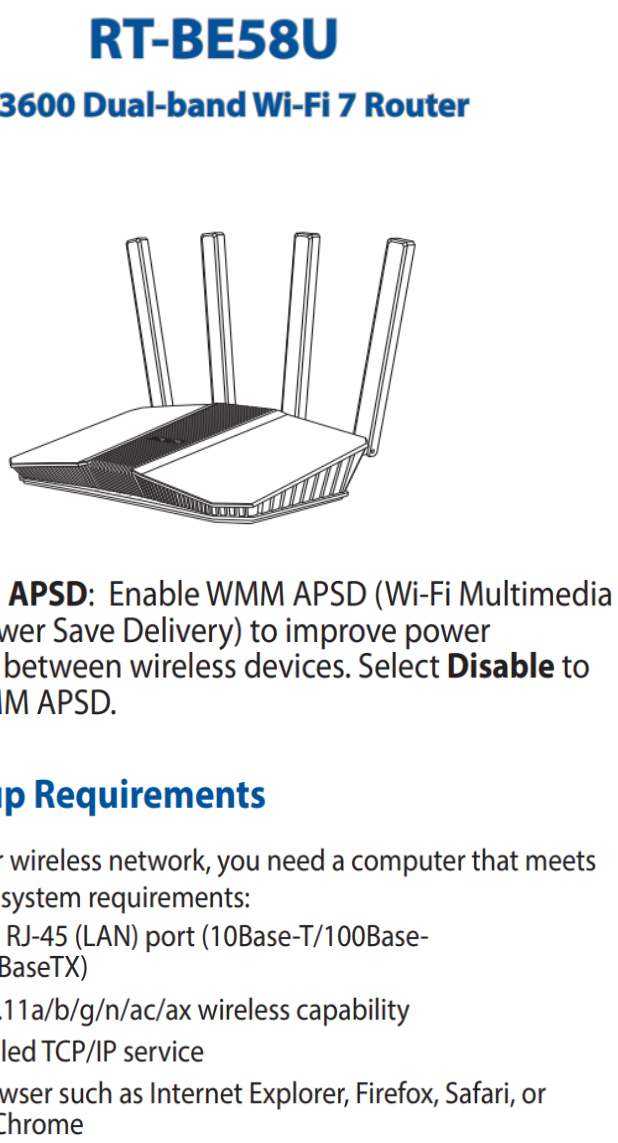
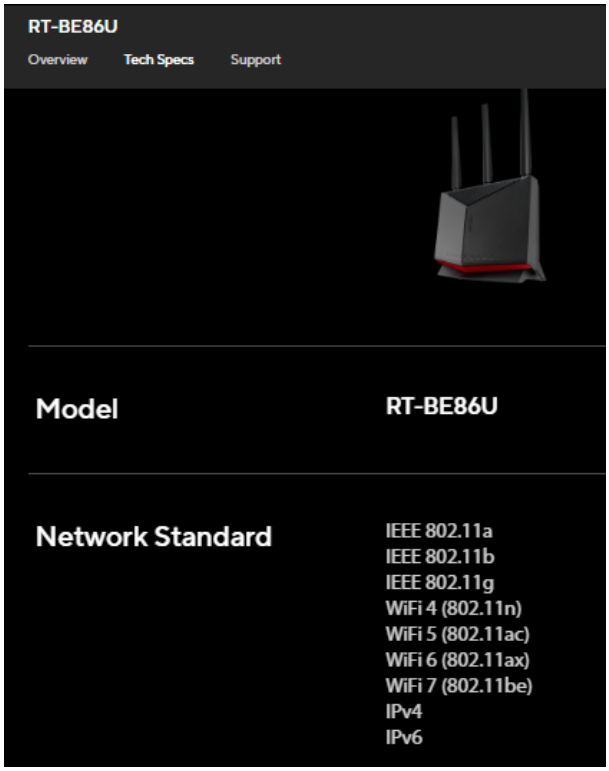


Figure 5 (*User Guide: RT-BE58U: BE3600 Dual-band Wi-Fi 7 Router*, ASUS, *available at* https://dlcdnets.asus.com/pub/ASUS/wireless/RT-BE58U/E23503_RT-BE58U_UM_WEB.pdf?model=RT-BE58U (last visited Nov. 7, 2024)).

- ASUS devices supporting **Wi-Fi Protected Setup (WPS)** functionality, including, but not limited to, the RT-BE Series, ROG Rapture GT-BE Series, TUF Gaming BE Series, ASUS ZenWiFi BQ Series, ASUS ZenWiFi BT Series, ROG Rapture GT-AXE Series, ROG Rapture GT Series, ROG Rapture GT-AX Series, ROG STRIX GS-AX Series, TUF Gaming AX

Series, RT-AX Series, RT-AXE Series, RT-AC Series, BRT-AC Series, ASUS ZenWiFi BD Series, ASUS ZenWiFi ET Series, ASUS ZenWiFi AX Hybrid Series, ASUS ZenWiFi XD Series, ASUS ZenWiFi AC Mini Series, 4G-N Series, 4G-AX Series, CMAX Series, 4G-AC Series, DSL-AX Series, DSL-AC Series. The RT-BE86U is listed below as an exemplary ASUS device supporting WPS functionality:

- **RT-BE86U**



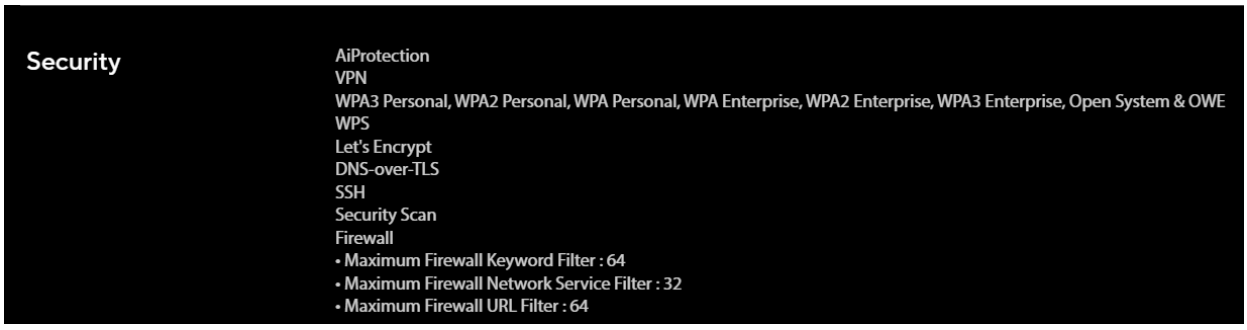


Figure 6 (*RT-BE86U*, ASUS, *available at* https://www.asus.com/networking-iot-servers/wifi-routers/asus-wifi-routers/rt-be86u/techspec/ (last visited Nov. 7, 2024)).

18. On information and belief based on public information, Defendant provides information and assistance to their customers to enable them to use the Accused Products in an infringing manner as described below.

19. For these reasons and the additional reasons detailed below, the Accused Products practice at least one claim of each of the Asserted Patents.

20. By letter dated April 29, 2020, addressed to Jacky Lu and Weifen Liu (Head of Legal Department) (the "Notice Letter"), Defendant received notice of its infringement of CommWorks' patents, including the Asserted Patents.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 7,177,285

21. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

22. The USPTO duly issued U.S. Patent No. 7,177,285 (the "'285 patent") on February 13, 2007, after full and fair examination of Application No. 10/961,959 which was filed October 8, 2004. The '285 patent is entitled "Time Based Wireless Access Provisioning."

23. CommWorks owns all substantial rights, interest, and title in and to the '285 patent, including the sole and exclusive right to prosecute this action and enforce the '285 patent against infringers and to collect damages for all relevant times.

24. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '285 patent.

25. The claims of the '285 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network

provisioning systems. The written description of the '285 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

26. For example, 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. '285 patent 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.

27. 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. Moreover, the structure of the devices described in the '285 patent was not conventional at the time of the invention. Specifically, a device such as an access point, comprising a provisioning activation button, time-based provisioning logic, access control list, wired network logic, a wired network connection and a transceiver were not conventional (or even available) at the time of the invention.

28. Defendant has directly infringed the '285 patent by making, using, offering to sell, selling, and/or importing the Accused Products identified above.

29. Defendant has directly infringed, either literally or under the doctrine of equivalents, at least claim 1 of the '285 patent, as detailed in **Exhibit A** to this Complaint (Evidence of Use Regarding U.S. Patent No. 7,177,285).

30. On information and belief based on public information, Defendant 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 Protected Setup ("WPS") compatible devices, such as, for example, the ASUS RT-BE86U (included in the "Accused Products").

31. For example, as detailed in Exhibit A, Defendant has infringed at least claim 1 of the '285 patent by making, using, offering to sell, selling, and/or importing the Accused Products, which perform a process for provisioning between a wireless device and a network. *See* Exhibit A. 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. *Id.* 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. *Id*.

32. Defendant has also indirectly infringed the ’285 patent by inducing others to directly infringe the ’285 patent. Defendant has induced distributors and end-users, including, but not limited to, Defendant’s employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the ’285 patent by providing or requiring use of the Accused Products. Defendant has taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the ’285 patent, including, for example, claim 1 of the ’285 patent. Such steps by Defendant include, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant has performed these steps, which constitute induced infringement with the knowledge of the ’285 patent and with the knowledge that the induced acts constitute infringement. Defendant has been aware that the normal and customary use of the Accused Products by others would infringe the ’285 patent.

33. Defendant has also indirectly infringed by contributing to the infringement of the ’285 patent. Defendant has contributed to the direct infringement of the ’285 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the ’285 patent, including, for example, claim 1 of the ’285 patent. The special features constitute a material part of the invention of one or more of the claims of the ’285 patent and are not staple articles of commerce suitable for substantial non-

infringing use.

34. Defendant had knowledge of the '285 patent when it received the Notice Letter in April 2020.

35. Furthermore, on information and belief based on public information, Defendant has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of CommWorks' patent rights.

36. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

37. Defendant's direct infringement of one or more claims of the '285 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

38. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that compensates it for such infringements, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 7,463,596

39. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

40. The USPTO duly issued U.S. Patent No. 7,463,596 (the "'596 patent") on December 9, 2008, after full and fair examination of Application No. 11/673,513, which was filed on February 9, 2007. The '596 patent is entitled "Time Based Wireless Access Provisioning."

41. CommWorks owns all substantial rights, interest, and title in and to the '596 patent, including the sole and exclusive right to prosecute this action and enforce the '596 patent against

infringers and to collect damages for all relevant times.

42. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '596 patent.

43. The claims of the '596 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

44. The written description of the '596 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

45. For example, 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. '596 patent 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.

46. The invention of the '596 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 '596 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 '596 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. Moreover, the structure of the devices described in the '596 patent was not conventional at the time of the invention. Specifically, a device such as an access point, comprising a provisioning activation button, time-based provisioning logic, access control list, wired network logic, a wired network connection and a transceiver were not conventional (or even available) at the time of the invention.

47. Defendant has directly infringed the '596 patent by making, using, offering to sell, selling, and/or importing the Accused Products identified above.

48. Defendant has directly infringed, either literally or under the doctrine of equivalents, at least claim 1 of the '596 patent, as detailed in **Exhibit B** to this Complaint (Evidence of Use Regarding U.S. Patent No. 7,463,596).

49. On information and belief based on public information, Defendant 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 Protected

Setup ("WPS") compatible devices, such as, for example, the ASUS RT-BE86U (included in the "Accused Products").

50. For example, as detailed in Exhibit B, Defendant, using the Accused Products, has infringed at least claim 1 of the '596 patent by making, using, offering to sell, selling, and/or importing the Accused Products, which perform a process for associating devices. *See* Exhibit B. 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. *Id.* 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. *Id.*

51. Defendant has also indirectly infringed the '596 patent by inducing others to directly infringe the '596 patent. Defendant has induced distributors and end-users, including, but not limited to, Defendant's employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the '596 patent by providing or requiring use of the Accused Products. Defendant has taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '596 patent, including, for example, claim 1 of the '596 patent. Such steps by Defendant include, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant has performed these steps, which constitute induced infringement with the knowledge of the '596 patent and with the knowledge that the induced acts constitute infringement. Defendant has been aware that the normal and

customary use of the Accused Products by others would infringe the '596 patent.

52. Defendant has also indirectly infringed by contributing to the infringement of the '596 patent. Defendant has contributed to the direct infringement of the '596 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '596 patent, including, for example, claim 1 of the '596 patent. The special features constitute a material part of the invention of one or more of the claims of the '596 patent and are not staple articles of commerce suitable for substantial non-infringing use.

53. Defendant had knowledge of the '596 patent when it received the Notice Letter in April 2020.

54. Furthermore, on information and belief based on public information, Defendant has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of CommWorks' patent rights.

55. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

56. Defendant's direct infringement of one or more claims of the '596 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

57. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that compensates it for such infringements, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 7,911,979

58. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

59. The USPTO duly issued U.S. Patent No. 7,911,979 (the "'979 patent") on March 22, 2011, after full and fair examination of Application No. 12/323,399 which was filed on November 25, 2008. The '979 patent is entitled "Time Based Access Provisioning System And Process." A Certificate of Correction was issued on July 19, 2011.

60. CommWorks owns all substantial rights, interest, and title in and to the '979 patent, including the sole and exclusive right to prosecute this action and enforce the '979 patent against infringers and to collect damages for all relevant times.

61. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '979 patent.

62. The claims of the '979 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

63. The written description of the '979 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

64. For example, 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. '979 patent 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.

65. 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. Moreover, the structure of the devices described in the '979 patent was not conventional at the time of the invention. Specifically, a device such as an access point, comprising a provisioning activation button, time-based provisioning logic, access control list, wired network logic, a wired network connection and a transceiver were not conventional (or even available) at the time of the invention.

66. Defendant has directly infringed the '979 patent by importing, selling, manufacturing, offering to sell, using, providing, supplying, or distributing the Accused Products identified above.

67. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 19 of the '979 patent, as detailed in **Exhibit C** to this Complaint (Evidence of Use Regarding U.S. Patent No. 7,911,979).

68. On information and belief based on public information, Defendant 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 Protected Setup ("WPS") compatible devices, such as, for example, the ASUS RT-BE86U (included in the "Accused Products").

69. For example, as detailed in Exhibit C, Defendant, using the Accused Products, has infringed at least claim 19 of the '979 patent by making, using, offering to sell, selling, and/or importing the Accused Products, which perform a provisioning process performed by a provisioning system having provisioning logic. *See* Exhibit C. The provisioning process performed comprises tracking, by the provisioning logic, 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. *Id.* The provisioning process performed in the Accused Products 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. *Id.*

70. Defendant has also indirectly infringed the '979 patent by inducing others to directly infringe the '979 patent. Defendant has induced distributors and end-users, including, but not limited to, Defendant's employees, partners, contractors, or customers, to directly infringe, either

literally or under the doctrine of equivalents, the '979 patent by providing or requiring use of the Accused Products. Defendant has taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '979 patent, including, for example, claim 19 of the '979 patent. Such steps by Defendant include, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant has performed these steps, which constitute induced infringement with the knowledge of the '979 patent and with the knowledge that the induced acts constitute infringement. Defendant has been aware that the normal and customary use of the Accused Products by others would infringe the '979 patent.

71. Defendant has also indirectly infringed by contributing to the infringement of the '979 patent. Defendant has contributed to the direct infringement of the '979 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '979 patent, including, for example, claim 19 of the '979 patent. The special features constitute a material part of the invention of one or more of the claims of the '979 patent and are not staple articles of commerce suitable for substantial non-infringing use.

72. Defendant had knowledge of the '979 patent when it received the Notice Letter in April 2020.

73. Furthermore, on information and belief based on public information, Defendant has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of CommWorks' patent rights.

74. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

75. Defendant's direct infringement of one or more claims of the '979 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

76. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that compensates it for such infringements, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. RE44,904

77. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

78. The USPTO duly and lawfully reissued U.S. Patent No. RE44,904 (the "'904 patent") on May 20, 2014. The '904 patent is entitled "Method For Contention Free Traffic Detection."

79. CommWorks owns all substantial rights, interest, and title in and to the '904 patent, including the sole and exclusive right to prosecute this action and enforce the '904 patent against infringers and to collect damages for all relevant times.

80. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '904 patent.

81. The claims of the '904 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

82. The written description of the '904 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

83. For example, at the time of the invention, "conventionally … transmission differentiation based on priority was not conducted at all." '904 patent 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. 1:63-2:2. This measure was very complex, took a long time, and required a large amount of processing, especially for complex tunneling protocols. *Id.* at col. 2:5-8. 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. 2:8-14. 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. 2:20-25.

84. The invention of the '904 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. 2:29-32, 3:2-4, 3:52-53. The methods of the invention of the '904 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. 2:62-65. The methods of the invention of the '904 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. 3:5-8, 3:14-21. 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. 3:22-31.

85. Defendant has directly infringed the '904 patent by importing, selling, manufacturing, offering to sell, using, providing, supplying, or distributing the Accused Products identified above.

86. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 7 of the '904 patent, as detailed in **Exhibit D** to this Complaint (Evidence of Use Regarding U.S. Patent No. RE44,904).

87. On information and belief based on public information, Defendant, using the Accused Products, has infringed the '904 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by performing methods for contention free traffic detection using Wi-Fi Multimedia ("WMM") and/or 802.11-2007+ compatible chips, such as, for example, the ASUS RT-BE Series (included in the "Accused Products").

88. For example, as detailed in Exhibit D, Defendant, using the Accused Products, has infringed at least claim 7 of the '904 patent by performing a method comprising extracting a bit pattern from a predetermined position in a frame. *See* Exhibit D. The method further comprises comparing said extracted bit pattern with a search pattern. *Id.* The method further comprises identifying a received frame as a priority frame in case said extracted bit pattern matches with said search pattern. *Id.* The method further comprises forwarding said received frame to a high priority queue in case said frame is detected to be a high priority frame during a special period for sending priority traffic. *Id.* The method further comprises adjusting the duration of the special period for sending priority traffic according statistic information regarding sent priority frames. *Id.*

89. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that compensates it for such infringements, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT V: INFRINGEMENT OF U.S. PATENT NO. 7,027,465

90. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

91. The USPTO duly issued U.S. Patent No. 7,027,465 (the "'465 patent") on April 11, 2006, after full and fair examination of Application No. 10/167,986 which was filed on June 11, 2002. The '465 patent is entitled "Method For Contention Free Traffic Detection."

92. CommWorks owns all substantial rights, interest, and title in and to the '465 patent, including the sole and exclusive right to prosecute this action and enforce the '465 patent against infringers and to collect damages for all relevant times.

93. CommWorks or its predecessors-in-interest have satisfied all statutory obligations

required to collect pre-filing damages for the full period allowed by law for infringement of the '465 patent.

94. The claims of the '465 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

95. The written description of the '465 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

96. For example, at the time of the invention, "conventionally … transmission differentiation based on priority was not conducted at all." '465 patent 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.

97. 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.

98. Defendant has directly infringed the '465 patent by importing, selling, manufacturing, offering to sell, using, providing, supplying, or distributing the Accused Products identified above.

99. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 1 of the '465 patent, as detailed in **Exhibit E** to this Complaint (Evidence of Use Regarding U.S. Patent No. 7,027,465).

100. On information and belief based on public information, Defendant, using the Accused Products, has infringed the '465 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by performing methods for contention free traffic detection using Wi-Fi

Multimedia (WMM) and/or 802.11-2007+ compatible chips and devices, such as, for example, the ASUS RT-BE Series (included in the "Accused Products").

101. For example, as detailed in Exhibit E, Defendant has infringed at least claim 1 of the '465 patent by performing a method for detecting priority of data frames in a network. *See* Exhibit E. The method for detecting priority of data frames comprises the step of extracting a bit pattern from a predetermined position in a frame. *Id.* The method for detecting priority of data frames further comprises the step of comparing said extracted bit pattern with a search pattern. *Id.* 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. *Id.* 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. *Id*.

102. Defendant has also indirectly infringed the '465 patent by inducing others to directly infringe the '465 patent. Defendant has induced distributors and end-users, including, but not limited to, Defendant's employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the '465 patent by providing or requiring use of the Accused Products. Defendant has taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '465 patent, including, for example, claim 1 of the '465 patent. Such steps by Defendant include, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant has performed these steps, which constitute induced infringement with the knowledge of the '465 patent and with the knowledge

that the induced acts constitute infringement. Defendant has been aware that the normal and customary use of the Accused Products by others would infringe the '465 patent.

103. Defendant has also indirectly infringed by contributing to the infringement of the '465 patent. Defendant has contributed to the direct infringement of the '465 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '465 patent, including, for example, claim 1 of the '465 patent. The special features constitute a material part of the invention of one or more of the claims of the '465 patent and are not staple articles of commerce suitable for substantial non-infringing use.

104. Defendant had knowledge of the '465 patent when it received the Notice Letter in April 2020.

105. Furthermore, on information and belief based on public information, Defendant has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of CommWorks' patent rights.

106. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

107. Defendant's direct infringement of one or more claims of the '465 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

108. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that compensates it for such infringements, which by law cannot be less than a reasonable royalty, together with interest

and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT VI: INFRINGEMENT OF U.S. PATENT NO. 6,891,807

109. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

110. The USPTO duly issued U.S. Patent No. 6,891,807 (the "'807 patent") on May 10, 2005, after full and fair examination of Application No. 10/341,847 which was filed on January 13, 2003. The '807 patent is entitled "Time Based Wireless Access Provisioning."

111. CommWorks owns all substantial rights, interest, and title in and to the '807 patent, including the sole and exclusive right to prosecute this action and enforce the '807 patent against infringers and to collect damages for all relevant times.

112. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '807 patent.

113. The claims of the '807 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

114. The written description of the '807 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

115. For example, 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. '807 patent at col. 3:5-18. 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. 3:19-28.

116. The invention of the '807 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. 3:29-33. The invention of the '807 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. 3:34-41. The invention of the '807 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. 3:42-50. Moreover, the structure of the devices described in the '807 patent was not conventional at the time of the invention. Specifically, a device such as an access point, comprising a provisioning activation button, time-based provisioning logic, access control list, wired network logic, a wired network connection and a transceiver were not conventional (or even available) at the time of the

invention.

117. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 17 of the '807 patent, as detailed in **Exhibit F** to this Complaint (Evidence of Use Regarding U.S. Patent No. 6,891,807).

118. On information and belief based on public information, Defendant 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 Protected Setup ("WPS") compatible consumer electronics chips, such as, for example, the ASUS RT-BE86U (included in the "Accused Products").

119. For example, as detailed in Exhibit F, Defendant has infringed at least claim 17 of the '807 patent by making, using, offering to sell, selling, and/or importing the Accused Products, which include a time based network access provisioning system between a wireless device and a network. *See* Exhibit F. 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. *Id*. 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 activatable time interval. *Id.*

120. Defendant has also indirectly infringed the '807 patent by inducing others to directly infringe the '807 patent. Defendant has induced distributors and end-users, including, but not limited to, Defendant's employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the '807 patent by providing or requiring use of the Accused Products. Defendant has taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that

infringes one or more claims of the '807 patent, including, for example, claim 17 of the '807 patent. Such steps by Defendant include, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant has performed these steps, which constitute induced infringement with the knowledge of the '807 patent and with the knowledge that the induced acts constitute infringement. Defendant has been aware that the normal and customary use of the Accused Products by others would infringe the '807 patent.

121. Defendant has also indirectly infringed by contributing to the infringement of the '807 patent. Defendant has contributed to the direct infringement of the '807 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '807 patent, including, for example, claim 17 of the '807 patent. The special features constitute a material part of the invention of one or more of the claims of the '807 patent and are not staple articles of commerce suitable for substantial non-infringing use.

122. Defendant had knowledge of the '807 patent when it received the Notice Letter in April 2020.

123. Furthermore, on information and belief based on public information, Defendant has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of CommWorks' patent rights.

124. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

125. Defendant's direct infringement of one or more claims of the '807 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

126. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that compensates it for such infringements, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284

COUNT VII: INFRINGEMENT OF U.S. PATENT NO. 6,433,742

127. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

128. The USPTO duly issued U.S. Patent No. 6,433,742 (the "'742 patent") on August 13, 2002, after full and fair examination of Application No. 09/693,465 which was filed on October 19, 2000. The '742 patent is entitled "Diversity Antenna Structure for Wireless Communications."

129. CommWorks owns all substantial rights, interest, and title in and to the '742 patent, including the sole and exclusive right to prosecute this action and enforce the '742 patent against infringers and to collect damages for all relevant times.

130. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '742 patent.

131. The claims of the '742 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

132. The written description of the ’742 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

133. For example, at the time of the invention, wireless access to data networks through antenna structures was not yet conventional. Then existent antenna structures employing diversity techniques, or employing multiple receiver antenna elements to selectively receive a signal from more than one direction, were not only expensive, but physically large structures that used coaxial cable connectors. ’742 patent at 1:25-39. Such structures were not suitable for residential and office use. *Id.* at col. 1:39-42.

134. The invention of the ’742 patent improved upon existent network provisioning systems by enabling antenna structures to have the active circuity located on the underside of the top polyhedron facet, thereby simplifying signal routing and eliminating the need for coaxial antenna connections. *Id.* at col. 4:39-44; 6:43-46. It also provides a diversity antenna structure comprising a dome with a plurality of facets and plurality of antenna elements. *Id.* at 1:45-50.

135. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 1 of the ’742 patent, as detailed in **Exhibit G** to this Complaint (Evidence of Use Regarding U.S. Patent No. 6,433,742).

136. On information and belief based on public information, Defendant has infringed the ’742 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 the ASUS Lyra Trio (included in the “Accused Products”).

137. For example, as detailed in Exhibit G, Defendant has infringed at least claim 1 of the '742 patent by making, using, offering to sell, selling, and/or importing the Accused Products, which include a diversity antenna structure comprising a dome having a plurality of positionally non-adjustable facets. *See* Exhibit G. The diversity antenna structure also comprises at least two, but not more than six antenna elements attached to the dome with the antenna elements being arranged and configured so that the antenna elements together provide substantially full coverage over a hemispherical region. *Id*. At least one facet of the dome of the diversity antenna structure has located thereon at least one antenna element. *Id.* The diversity antenna elements are also configured to achieve diversity in a local multipath environment that is created when a signal reflects from objects in the local area multipath environment. *Id.*

138. Defendant has also indirectly infringed the '742 patent by inducing others to directly infringe the '742 patent. Defendant has induced distributors and end-users, including, but not limited to, Defendant's employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the '742 patent by providing or requiring use of the Accused Products. Defendant has taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '742 patent, including, for example, claim 1 of the '742 patent. Such steps by Defendant include, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant has performed these steps, which constitute induced infringement with the knowledge of the '742 patent and with the knowledge that the induced acts constitute infringement. Defendant has been aware that the normal and

customary use of the Accused Products by others would infringe the '742 patent.

139. Defendant has also indirectly infringed by contributing to the infringement of the '742 patent. Defendant has contributed to the direct infringement of the '742 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '742 patent, including, for example, claim 1 of the '742 patent. The special features constitute a material part of the invention of one or more of the claims of the '742 patent and are not staple articles of commerce suitable for substantial non-infringing use.

140. Defendant had knowledge of the '742 patent when it received the Notice Letter in April 2020.

141. Furthermore, on information and belief based on public information, Defendant has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of CommWorks' patent rights.

142. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

143. Defendant's direct infringement of one or more claims of the '742 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

144. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that compensates it for such infringements, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT VIII: INFRINGEMENT OF U.S. PATENT NO. 6,456,242

145. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

146. The USPTO duly issued U.S. Patent No. 6,456,242 (the "'242 patent") on September 24, 2002, after full and fair examination of Application No. 09/799,411 which was filed on March 5, 2001. The '242 patent is entitled "Conformal Box Antenna."

147. CommWorks owns all substantial rights, interest, and title in and to the '242 patent, including the sole and exclusive right to prosecute this action and enforce the '242 patent against infringers and to collect damages for all relevant times.

148. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '242 patent.

149. The claims of the '242 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

150. The written description of the '242 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

151. For example, at the time of the invention wireless access to data networks through antenna structures was not yet conventional. Then existent antenna structures employing diversity techniques were not only expensive, but physically large structures that used coaxial cable

connectors. '242 patent, at 1:34-37. Such structures were not suitable for residential and office use and could not be easily mounted or attached to devices that needed to communicate in a WLAN. *Id.* at 1:37-42.

152. The invention of the '242 patent improved upon existent network provisioning systems by enabling antenna structures to have the active circuity located on the backside of the antenna assembly, which allowed the active circuitry to interface directly with the antenna elements thereby simplifying signal routing and eliminating the need for coaxial antenna connections. *Id.* at 6:33-38. This location also minimizes signal losses and allows the antenna elements to connect almost immediately to the active circuitry. *Id.* at 6:42-49.

153. Defendant has directly infringed the '242 patent by importing, selling, manufacturing, offering to sell, using, providing, supplying, or distributing the Accused Products identified above.

154. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 1 of the '242 patent, as detailed in **Exhibit H** to this Complaint (Evidence of Use Regarding U.S. Patent No. 6,456,242).

155. On information and belief based on public information, Defendant has infringed the '242 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 such as, for example, the ASUS CM32 WiFi Router (included in the "Accused Products").

156. For example, as detailed in Exhibit H, Defendant, using the Accused Products, has infringed at least claim 1 of the '242 patent by making, using, offering to sell, selling, and/or importing the Accused Products, which comprise an antenna assembly. *See* Exhibit H. The antenna assembly comprises a portion of a first outer wall of a consumer electronics device housing that houses an electric device a need to communicate wirelessly. *Id.* The antenna assembly further

comprises a portion of a second outer wall of the consumer electronics device housing, wherein the first and second outer walls are noncoplanar. *Id.* At least two antenna elements with a first of the at least two antenna elements are attached to an exterior surface of the portion of the first outer wall; a second of the at least two elements is attached to an exterior surface of the portion of the outer second wall. *Id.* Active circuitry is attached to an interior surface of the at least one of the portion of the first outer wall and the portion of the second outer wall and is coupled to the at least two antenna elements. *Id.* At least two of the antenna elements are configured to achieve diversity in a local area multipath environment that is created when a signal reflects from objects in the local area multipath environment. *Id.*

157. Defendant has also indirectly infringed the ’242 patent by inducing others to directly infringe the ’242 patent. Defendant has induced distributors and end-users, including, but not limited to, Defendant’s employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the ’242 patent by providing or requiring use of the Accused Products. Defendant has taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the ’242 patent, including, for example, claim 1 of the ’242 patent. Such steps by Defendant include, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant has performed these steps, which constitute induced infringement with the knowledge of the ’242 patent and with the knowledge that the induced acts constitute infringement. Defendant has been aware that the normal and customary use of the Accused Products by others would infringe the ’242 patent.

158. Defendant has also indirectly infringed by contributing to the infringement of the '242 patent. Defendant has contributed to the direct infringement of the '242 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '242 patent, including, for example, claim 1 of the '242 patent. The special features constitute a material part of the invention of one or more of the claims of the '242 patent and are not staple articles of commerce suitable for substantial non-infringing use.

159. Defendant had knowledge of the '242 patent when it received the Notice Letter in April 2020.

160. Furthermore, on information and belief based on public information, Defendant has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of CommWorks' patent rights.

161. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

162. Defendant's direct infringement of one or more claims of the '242 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

163. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that compensates it for such infringements, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT IX: INFRINGEMENT OF U.S. PATENT NO. 6,456,245

164. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

165. The USPTO duly issued U.S. Patent No. 6,456,245 (the "'245 patent") on September 24, 2002, after full and fair examination of Application No. 09/735,977 which was filed on December 13, 2000. The '245 patent is entitled "Card-Based Diversity Antenna Structure for Wireless Communications."

166. CommWorks owns all substantial rights, interest, and title in and to the '245 patent, including the sole and exclusive right to prosecute this action and enforce the '245 patent against infringers and to collect damages for all relevant times.

167. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '245 patent.

168. The claims of the '245 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

169. The written description of the '245 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

170. For example, at the time of the invention wireless access to data networks through antenna structures was not yet conventional. Then existent antenna structures employing diversity

techniques were not only expensive, but physically large structures that used coaxial cable connectors. '245 patent, at 1:36-39. Such structures were not suitable for residential and office use and could not be easily mounted or attached to devices that needed to communicate in a WLAN. *Id.* at 1:39-41.

171. The invention of the '245 patent improved upon existent network provisioning systems by locating the active circuity on the card to interface directly with the antenna elements to simplify signal routing and eliminate the need for coaxial antenna connections. *Id.* at 4:33-37. This location also minimizes signal losses and allows the antenna elements to connect almost immediately to the active circuitry. *Id.* at 6:37-60. Using two or more antenna elements also enables the usage of more than one power amplifier in a transmitter to reduce the maximum power level required for any individual power amplifier stage. *Id.* at 5:60-65. This notably is "highly advantageous for Orthogonal Frequency Division Multiplexing (OFDM). . . ." *Id.* at 5:65-7:1.

172. Defendant has directly infringed the '245 patent by importing, selling, manufacturing, offering to sell, using, providing, supplying, or distributing the Accused Products identified above.

173. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 1 of the '245 patent, as detailed in **Exhibit I** to this Complaint (Evidence of Use Regarding U.S. Patent No. 6,456,245).

174. On information and belief based on public information, Defendant has infringed the '245 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 for example, the ASUS PCE-AC56 (included in the "Accused Products").

175. For example, as detailed in Exhibit I, Defendant, using the Accused Products, has infringed at least claim 1 of the '245 patent by making, using, offering to sell, selling, and/or

importing the Accused Products, which comprise an antenna structure. *See* Exhibit I. The antenna structure comprises a card configured for insertion into a slot of a device. *Id.* The antenna structure comprises at least two antenna elements attached to the card at a first end thereof, wherein the antenna elements are located and configured to provide at least one antenna gain pattern that provides at least some coverage on one side of the card and at least one antenna gain pattern that provides at least some coverage on another side of the card so that at least some coverage is provided on both sides of the card. *Id.* Active circuitry is attached to the card and is coupled to the at least two antenna elements. *Id.* At least two of the at least two antenna elements are sufficiently spaced apart so as to achieve spatial diversity. *Id.*

176. Defendant has also indirectly infringed the ’245 patent by inducing others to directly infringe the ’245 patent. Defendant has induced distributors and end-users, including, but not limited to, Defendant’s employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the ’245 patent by providing or requiring use of the Accused Products. Defendant has taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the ’245 patent, including, for example, claim 1 of the ’245 patent. Such steps by Defendant include, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant has performed these steps, which constitute induced infringement with the knowledge of the ’245 patent and with the knowledge that the induced acts constitute infringement. Defendant has been aware that the normal and customary use of the Accused Products by others would infringe the ’245 patent.

177. Defendant has also indirectly infringed by contributing to the infringement of the ’245 patent. Defendant has contributed to the direct infringement of the ’245 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the ’245 patent, including, for example, claim 1 of the ’245 patent. The special features constitute a material part of the invention of one or more of the claims of the ’245 patent and are not staple articles of commerce suitable for substantial non-infringing use.

178. Defendant had knowledge of the ’245 patent when it received the Notice Letter in April 2020.

179. Furthermore, on information and belief based on public information, Defendant has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus have been willfully blind of CommWorks’ patent rights.

180. Defendant’s actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

181. Defendant’s direct infringement of one or more claims of the ’245 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks’ rights under the patent.

182. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that compensates it for such infringements, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT X: INFRINGEMENT OF U.S. PATENT NO. 9,554,304

183. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

184. The USPTO duly issued U.S. Patent No. 9,554,304 (the "'304 patent") on January 24, 2017, after full and fair examination of Application No. 14/090,760 which was filed on November 26, 2013. The '304 patent is entitled "Scalable Media Access Control for Multi-Hop High Bandwidth Communications."

185. CommWorks owns all substantial rights, interest, and title in and to the '304 patent, including the sole and exclusive right to prosecute this action and enforce the '304 patent against infringers and to collect damages for all relevant times.

186. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '304 patent.

187. The claims of the '304 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

188. The written description of the '304 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

189. For example, at the time of the invention wireless communications and scalable medium access control ("MAC") modules for use in multi-hop wireless network communications

over high bandwidth network communication channels was impractical. Existing technologies could only be carried out locally and failed to account for end-to-end resource allocation. '304 patent, at 1:62-67; 3:7-9. This led to a significant increase in communication errors because the routing protocols unknowingly selected routing paths without enough resources. *Id.* at 3:9-15.

190. The invention of the '304 patent improved upon MACs by providing wireless network meshes that avoided conflict resource reservation to prevent degradation of network performance as the number of hops or nodes increased in the network. *Id.* at 3:19-22. This resource allocation is also performed together with routing to achieve layer-2 routing within the MAC protocol to ensure optimal performance in both routing and the MAC layer. *Id.* at 3:36-40. Further, these meshes allowed the MAC to be compliant with both WiMedia MAC and IEEE 802.15.3 MAC, for seamless integration in the industry. *Id.* at 3:30-33.

191. Defendant has directly infringed the '304 patent by importing, selling, manufacturing, offering to sell, using, providing, supplying, or distributing the Accused Products identified above.

192. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 1 of the '304 patent, as detailed in **Exhibit J** to this Complaint (Evidence of Use Regarding U.S. Patent No. 9,554,304).

193. On information and belief based on public information, Defendant has infringed the '304 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 such as, for example, the Wi-Fi Mesh Accused Products identified above (included in the "Accused Products").

194. For example, as detailed in Exhibit J, Defendant, using the Accused Products, has infringed at least claim 1 of the '304 patent by making, using, offering to sell, selling, and/or

importing the Accused Products, which perform a method comprising receiving a beacon signal from a wireless communication network, wherein the beacon signal includes information about a sender node and network synchronization information. *See* Exhibit J. The receiving a beacon signal process comprises adding the sender node to a neighbor list. *Id.* The receiving a beacon signal process further comprises determining a signal quality for the beacon signal from the sender node. *Id.* The receiving a beacon signal process further comprises establishing a wireless communication link with the sender node if the determined signal quality meets a predetermined threshold quality level. *Id.*

195. Defendant has also indirectly infringed the ’304 patent by inducing others to directly infringe the ’304 patent. Defendant has induced distributors and end-users, including, but not limited to, Defendant’s employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the ’304 patent by providing or requiring use of the Accused Products. Defendant has taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the ’304 patent, including, for example, claim 1 of the ’304 patent. Such steps by Defendant include, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant has performed these steps, which constitute induced infringement with the knowledge of the ’304 patent and with the knowledge that the induced acts constitute infringement. Defendant has been aware that the normal and customary use of the Accused Products by others would infringe the ’304 patent.

196. Defendant has also indirectly infringed by contributing to the infringement of the ’304

patent. Defendant has contributed to the direct infringement of the '304 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '304 patent, including, for example, claim 1 of the '304 patent. The special features constitute a material part of the invention of one or more of the claims of the '304 patent and are not staple articles of commerce suitable for substantial non-infringing use.

197. Defendant had knowledge of the '304 patent when it received the Notice Letter in April 2020.

198. Furthermore, on information and belief based on public information, Defendant has a policy or practice of not reviewing the patents of others, including instructing its employees to not review the patents of others, and thus has been willfully blind of CommWorks' patent rights.

199. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

200. Defendant's direct infringement of one or more claims of the '304 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

201. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that compensates it for such infringements, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

JURY DEMAND

202. CommWorks hereby requests a trial by jury on all issues so triable by right.

PRAYER FOR RELIEF

203. CommWorks requests that the Court find in its favor and against Defendant, and that the Court grant CommWorks the following relief:

a. Judgment that one or more claims of each of the Asserted Patents has been infringed, either literally or under the doctrine of equivalents, by the Defendant or others acting in concert therewith;

b. A permanent injunction enjoining Defendant and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in concert therewith from infringement of the claims of the Asserted Patents; or, in the alternative, an award of a reasonable ongoing royalty for future infringement of the '304 patent by such entity;

c. Judgment that Defendant accounts for and pay to CommWorks all damages to and costs incurred by CommWorks because of Defendant's infringing activities and other conduct complained of herein;

d. Judgment that Defendant's infringements of one or more claims of the '285, '596, '979, '465, '807, '742, '242, '245, and '304 patents be found willful, and that the Court award treble damages for the period of such willful infringement pursuant to 35 U.S.C. § 284;

e. Pre-judgment interest on the damages caused by Defendant's infringing activities and other conduct complained of herein;

f. That this Court declare this an exceptional case and award CommWorks its reasonable attorneys' fees and costs in accordance with 35 U.S.C. § 285; and

g. All other and further relief as the Court may deem just and proper under the circumstances.

Dated: November 14, 2024

Respectfully submitted,

By:*/s/ James F. McDonough, III*

James F. McDonough, III (GA 117088)*
ROZIER HARDT MCDONOUGH PLLC
659 Auburn Avenue NE, Unit 254
Atlanta, Georgia 30312
Telephone: (404) 564-1866
Email: jim@rhmtrial.com

Jonathan L. Hardt (TX 24039906)*
Danielle De La Paz (TX 24130716)*
ROZIER HARDT MCDONOUGH PLLC
712 W. 14th Street, Suite A
Austin, Texas 78701
Telephone: (210) 289-7541; (737) 304-8481
Email: hardt@rhmtrial.com
Email: danielle@rhmtrial.com

C. Matthew Rozier (CO 46854)
Kenneth A. Matuszewski (IL 6324308)*
ROZIER HARDT MCDONOUGH PLLC
1500 K Street, 2nd Floor
Washington, District of Columbia 20005
Telephone: (404) 779-5305; (202) 316-1591
Telephone: (708) 870-5803
Email: matt@rhmtrial.com
Email: kenneth@rhmtrial.com

Attorneys for Plaintiff COMMWORKS SOLUTIONS, LLC

* Admitted to the Eastern District of Texas

List of Exhibits

A. Evidence of Use Regarding U.S. Patent No. 7,177,285
B. Evidence of Use Regarding U.S. Patent No. 7,463,596
C. Evidence of Use Regarding U.S. Patent No. 7,911,979
D. Evidence of Use Regarding U.S. Patent No. RE44,904
E. Evidence of Use Regarding U.S. Patent No. 7,027,465
F. Evidence of Use Regarding U.S. Patent No. 6,891,807
G. Evidence of Use Regarding U.S. Patent No. 6,433,742
H. Evidence of Use Regarding U.S. Patent No. 6,456,242
I. Evidence of Use Regarding U.S. Patent No. 6,456,245
J. Evidence of Use Regarding U.S. Patent No. 9,554,304

List of Attachments

- Civil Cover Sheet
- Proposed Summons