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UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

COMMWORKS SOLUTIONS, LLC, Plaintiff, v. LINKSYS USA, INC., LINKSYS HOLDINGS, INC., and BELKIN INTERNATIONAL, INC., Defendants.	Case No.: 2:23-cv-9229 **COMPLAINT FOR PATENT INFRINGEMENT** **DEMAND FOR JURY TRIAL**

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COMMPLAINT FOR PATENT INFRINGEMENT

1.   Plaintiff CommWorks Solutions, LLC ("CommWorks" or "Plaintiff") hereby files this Complaint for patent infringement against Defendants Linksys USA, Inc., Linksys Holdings, Inc., and Belkin International, Inc. (collectively, "Linksys-Belkin" or "Defendants") and alleges as follows:

PARTIES

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

3.   On information and belief, Defendant Linksys USA, Inc. is a corporation organized and existing under the laws of the State of Delaware having its principal place of business at 121 Theory Drive, Suite 200, Irvine, CA 92617. Linksys USA, Inc. may be served through its registered agent, Corporation Service Company dba CSC-Lawyers Incorporating Service, 2710 Gateway Oaks Drive, Suite 150N, Sacramento, CA 95833. Linksys USA, Inc. is registered to do business in the State of California.

4.   On information and belief, Defendant Linksys Holdings, Inc. is a corporation organized and existing under the laws of the Cayman Islands having its principal place of business at 121 Theory Drive, Suite 200, Irvine, CA 92617. On information and belief, Linksys Holdings, Inc. is the parent company to Linksys USA, Inc. Linksys Holdings, Inc. and Linksys USA, Inc. are collectively referred to as "Linksys."

5.   On information and belief, Belkin International, Inc. ("Belkin") is a corporation organized and existing under the laws of the State of Delaware having its principal place of business at 555 Aviation Blvd, Suite 180, El Segundo, CA 90245. Belkin International, Inc. may be served through its registered agent,

National Registered Agents, Inc., 330 N Brandon Blvd, Ste 700, Glendale, CA 91203. Belkin International, Inc. is registered to do business in the State of California.

6.   On information and belief, Linksys-Belkin, either itself and/or through the activities of its affiliates and/or subsidiaries uses methods covered by the Patents-in-Suit in the United States and/or induces others to use methods covered by the Patents-in-Suit in the United States and/or contributes to their infringement of the Patents-in-Suit.

JURISDICTION AND VENUE

7.   This is an action under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.*, for infringement by Linksys-Belkin of claims of U.S. Patent No. 6,891,807; U.S. Patent No. 7,027,465; U.S. Patent No. 7,177,285; U.S. Patent No. 7,463,596; U.S. Patent No. 7,911,979; and U.S. Patent No. RE44,904 (collectively "the Patents-in-Suit").

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

9.   Linksys is subject to personal jurisdiction of this Court because, *inter alia*, on information and belief, (i) Linksys maintains its headquarters in California in this Judicial District at 121 Theory Drive, Suite 200, Irvine, CA 92617; (ii) Linksys regularly conducts business in the State of California including in this Judicial District; and (iii) Linksys has committed acts of patent infringement in the State of California and/or has contributed to or induced acts of patent infringement by others in the State of California.

10.   Venue is proper as to Linksys in this Judicial District under 28 U.S.C. § 1400(b) because, *inter alia*, on information and belief, Linksys maintains a regular and established place of business in this Judicial District at 121 Theory Drive, Suite 200, Irvine, CA 92617, and has committed acts of patent infringement

1   in this Judicial District and/or has contributed to or induced acts of patent

2   infringement by others in this District.

3   11.   Belkin is subject to personal jurisdiction of this Court because, *inter*

4   *alia*, on information and belief, (i) Belkin maintains its headquarters in California

5   in this Judicial District at 555 Aviation Blvd, Suite 180, El Segundo, CA 90245

6   and a regular and established place of business at 12045 East Waterfront Drive,

7   Playa Vista, CA 90094; (ii) Belkin regularly conducts business in the State of

8   California including in this Judicial District; and (iii) Belkin has committed acts of

9   patent infringement in the State of California and/or has contributed to or induced

10   acts of patent infringement by others in the State of California.

11   12.   Venue is proper as to Belkin in this Judicial District under 28 U.S.C. §

12   1400(b) because, *inter alia*, on information and belief, Belkin maintains a regular

13   and established place of business in this Judicial District at 555 Aviation Blvd,

14   Suite 180, El Segundo, CA 90245 and 12045 East Waterfront Drive, Playa Vista,

15   CA 90094, and has committed acts of patent infringement in this Judicial District

16   and/or has contributed to or induced acts of patent infringement by others in this

17   District.

BACKGROUND

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19   13.   On May 10, 2005, the United States Patent and Trademark Office

20   duly and lawfully issued U.S. Patent No. 6,891,807 ("the '807 Patent"), entitled

21   "Time Based Wireless Access Provisioning."

22   14.   At the time of the invention, wireless access to data networks was not

23   yet conventional. Then existent systems for provisioning access to a network were

24   impractical, such as for wireless devices which lacked a user interface configured

25   for communicating provisioning information, or for simple home-based intranets,

26   such as a wireless picture frame device lacking a control interface to read or extract

27   identification information, such as a MAC address, to facilitate wireless access

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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.

15.   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.

16.   On April 11, 2006, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 7,027,465 ("the '465 Patent"), entitled "Method for Contention Free Traffic Detection."

17.   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.

18.   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, 3:5-11.

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1   A further advantage over conventional network traffic routing systems is that

2   installation of new software or hardware in the network element would not be

3   required when new protocols or modified protocols are introduced in the network.

4   *Id.* at col. 3:12-21.

5   19.   On February 13, 2007, the United States Patent and Trademark Office

6   duly and lawfully issued U.S. Patent No. 7,177,285 ("the '285 Patent"), entitled

7   "Time Based Wireless Access Provisioning."

8   20.   At the time of the invention, wireless access to data networks was not

9   yet conventional. Then existent systems for provisioning access to a network were

10   impractical, such as for wireless devices which lacked a user interface configured

11   for communicating provisioning information, or for simple home-based intranets,

12   such as a wireless picture frame device lacking a control interface to read or extract

13   identification information, such as a MAC address, to facilitate wireless access

14   provisioning. '285 Patent at col. 3:13-26. Further, wireless devices that did have a

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

16   device identification and exchanging provisioning information, still requiring a

17   user to be technically proficient to properly initiate and complete a provisioning

18   process. *Id.* at col. 3:27-36.

19   21.   The invention of the '285 Patent improved upon existent network

20   provisioning systems by enabling provisioning without requiring a user interface

21   for the initiation of a provisioning process—"a major technological advance." *Id.*

22   at col. 3:37-41. The invention of the '285 Patent further improved upon existent

23   provisioning systems by providing a wireless access provisioning structure and

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

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

26   other unauthorized devices within an access region are prevented from being

27   provisioned by the provisioning system. *Id.* at col. 3:42-49. The invention of the

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'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.

22. On December 9, 2008, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 7,463,596 ("the '596 Patent"), entitled "Time Based Wireless Access Provisioning."

23. 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.

24. 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

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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.

25.   On March 22, 2011, the United States Patent and Trademark Office duly and lawfully issued U.S. Patent No. 7,911,979 ("the '979 Patent"), entitled "Time Based Access Provisioning System and Process.

26.   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.

27.   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.

28.   On May 20, 2014, the United States Patent and Trademark Office duly and lawfully reissued U.S. Patent No. RE44,904 ("the '904 Patent"), entitled "Method for Contention Free Traffic Detection."

29.   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.

30.   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.

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

32.   Linksys-Belkin has infringed the Patents-in-Suit by using methods covered by the Patents-in-Suit within the United States, and/or contributing to and/or inducing others' infringement of the Patents-in-Suit by operating products with Wi-Fi-related technology claimed in the Patents-in-Suit. Attachment A to this Complaint provides a non-exhaustive listing of Accused Products.

NOTICE

33.   On information and belief, the Defendants have been on notice of the Patents-in-Suit, and of Defendants' infringement thereof, since at least 2020.

34.   For example, on September 14, 2020, CommWorks asserted the Patents-in-Suit against RCN Telecom Services, LLC. CommWorks' complaint in the *RCN* action identified the "Linksys E1200 router" as being "included in the 'Accused Products and Services.'" CommWorks further served infringement contentions that identified Linksys routers as Accused Products.

35.   On information and belief, Linksys received, and reviewed, CommWorks' prior complaints, asserted patents, and infringement contentions setting forth infringement allegations against Linksys products in prior actions for the Patents-in-Suit.

36.   Further, CommWorks previously issued a subpoena dated Augst 13, 2021 to Belkin International, Inc. (the "Subpoena"). The Subpoena included a list of accused Linksys devices (defined as "Your Accused Products") and information on accused functionality. On information and belief, at the time the Subpoena was issued, Belkin International, Inc. was affiliated with Linksys.

37.   On August 16, 2021, the Subpoena was delivered to Belkin's registered agent, which is currently the same address as Linksys's registered agent.

38.   On September 1, 2021, counsel for Belkin confirmed receipt of the Subpoena and stated that responses are in progress via email. On September 10, 2021, CommWorks provided an updated list of accused Linksys devices.

39.   On October 1, 2021 counsel for Belkin provided responses to the Subpoena and produced responsive documents in its possession.

40.   On January 25, 2022, counsel for Linksys provided supplemental responses to the Subpoena.

41.   Linksys-Belkin was on notice and aware of accused Linksys-Belkin devices and infringing functionality of those accused products as early as August 16, 2021.

42.   Based on the above facts, i.e., Linksys-Belkin's awareness of CommWorks' Patents-in-Suit, prior actions, and the Subpoena, and Linksys-Belkin's awareness of infringing functionality of accused Linksys-Belkin devices disclosed in the Subpoena, on information and belief, Linksys-Belkin conducted due diligence on the Patents-in-Suit, resulting in awareness and knowledge of the Patents-in-Suit. Further, on information and belief, one or more Internet Service Providers that were previously accused of infringing the Patents-in-Suit put Linksys-Belkin on notice of its infringement of the Patents-in-Suit.

43.   CommWorks has complied with the statutory and judicial requirements for collecting past damages against Linksys-Belkin with respect to the Patents-in-Suit.

COUNT I: INFRINGEMENT OF THE '807 PATENT BY LINKSYS-BELKIN

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

45.   On information and belief, Linksys-Belkin has infringed the '807 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents,

by using within the United States Wi-Fi enabled routers, access points, and gateways, such as, for example, the Linksys EA8300 Router (included in the "Accused Products").

46.   For example, on information and belief, Linksys-Belkin has infringed at least claim 46 of the '807 Patent by using the process recited in that claim with the Accused Products having a transmitted signal and performing a process for provisioning between a wireless device and a network. *See* Exs. 1-3 (showing that Linksys-Belkin routinely uses and tests Accused Products to be Wi-Fi Certified, "an internationally recognized seal of approval for products indicating that they have met industry-agreed standards for interoperability, security, and a range of application specific protocols," and that Certification means that a product has been rigorously tested in a variety of ways to validate interoperability at an Authorized Test Laboratory (which includes labs located in the United States) or a member testing site (e.g. at Linksys's Life Lab)); Exs. 1, 4 (showing, e.g., Linksys-Belkin conducts rigorous functional testing on varieties of products and technologies for the home networking business in the United States, including at the Linksys Life Lab); Ex. 5 (showing, e.g., Linksys-Belkin automatically updating the firmware of Accused Products thereby directing and/or controlling the performance of a process for provisioning); Ex. 6 at 1, 3-4, 6, 16, 23; Ex. 3 (showing the Linksys EA8300 Router supports Wi-Fi Protected Setup ("WPS") and is WPS-certified); Ex. 7 at 1, 7, 11, 25, 80 (showing that WPS access points comprise a process for provisioning between a wireless device and a network, for example a Wireless Local Area Network ("WLAN"), and a transmitted signal). The process for provisioning performed in the Accused Products comprises the step of providing an access point connected to a network, the access point comprising an activatable provisioning time interval. *See* Ex. 6 at 6 (showing, e.g., Linksys-Belkin provides a WPS compatible access point connected to a network,

such as a WLAN, and that the Linksys EA8300 Router has a WPS button); Ex. 7 at 7, 11, 19, 77-78 (showing, for example, that WPS access points comprise a PushButton Configuration ("PBC") method that activates a provisioning time interval, e.g., a 120-second walk time). The process for provisioning performed in the Accused Products further comprises initiating provisioning of the wireless device if the transmission of the wireless signal from the wireless device to the access point begins during the interval. *See* Ex. 7 at 77-78, 80 (showing, for example, WPS access points begin provisioning of the wireless device (enrollee) if the transmission of the wireless signal, such as the Probe Request {WSC IE PBC} from the wireless device (enrollee) begins during the walk time).

47.   On information and belief, Linksys has induced infringement of the '807 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, resellers, distributers, customers, operators, and end users, to use within the United States the Accused Products thereby infringing claim 46 of the '807 Patent by, among other things, providing the Accused Products, software and/or firmware updates, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products. *See* ¶¶ 33-43 above (explaining Linksys-Belkin's notice of infringement); Ex. 6 at 1, 3-4, 6, 16, 23 (Linksys-Belkin, e.g., providing instructions and assistance relating to the installation, set up, use, operation, and maintenance of the Linksys EA8300 Router).

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

49.   On information and belief, Linksys-Belkin knew the '807 Patent existed and knew of an exemplary infringing Linksys-Belkin product while committing the foregoing infringing acts thereby willfully, wantonly and

deliberately infringing the '807 Patent.

50.   CommWorks has complied with the statutory and judicial requirements for collecting past damages with respect to the '807 Patent.

COUNT II: INFRINGEMENT OF THE '465 PATENT BY LINKSYS-BELKIN

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

52.   On information and belief, Linksys-Belkin 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 Accused Products.

53.   For example, on information and belief, Linksys-Belkin has infringed at least claim 1 of the '465 Patent by performing a method for detecting priority of data frames in a network. *See* Exs. 1-3 (showing that Linksys-Belkin routinely uses and tests Accused Products to be Wi-Fi Certified, "an internationally recognized seal of approval for products indicating that they have met industry-agreed standards for interoperability, security, and a range of application specific protocols," and that Certification means that a product has been rigorously tested in a variety of ways to validate interoperability at an Authorized Test Laboratory (which includes labs located in the United States) or a member testing site (e.g. at Linksys's Life Lab)); Exs. 1, 4 (showing, e.g., Linksys-Belkin conducts rigorous functional testing on varieties of products and technologies for the home networking business in the United States, including at the Linksys Life Lab); Ex. 5 (showing, e.g., Linksys-Belkin automatically updating the firmware of Accused Products thereby directing and/or controlling the performance of a process for provisioning); Exs. 3, 8 (showing, *e.g.*, the Linksys EA8300 Router supports Wi-Fi Multimedia ("WMM"), has WMM enabled by default, and is WMM-certified); Ex.

9 at 7-8, 25-26 (showing that WMM compatible Access Points detect the priority of data frames in a network by mapping to the Access Category ("AC") of the Enhanced Distributed Channel Access ("EDCA") mechanism); *see also* Ex. 10 at 12, 51, 268-269 (showing another example in which 802.11-2007+ compatible Access Points detect priority data frames in a network by mapping the AC of the EDCA mechanism). The method for detecting priority of data frames comprises the step of extracting a bit pattern from a predetermined position in a frame. *See* Ex. 9 at 10, 12, 25 (showing, for example, WMM compatible Access Points extract a bit pattern from a predetermined position in a data frame, such as in the QoS Control field); Ex. 10 at 51, 60, 67, 253 (showing, for example, 802.11-2007+ compatible Access Points extract a bit pattern from a predetermined position in a data frame, such as in the QoS Control field). The method for detecting priority of data frames further comprises the step of comparing said extracted bit pattern with a search pattern. *See* Ex. 9 at 25-26 (showing, for example, that WMM compatible Access Points compare the extracted UP bit pattern with a search pattern, such as the Access Category ("AC")); Ex. 10 at 252, 268-269 (showing, for example, that 802.11-2007+ compatible Access Points compare the extracted TID bit pattern User Priority ("UP") with the Access Category ("AC") search pattern). The method for detecting priority of data frames further comprises the step of identifying a received frame as a priority frame in case said extracted bit pattern matches with said search pattern. *See* Ex. 9 at 25-26 (showing, for example, that WMM compatible Access Points identify the priority Access Category ("AC") of the WMM Data frame if the UP of said frame matches an AC search pattern); Ex. 10 at 51, 252, 268-269 (showing, for example, that 802.11-2007+ compatible Access Points identify the priority Access Category ("AC") of the data frame if the TID UP bit pattern matches an AC search pattern). In the method for detecting priority of data frames, the predetermined position in said frame is defined by the

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offset of said bit pattern in said frame. *See* Ex. 9 at 10-12 (showing, for example, WMM compatible Access Points predetermine the position of the bit pattern by inspecting the Frame Control field to anticipate which non-minimal field has data present in the frame MAC Header so the offset of the UP bit pattern can be determined); Ex. 10 at 60, 62, 67 (showing, for example, 802.11-2007+ compatible Access Points predetermine the position of the bit pattern by inspecting the Frame Control field to anticipate which non-minimal field has data present in the frame MAC Header so the offset of the TID bit pattern can be determined).

54.   On information and belief, Linksys-Belkin has committed the foregoing infringing activities without a license.

55.   CommWorks has complied with the statutory and judicial requirements for collecting past damages with respect to the '465 Patent.

COUNT III: INFRINGEMENT OF THE '285 PATENT BY LINKSYS-BELKIN

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

57.   On information and belief, Linksys-Belkin has infringed the '285 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by using within the United States Wi-Fi enabled routers, access points, and gateways, such as, for example, the Linksys EA8300 Router (included in the "Accused Products").

58.   For example, on information and belief, Linksys-Belkin has infringed at least claim 1 of the '285 Patent by using the process recited in that claim with the Accused Products performing a process for provisioning between a wireless device and a network. *See* Exs. 1-3 (showing that Linksys-Belkin routinely uses and tests Accused Products to be Wi-Fi Certified, "an internationally recognized seal of approval for products indicating that they have met industry-agreed

standards for interoperability, security, and a range of application specific protocols," and that Certification means that a product has been rigorously tested in a variety of ways to validate interoperability at an Authorized Test Laboratory (which includes labs located in the United States) or a member testing site (e.g. at Linksys's Life Lab)); Exs. 1, 4 (showing, e.g., Linksys-Belkin conducts rigorous functional testing on varieties of products and technologies for the home networking business in the United States, including at the Linksys Life Lab); Ex. 5 (showing, e.g., Linksys-Belkin automatically updating the firmware of Accused Products thereby directing and/or controlling the performance of a process for provisioning); Ex. 6 at 1, 3-4, 6, 16, 23; Ex. 3 (showing the Linksys EA8300 Router supports Wi-Fi Protected Setup ("WPS") and is WPS-certified); Ex. 7 at 1, 7, 11 (showing that WPS access points perform a process for provisioning between a wireless device and a network, such as a WLAN). The process for provisioning performed in the Accused Products comprises the step of tracking an operating parameter of the wireless device within a service area, wherein the operating parameter of the wireless device comprises an onset of a signal transmission of the wireless device. *See* Ex. 7 at 11, 13, 25, 80 (showing that, for example, WPS access points monitors Probe Request {WSC IE, PBC}, wherein said Probe Requests include an onset of a signal transmission and PBC operating parameter in the onset signal Probe Request {WSC IE PBC} transmitted from an in range wireless device (enrollee) seeking access to the network). The process for provisioning performed in the Accused Products further comprises the step of initiating provisioning of the wireless device if the tracked operating parameter occurs within a time interval. *See* Ex. 7 at 12-13, 25, 77-78, 80 (showing that, for example, WPS access points initiate provisioning of the wireless device if the tracked operating parameter (transmission of signal seeking access) occurs within the 120-second time period ("Walk Time")).

59.   On information and belief, Linksys-Belkin has induced infringement of the '285 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, resellers, distributers, customers, operators, and end users, to use within the United States the Accused Products thereby infringing claim 1 of the '285 Patent by, among other things, providing the Accused Products, software and/or firmware updates, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products. *See* ¶¶ 33-43 above (explaining Linksys-Belkin's notice of infringement); Ex. 6 at 1, 3-4, 6, 16, 23 (Linksys-Belkin, e.g., providing instructions and assistance relating to the installation, set up, use, operation, and maintenance of the Linksys EA8300 Router).

60.   On information and belief, Linksys-Belkin has committed the foregoing infringing activities without a license.

61.   On information and belief, Linksys-Belkin knew the '285 Patent existed and knew of an exemplary infringing Linksys-Belkin product while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '285 Patent.

62.   CommWorks has complied with the statutory and judicial requirements for collecting past damages with respect to the '285 Patent.

COUNT IV: INFRINGEMENT OF THE '596 PATENT BY LINKSYS-BELKIN

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

64.   On information and belief, Linksys-Belkin has infringed the '596 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by using within the United States Wi-Fi enabled routers, access points, and

gateways, such as, for example, the Linksys EA8300 Router (included in the "Accused Products").

65.   For example, on information and belief, Linksys-Belkin has infringed at least claim 1 of the '596 Patent by using the process recited in that claim with the Accused Products performing a process for associating devices. *See* Exs. 1-3 (showing that Linksys-Belkin routinely uses and tests Accused Products to be Wi-Fi Certified, "an internationally recognized seal of approval for products indicating that they have met industry-agreed standards for interoperability, security, and a range of application specific protocols," and that Certification means that a product has been rigorously tested in a variety of ways to validate interoperability at an Authorized Test Laboratory (which includes labs located in the United States) or a member testing site (e.g. at Linksys's Life Lab)); Exs. 1, 4 (showing, e.g., Linksys-Belkin conducts rigorous functional testing on varieties of products and technologies for the home networking business in the United States, including at the Linksys Life Lab); Ex. 5 (showing, e.g., Linksys-Belkin automatically updating the firmware of Accused Products thereby directing and/or controlling the performance of a process for provisioning); Ex. 6 at 1, 3-4, 6, 16, 23; Ex. 3 (showing the Linksys EA8300 Router supports Wi-Fi Protected Setup ("WPS") and is WPS-certified); Ex. 7 at 1, 9, 11 (showing, for example, that WPS access points perform a process for associating devices, such as the PushButton Configuration ("PBC") method). The process for associating devices performed in the Accused Products comprises the step of tracking an operating parameter of a first device, wherein the operating parameter of the first device comprises any of a power on of the first device, and an onset of a signal transmission of the first device. *See* Ex. 7 at 9, 11-13, 25, 77, 80 (showing, for example, WPS access points track racks the PBC operating parameter of the first device found in the onset signal of the Probe Request {WSC IE PBC}, where the Probe Request is

activated when a PBC button is pressed on the first device (enrollee) that is seeking access to the network). The process for associating devices performed in the Accused Products further comprises the step of automatically associating the first device with at least one other device if the tracked operating parameter occurs within a time interval. *See* Ex. 7 at 12-13, 77-78, 80 (showing, for example, WPS access points automatically associate the wireless device seeking access with the access point if the signal transmission initiated by a button on the wireless device occurs within the 120-second time period ("Walk Time")).

66.   On information and belief, Linksys-Belkin has induced infringement of the '596 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, resellers, distributers, customers, operators, and end users, to use within the United States the Accused Products thereby infringing claim 1 of the '596 Patent by, among other things, providing the Accused Products, software and/or firmware updates, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products. *See* ¶¶ 33-43 above (explaining Linksys-Belkin's notice of infringement); Ex. 6 at 1, 3-4, 6, 16, 23 (Linksys-Belkin, e.g., providing instructions and assistance relating to the installation, set up, use, operation, and maintenance of the Linksys EA8300 Router).

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

68.   On information and belief, Linksys-Belkin knew the '596 Patent existed and knew of an exemplary infringing Linksys-Belkin product while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '596 Patent.

69.   CommWorks has complied with the statutory and judicial

requirements for collecting past damages with respect to the '596 Patent.

COUNT V: INFRINGEMENT OF THE '979 PATENT BY LINKSYS-BELKIN

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

71.   On information and belief, Linksys-Belkin has infringed the '979 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by using within the United States Wi-Fi enabled routers, access points, and gateways, such as, for example, the Linksys EA8300 Router (included in the "Accused Products").

72.   For example, on information and belief, Linksys-Belkin has infringed at least claim 1 of the '979 Patent by using the process recited in that claim with the Accused Products performing a provisioning process performed by a provisioning system having provisioning logic. *See* Exs. 1-3 (showing that Linksys-Belkin routinely uses and tests Accused Products to be Wi-Fi Certified, "an internationally recognized seal of approval for products indicating that they have met industry-agreed standards for interoperability, security, and a range of application specific protocols," and that Certification means that a product has been rigorously tested in a variety of ways to validate interoperability at an Authorized Test Laboratory (which includes labs located in the United States) or a member testing site (e.g. at Linksys's Life Lab)); Exs. 1, 4 (showing, e.g., Linksys-Belkin conducts rigorous functional testing on varieties of products and technologies for the home networking business in the United States, including at the Linksys Life Lab); Ex. 5 (showing, e.g., Linksys-Belkin automatically updating the firmware of Accused Products thereby directing and/or controlling the performance of a process for provisioning); Ex. 6 at 1, 3-4, 6, 16, 23; Ex. 3 (showing the Linksys EA8300 Router supports Wi-Fi Protected Setup ("WPS")

and is WPS-certified); Ex. 7 at 1, 11-14 (showing, for example, that WPS access points include a provisioning system having a provisioning logic (i.e. software and/or hardware components used to implement interfaces such as A, M, and/or E illustrated below) that perform the PushButton Configuration ("PBC") provisioning process). The provisioning process performed in the Accused Products 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. *See* Ex. 7 at 12-13, 25, 80 (showing, for example, WPS access points' provisioning logic tracks and monitors a PBC operating parameter, such as an onset of a Probe Request {WSC IE PBC} sent by the first device (enrollee)). The provisioning process 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. *See* Ex. 7 at 12-13, 77-78, 80 (showing that, for example, WPS access points' send a Probe Response {WSC IE, PBC} signal to initiate provisioning of the first device (enrollee) if the Probe Request {WSC IE PBC} occurs within the 120-second walk time).

73.   On information and belief, Linksys-Belkin has induced infringement of the '979 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing, directing, causing, and encouraging others, including, but not limited to, its partners, resellers, distributers, customers, operators, and end users, to use within the United States the Accused Products thereby infringing claim 1 of the '979 Patent by, among other things, providing the Accused Products, software and/or firmware updates, specifications, instructions, manuals, advertisements, marketing materials, and technical assistance relating to the installation, set up, use, operation, and maintenance of said products. *See* ¶¶ 33-43 above (explaining Linksys-Belkin's notice of infringement); Ex. 6 at 1, 3-4, 6, 16, 23 (Linksys-

Belkin, e.g., providing instructions and assistance relating to the installation, set up, use, operation, and maintenance of the Linksys EA8300 Router).

74.   On information and belief, Linksys-Belkin has committed the foregoing infringing activities without a license.

75.   On information and belief, Linksys-Belkin knew the '979 Patent existed and knew of an exemplary infringing Linksys-Belkin product while committing the foregoing infringing acts thereby willfully, wantonly and deliberately infringing the '979 Patent.

76.   CommWorks has complied with the statutory and judicial requirements for collecting past damages with respect to the '979 Patent.

COUNT VI: INFRINGEMENT OF THE '904 PATENT BY LINKSYS-BELKIN

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

78.   On information and belief, Linksys-Belkin 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 Accused Products.

79.   For example, on information and belief, Linksys-Belkin has infringed at least claim 7 of the '904 Patent by performing a method comprising detecting a received frame is a priority frame based, at least in part, on information in the received frame. *See* Exs. 1-3 (showing that Linksys-Belkin routinely uses and tests Accused Products to be Wi-Fi Certified, "an internationally recognized seal of approval for products indicating that they have met industry-agreed standards for interoperability, security, and a range of application specific protocols," and that Certification means that a product has been rigorously tested in a variety of ways to validate interoperability at an Authorized Test Laboratory (which includes labs

located in the United States) or a member testing site (e.g. at Linksys's Life Lab));

Exs. 1, 4 (showing, e.g., Linksys-Belkin conducts rigorous functional testing on

varieties of products and technologies for the home networking business in the

United States, including at the Linksys Life Lab); Ex. 5 (showing, e.g., Linksys-

Belkin automatically updating the firmware of Accused Products thereby directing

and/or controlling the performance of a process for provisioning); Exs. 3, 8

(showing, *e.g.*, the Linksys EA8300 Router supports Wi-Fi Multimedia ("WMM"),

has WMM enabled by default, and is WMM-certified); Ex. 9 at 7, 10, 12, 25-26

(showing that, for example, WMM compatible Access Points detect the priority of

data frames by mapping to an Access Category ("AC") based, at least in part, on

information in the QoS Control field of a received frame, such as the User Priority

("UP") subfield); Ex. 10 at 12, 51, 60, 67, 287 (showing that, for example, 802.11-

2007+ compatible Access Points detect the priority of data frames by mapping to

an Access Category ("AC") based, at least in part, on information in the QoS

Control field of a received frame, such as the User Priority ("UP") TID subfield).

The method further comprises extracting a bit pattern from a predetermined

position in the received frame. *See* Ex. 9 at 10, 12, 25 (showing, for example, that

in WMM compatible Access Points extract a bit pattern (i.e. UP subfield bit

pattern) from a predetermined position in a data frame, such as in the QoS Control

field); Ex. 10 at 51, 60, 67, 253 (showing, for example, that 802.11-2007+

compatible Access Points extract a bit pattern (i.e. TID) UP from a predetermined

position in a data frame, such as in the QoS Control field). The method further

comprises comparing the extracted bit pattern with a search pattern. *See* Ex. 9 at

25-26 (showing, for example, that WMM compatible Access Points compare the

extracted UP bit pattern with a search pattern, such as the AC); Ex. 10 at 252, 258-

259 (showing, for example, that 802.11-2007+ compatible Access Points compare

the extracted TID bit pattern UP with the AC search pattern). In the method, the

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detecting is based on a match between the extracted bit pattern and the search pattern. *See* Ex. 9 at 25-26 (showing, for example, that WMM compatible Access Points determine the AC of the WMM Data frame if the UP of said frame matches to an AC search pattern); Ex. 10 at 51, 252, 268-269 (showing, for example, that 802.11-2007+ compatible Access Points determine the priority AC of the data frame if the TID UP bit pattern matches an AC search pattern). The method further comprises transmitting the received frame in a transmit period reserved for priority frames in response to the detecting. *See* Ex. 9 at 25-27, 39 (showing, for example, that WMM compatible Access Points detect a data frame to be high priority and transmits said frame from a high priority queue, with the transmitting occurring while frames in said queue are being sent in succession onto the wireless medium during said queue's Transmission Opportunity ("TXOP") interval); Ex. 10 at 5, 15, 51, 69, 252-253, 268-269, 1021-1023 (showing, for example, that 802.11-2007+ compatible Access Points detect a data frame to be high priority and transmits said frame from a high priority queue, with the transmitting occurring while frames in said queue are being sent in succession onto the wireless medium during said queue's Transmission Opportunity ("TXOP") interval). The method adjusts a duration of the transmit period reserved for priority frames based on statistic information regarding sent priority frames. *See* Ex. 9 at 25, 27 (showing, for example, that WMM compatible Access Points adjust the duration of the TXOP interval (such as the TXOP limit) based on statistic information regarding sent priority frames, such as when using a lower PHY rate than selected for the initial transmission attempt of the first data frame, for retransmission of a data frame or for the initial transmission of a data frame if any previous data frame in the current data frame set has been retransmitted); Ex. 10 at 5, 15, 287, 1024-1025 (showing, for example, that 802.11-2007+ compatible Access Points adjust the duration of the TXOP based on statistic information regarding sent priority frames, such as

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when using a lower PHY rate than selected for the initial transmission attempt of the first data frame, for retransmission of a data frame or for the initial transmission of a data frame if any previous data frame in the current data frame set has been retransmitted).

80.   On information and belief, Linksys-Belkin has committed the foregoing infringing activities without a license.

81.   CommWorks has complied with the statutory and judicial requirements for collecting past damages with respect to the '979 Patent.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff CommWorks prays for the judgment in its favor against Linksys-Belkin, and specifically, for the following relief:

A.   Entry of judgment in favor of CommWorks against Linksys-Belkin on all counts;

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

C.   Entry of judgment that Linksys-Belkin's infringement of the '807 Patent, the '285 Patent, the '596 Patent, and the '979 Patent has been willful;

D.   Award of compensatory damages adequate to compensate CommWorks for Linksys-Belkin's infringement of the '807 Patent, the '285 Patent, the '596 Patent, and the '979 Patent, in no event less than a reasonable royalty trebled as provided by 35 U.S.C. § 284;

E.   Award of compensatory damages adequate to compensate CommWorks for Linksys-Belkin's infringement of the '465 Patent and the '904 Patent, in no event less than a reasonable royalty as provided by 35 U.S.C. § 284;

F.   CommWorks' costs;

G.   Pre-judgement and post-judgement interest on CommWorks' award;

1   and

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

3   **DEMAND FOR JURY TRIAL**

4   Pursuant to Rule 38 of the Fed. R. Civ. P., Plaintiff CommWorks hereby

5   demands trial by jury in this action of all claims so triable.

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7   Respectfully Submitted,

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