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22 **UNITED STATES DISTRICT COURT**
23 **CENTRAL DISTRICT OF CALIFORNIA**

24 COMMWORKS SOLUTIONS, LLC,
25
26 Plaintiff,

27 v.

28 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

1
2 **COMPLAINT FOR PATENT INFRINGEMENT**

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

7 **PARTIES**

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

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

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

24 5. On information and belief, Belkin International, Inc. (“Belkin”) is a
25 corporation organized and existing under the laws of the State of Delaware having
26 its principal place of business at 555 Aviation Blvd, Suite 180, El Segundo, CA
27 90245. Belkin International, Inc. may be served through its registered agent,
28

1 National Registered Agents, Inc., 330 N Brandon Blvd, Ste 700, Glendale, CA
2 91203. Belkin International, Inc. is registered to do business in the State of
3 California.

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

9 **JURISDICTION AND VENUE**

10 7. This is an action under the patent laws of the United States, 35 U.S.C.
11 §§ 1, *et seq.*, for infringement by Linksys-Belkin of claims of U.S. Patent No.
12 6,891,807; U.S. Patent No. 7,027,465; U.S. Patent No. 7,177,285; U.S. Patent No.
13 7,463,596; U.S. Patent No. 7,911,979; and U.S. Patent No. RE44,904 (collectively
14 “the Patents-in-Suit”).

15 8. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§
16 1331 and 1338(a).

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

24 10. Venue is proper as to Linksys in this Judicial District under 28 U.S.C.
25 § 1400(b) because, *inter alia*, on information and belief, Linksys maintains a
26 regular and established place of business in this Judicial District at 121 Theory
27 Drive, Suite 200, Irvine, CA 92617, and has committed acts of patent infringement
28

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.

18 **BACKGROUND**

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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1 provisioning. '807 Patent at col. 3:5-18. Further, wireless devices that did have a
2 dedicated user interface were incapable of, or cumbersome in, communicating
3 device identification and exchanging provisioning information, still requiring a
4 user to be technically proficient to properly initiate and complete a provisioning
5 process. *Id.* at col. 3:19-28.

6 15. The invention of the '807 Patent improved upon existent network
7 provisioning systems by enabling provisioning without requiring a user interface
8 for the initiation of a provisioning process—"a major technological advance." *Id.*
9 at col. 3:29-33. The invention of the '807 Patent further improved upon existent
10 provisioning systems by providing a wireless access provisioning structure and
11 process with minimal device requirements and/or user proficiency, whereby a
12 wireless device is readily provisioned by the provisioning system, and whereby
13 other unauthorized devices within an access region are prevented from being
14 provisioned by the provisioning system. *Id.* at col. 3:34-41. The invention of the
15 '807 Patent further improved upon existent provisioning systems by providing a
16 time-based wireless access provisioning system integrated with easily monitored
17 parameters of a wireless device, such as the time monitoring of power on and/or
18 start of signal transmission, for provisioning secure encrypted communication. *Id.*
19 at col. 3:42-50. Moreover, the structure of the devices described in the '807 Patent
20 was not conventional at the time of the invention. Specifically, a device such as an
21 access point, comprising a provisioning activation button, time-based provisioning
22 logic, access control list, wired network logic, a wired network connection and a
23 transceiver were not conventional (or even available) at the time of the invention.

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

27 17. At the time of the invention, "conventionally ... transmission
28

1 differentiation based on priority was not conducted at all.” ’465 Patent at col. 2:9-
2 10. Obtaining priority information for traffic transmitted through an Access Point
3 (AP) required searching all fields in all frames for indications of the priority state
4 of the actual data frame, resulting in all fields in all frames being checked and all
5 headers being analyzed, starting from the outer most headers, until the right field in
6 the header had been found. *Id.* at col. 1:53-59. This measure was very complex,
7 took a long time, and required a large amount of processing, especially for
8 complex tunneling protocols. *Id.* at col. 1:62-65. All the frame headers and
9 protocols which can be included in the data frames transmitted via the network had
10 to be known, hence, the amount of information needed for identifying the data was
11 huge. *Id.* at col. 1:66-2:4. Such a huge amount of information was typically too
12 heavy to handle in small and low price equipment like WLAN access points (AP).
13 *Id.* Further, then existing systems according to the IEEE 802.11 standard did not
14 separate traffic based on priority. *Id.* at col. 2:11-15.

15 18. The invention of the ’465 Patent improved upon conventional network
16 traffic routing systems by providing methods by which priority traffic can easily be
17 distinguished from normal traffic without the need of complex processing making
18 it possible to execute in a low cost and possibly low performance AP. *Id.* at col.
19 2:19-23, 2:60-62, 3:43. The methods of the invention of the ’465 Patent further
20 improved upon conventional network traffic routing systems by easily finding
21 higher priority traffic from the stream of MAC layer frames without necessarily
22 requiring knowledge of the upper layer protocols. *Id.* at col. 2:53-56. The
23 methods of the invention of the ’465 Patent further improved upon conventional
24 network traffic routing systems by being protocol-independent and flexible such
25 that their configuration may be done in an external configuration program; with the
26 Access Point not needing to know anything about the processed traffic; further
27 alleviating the need of complex structure of the device. *Id.* at col. 2:63-66, 3:5-11.

28

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
28

1 '285 Patent further improved upon existent provisioning systems by providing a
2 time-based wireless access provisioning system integrated with easily monitored
3 parameters of a wireless device, such as the time monitoring of power on and/or
4 start of signal transmission, for provisioning secure encrypted communication. *Id.*
5 at col. 3:50-58. Moreover, the structure of the devices described in the '285 Patent
6 was not conventional at the time of the invention. Specifically, a device such as an
7 access point, comprising a provisioning activation button, time-based provisioning
8 logic, access control list, wired network logic, a wired network connection and a
9 transceiver were not conventional (or even available) at the time of the invention.

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

13 23. At the time of the invention, wireless access to data networks was not
14 yet conventional. Then existent systems for provisioning access to a network were
15 impractical, such as for wireless devices which lacked a user interface configured
16 for communicating provisioning information, or for simple home-based intranets,
17 such as a wireless picture frame device lacking a control interface to read or extract
18 identification information, such as a MAC address, to facilitate wireless access
19 provisioning. '596 Patent at col. 3:13-26. Further, wireless devices that did have a
20 dedicated user interface were incapable of, or cumbersome in, communicating
21 device identification and exchanging provisioning information, still requiring a
22 user to be technically proficient to properly initiate and complete a provisioning
23 process. *Id.* at col. 3:27-36.

24 24. The invention of the '596 Patent improved upon existent network
25 provisioning systems by enabling provisioning without requiring a user interface
26 for the initiation of a provisioning process—“a major technological advance.” *Id.*
27 at col. 3:37-41. The invention of the '596 Patent further improved upon existent
28

1 provisioning systems by providing a wireless access provisioning structure and
2 process with minimal device requirements and/or user proficiency, whereby a
3 wireless device is readily provisioned by the provisioning system, and whereby
4 other unauthorized devices within an access region are prevented from being
5 provisioned by the provisioning system. *Id.* at col. 3:42-49. The invention of the
6 '596 Patent further improved upon existent provisioning systems by providing a
7 time-based wireless access provisioning system integrated with easily monitored
8 parameters of a wireless device, such as the time monitoring of power on and/or
9 start of signal transmission, for provisioning secure encrypted communication. *Id.*
10 at col. 3:50-58. Moreover, the structure of the devices described in the '596 Patent
11 was not conventional at the time of the invention. Specifically, a device such as an
12 access point, comprising a provisioning activation button, time-based provisioning
13 logic, access control list, wired network logic, a wired network connection and a
14 transceiver were not conventional (or even available) at the time of the invention.

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

18 26. At the time of the invention wireless access to data networks was not
19 yet conventional. Then existent systems for provisioning access to a network were
20 impractical, such as for wireless devices which lacked a user interface configured
21 for communicating provisioning information, or for simple home-based intranets,
22 such as a wireless picture frame device lacking a control interface to read or extract
23 identification information, such as a MAC address, to facilitate wireless access
24 provisioning. '979 Patent at col. 3:19-31. Further, wireless devices that did have a
25 dedicated user interface were incapable of, or cumbersome in, communicating
26 device identification and exchanging provisioning information, still requiring a
27 user to be technically proficient to properly initiate and complete a provisioning
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1 process. *Id.* at col. 3:32-41.

2 27. The invention of the '979 Patent improved upon existent network
3 provisioning systems by enabling provisioning without requiring a user interface
4 for the initiation of a provisioning process—"a major technological advance." *Id.*
5 at col. 3:42-46. The invention of the '979 Patent further improved upon existent
6 provisioning systems by providing a wireless access provisioning structure and
7 process with minimal device requirements and/or user proficiency, whereby a
8 wireless device is readily provisioned by the provisioning system, and whereby
9 other unauthorized devices within an access region are prevented from being
10 provisioned by the provisioning system. *Id.* at col. 3:47-53. The invention of the
11 '979 Patent further improved upon existent provisioning systems by providing a
12 time-based wireless access provisioning system integrated with easily monitored
13 parameters of a wireless device, such as the time monitoring of power on and/or
14 start of signal transmission, for provisioning secure encrypted communication. *Id.*
15 at col. 3:54-62. Moreover, the structure of the devices described in the '979 Patent
16 was not conventional at the time of the invention. Specifically, a device such as an
17 access point, comprising a provisioning activation button, time-based provisioning
18 logic, access control list, wired network logic, a wired network connection and a
19 transceiver were not conventional (or even available) at the time of the invention.

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

23 29. At the time of the invention, "conventionally ... transmission
24 differentiation based on priority was not conducted at all." '904 Patent at col. 2:9-
25 10. Obtaining priority information for traffic transmitted through an Access Point
26 (AP) required searching all fields in all frames for indications of the priority state
27 of the actual data frame, resulting in all fields in all frames being checked and all
28

1 headers being analyzed, starting from the outer most headers, until the right field in
2 the header had been found. *Id.* at col. 1:63-2:2. This measure was very complex,
3 took a long time, and required a large amount of processing, especially for
4 complex tunneling protocols. *Id.* at col. 2:5-8. All the frame headers and protocols
5 which can be included in the data frames transmitted via the network had to be
6 known, hence, the amount of information needed for identifying the data was huge.
7 *Id.* at col. 2:8-14. Such a huge amount of information was typically too heavy to
8 handle in small and low price equipment like WLAN access points (AP). *Id.*
9 Further, then existing systems according to the IEEE 802.11 standard did not
10 separate traffic based on priority. *Id.* at col. 2:20-25.

11 30. The invention of the '904 Patent improved upon conventional network
12 traffic routing systems by providing methods by which priority traffic can easily be
13 distinguished from normal traffic without the need of complex processing making
14 it possible to execute in a low cost and possibly low performance AP. *Id.* at col.
15 2:29-32, 3:2-4, 3:52-53. The methods of the invention of the '904 Patent further
16 improved upon conventional network traffic routing systems by easily finding
17 higher priority traffic from the stream of MAC layer frames without necessarily
18 requiring knowledge of the upper layer protocols. *Id.* at col. 2:62-65. The
19 methods of the invention of the '904 Patent further improved upon conventional
20 network traffic routing systems by being protocol-independent and flexible such
21 that their configuration may be done in an external configuration program; with the
22 Access Point not needing to know anything about the processed traffic; further
23 alleviating the need of complex structure of the device. *Id.* at col. 3:5-8, 3:14-21.
24 A further advantage over conventional network traffic routing systems is that
25 installation of new software or hardware in the network element would not be
26 required when new protocols or modified protocols are introduced in the network.
27 *Id.* at col. 3:22-31.

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

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

9 **NOTICE**

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

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

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

21 36. Further, CommWorks previously issued a subpoena dated August 13,
22 2021 to Belkin International, Inc. (the "Subpoena"). The Subpoena included a list
23 of accused Linksys devices (defined as "Your Accused Products") and information
24 on accused functionality. On information and belief, at the time the Subpoena was
25 issued, Belkin International, Inc. was affiliated with Linksys.

26 37. On August 16, 2021, the Subpoena was delivered to Belkin's
27 registered agent, which is currently the same address as Linksys's registered agent.
28

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

4 46. For example, on information and belief, Linksys-Belkin has infringed
5 at least claim 46 of the ’807 Patent by using the process recited in that claim with
6 the Accused Products having a transmitted signal and performing a process for
7 provisioning between a wireless device and a network. *See* Exs. 1-3 (showing that
8 Linksys-Belkin routinely uses and tests Accused Products to be Wi-Fi Certified,
9 “an internationally recognized seal of approval for products indicating that they
10 have met industry-agreed standards for interoperability, security, and a range of
11 application specific protocols,” and that Certification means that a product has
12 been rigorously tested in a variety of ways to validate interoperability at an
13 Authorized Test Laboratory (which includes labs located in the United States) or a
14 member testing site (e.g. at Linksys’s Life Lab)); Exs. 1, 4 (showing, e.g., Linksys-
15 Belkin conducts rigorous functional testing on varieties of products and
16 technologies for the home networking business in the United States, including at
17 the Linksys Life Lab); Ex. 5 (showing, e.g., Linksys-Belkin automatically updating
18 the firmware of Accused Products thereby directing and/or controlling the
19 performance of a process for provisioning); Ex. 6 at 1, 3-4, 6, 16, 23; Ex. 3
20 (showing the Linksys EA8300 Router supports Wi-Fi Protected Setup (“WPS”)
21 and is WPS-certified); Ex. 7 at 1, 7, 11, 25, 80 (showing that WPS access points
22 comprise a process for provisioning between a wireless device and a network, for
23 example a Wireless Local Area Network (“WLAN”), and a transmitted signal).
24 The process for provisioning performed in the Accused Products comprises the
25 step of providing an access point connected to a network, the access point
26 comprising an activatable provisioning time interval. *See* Ex. 6 at 6 (showing, e.g.,
27 Linksys-Belkin provides a WPS compatible access point connected to a network,
28

1 such as a WLAN, and that the Linksys EA8300 Router has a WPS button); Ex. 7 at
2 7, 11, 19, 77-78 (showing, for example, that WPS access points comprise a
3 PushButton Configuration (“PBC”) method that activates a provisioning time
4 interval, e.g., a 120-second walk time). The process for provisioning performed in
5 the Accused Products further comprises initiating provisioning of the wireless
6 device if the transmission of the wireless signal from the wireless device to the
7 access point begins during the interval. *See* Ex. 7 at 77-78, 80 (showing, for
8 example, WPS access points begin provisioning of the wireless device (enrollee) if
9 the transmission of the wireless signal, such as the Probe Request {WSC IE PBC}
10 from the wireless device (enrollee) begins during the walk time).

11 47. On information and belief, Linksys has induced infringement of the
12 ’807 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly inducing,
13 directing, causing, and encouraging others, including, but not limited to, its
14 partners, resellers, distributors, customers, operators, and end users, to use within
15 the United States the Accused Products thereby infringing claim 46 of the ’807
16 Patent by, among other things, providing the Accused Products, software and/or
17 firmware updates, specifications, instructions, manuals, advertisements, marketing
18 materials, and technical assistance relating to the installation, set up, use,
19 operation, and maintenance of said products. *See* ¶¶ 33-43 above (explaining
20 Linksys-Belkin’s notice of infringement); Ex. 6 at 1, 3-4, 6, 16, 23 (Linksys-
21 Belkin, e.g., providing instructions and assistance relating to the installation, set
22 up, use, operation, and maintenance of the Linksys EA8300 Router).

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

25 49. On information and belief, Linksys-Belkin knew the ’807 Patent
26 existed and knew of an exemplary infringing Linksys-Belkin product while
27 committing the foregoing infringing acts thereby willfully, wantonly and
28

1 deliberately infringing the '807 Patent.

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

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

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

8 52. On information and belief, Linksys-Belkin has infringed the '465
9 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents,
10 by performing methods for contention free traffic detection using Accused
11 Products.

12 53. For example, on information and belief, Linksys-Belkin has infringed
13 at least claim 1 of the '465 Patent by performing a method for detecting priority of
14 data frames in a network. *See* Exs. 1-3 (showing that Linksys-Belkin routinely
15 uses and tests Accused Products to be Wi-Fi Certified, “an internationally
16 recognized seal of approval for products indicating that they have met industry-
17 agreed standards for interoperability, security, and a range of application specific
18 protocols,” and that Certification means that a product has been rigorously tested in
19 a variety of ways to validate interoperability at an Authorized Test Laboratory
20 (which includes labs located in the United States) or a member testing site (e.g. at
21 Linksys’s Life Lab)); Exs. 1, 4 (showing, e.g., Linksys-Belkin conducts rigorous
22 functional testing on varieties of products and technologies for the home
23 networking business in the United States, including at the Linksys Life Lab); Ex. 5
24 (showing, e.g., Linksys-Belkin automatically updating the firmware of Accused
25 Products thereby directing and/or controlling the performance of a process for
26 provisioning); Exs. 3, 8 (showing, e.g., the Linksys EA8300 Router supports Wi-Fi
27 Multimedia (“WMM”), has WMM enabled by default, and is WMM-certified); Ex.
28

1 9 at 7-8, 25-26 (showing that WMM compatible Access Points detect the priority
2 of data frames in a network by mapping to the Access Category (“AC”) of the
3 Enhanced Distributed Channel Access (“EDCA”) mechanism); *see also* Ex. 10 at
4 12, 51, 268-269 (showing another example in which 802.11-2007+ compatible
5 Access Points detect priority data frames in a network by mapping the AC of the
6 EDCA mechanism). The method for detecting priority of data frames comprises
7 the step of extracting a bit pattern from a predetermined position in a frame. *See*
8 Ex. 9 at 10, 12, 25 (showing, for example, WMM compatible Access Points extract
9 a bit pattern from a predetermined position in a data frame, such as in the QoS
10 Control field); Ex. 10 at 51, 60, 67, 253 (showing, for example, 802.11-2007+
11 compatible Access Points extract a bit pattern from a predetermined position in a
12 data frame, such as in the QoS Control field). The method for detecting priority of
13 data frames further comprises the step of comparing said extracted bit pattern with
14 a search pattern. *See* Ex. 9 at 25-26 (showing, for example, that WMM compatible
15 Access Points compare the extracted UP bit pattern with a search pattern, such as
16 the Access Category (“AC”)); Ex. 10 at 252, 268-269 (showing, for example, that
17 802.11-2007+ compatible Access Points compare the extracted TID bit pattern
18 User Priority (“UP”) with the Access Category (“AC”) search pattern). The
19 method for detecting priority of data frames further comprises the step of
20 identifying a received frame as a priority frame in case said extracted bit pattern
21 matches with said search pattern. *See* Ex. 9 at 25-26 (showing, for example, that
22 WMM compatible Access Points identify the priority Access Category (“AC”) of
23 the WMM Data frame if the UP of said frame matches an AC search pattern); Ex.
24 10 at 51, 252, 268-269 (showing, for example, that 802.11-2007+ compatible
25 Access Points identify the priority Access Category (“AC”) of the data frame if the
26 TID UP bit pattern matches an AC search pattern). In the method for detecting
27 priority of data frames, the predetermined position in said frame is defined by the
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1 offset of said bit pattern in said frame. *See* Ex. 9 at 10-12 (showing, for example,
2 WMM compatible Access Points predetermine the position of the bit pattern by
3 inspecting the Frame Control field to anticipate which non-minimal field has data
4 present in the frame MAC Header so the offset of the UP bit pattern can be
5 determined); Ex. 10 at 60, 62, 67 (showing, for example, 802.11-2007+ compatible
6 Access Points predetermine the position of the bit pattern by inspecting the Frame
7 Control field to anticipate which non-minimal field has data present in the frame
8 MAC Header so the offset of the TID bit pattern can be determined).

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

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

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

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

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

22 58. For example, on information and belief, Linksys-Belkin has infringed
23 at least claim 1 of the '285 Patent by using the process recited in that claim with
24 the Accused Products performing a process for provisioning between a wireless
25 device and a network. *See* Exs. 1-3 (showing that Linksys-Belkin routinely uses
26 and tests Accused Products to be Wi-Fi Certified, "an internationally recognized
27 seal of approval for products indicating that they have met industry-agreed
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1 standards for interoperability, security, and a range of application specific
2 protocols,” and that Certification means that a product has been rigorously tested in
3 a variety of ways to validate interoperability at an Authorized Test Laboratory
4 (which includes labs located in the United States) or a member testing site (e.g. at
5 Linksys’s Life Lab)); Exs. 1, 4 (showing, e.g., Linksys-Belkin conducts rigorous
6 functional testing on varieties of products and technologies for the home
7 networking business in the United States, including at the Linksys Life Lab); Ex. 5
8 (showing, e.g., Linksys-Belkin automatically updating the firmware of Accused
9 Products thereby directing and/or controlling the performance of a process for
10 provisioning); Ex. 6 at 1, 3-4, 6, 16, 23; Ex. 3 (showing the Linksys EA8300
11 Router supports Wi-Fi Protected Setup (“WPS”) and is WPS-certified); Ex. 7 at 1,
12 7, 11 (showing that WPS access points perform a process for provisioning between
13 a wireless device and a network, such as a WLAN). The process for provisioning
14 performed in the Accused Products comprises the step of tracking an operating
15 parameter of the wireless device within a service area, wherein the operating
16 parameter of the wireless device comprises an onset of a signal transmission of the
17 wireless device. *See* Ex. 7 at 11, 13, 25, 80 (showing that, for example, WPS
18 access points monitors Probe Request {WSC IE, PBC}, wherein said Probe
19 Requests include an onset of a signal transmission and PBC operating parameter in
20 the onset signal Probe Request {WSC IE PBC} transmitted from an in range
21 wireless device (enrollee) seeking access to the network). The process for
22 provisioning performed in the Accused Products further comprises the step of
23 initiating provisioning of the wireless device if the tracked operating parameter
24 occurs within a time interval. *See* Ex. 7 at 12-13, 25, 77-78, 80 (showing that, for
25 example, WPS access points initiate provisioning of the wireless device if the
26 tracked operating parameter (transmission of signal seeking access) occurs within
27 the 120-second time period (“Walk Time”).
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1 gateways, such as, for example, the Linksys EA8300 Router (included in the
2 “Accused Products”).

3 65. For example, on information and belief, Linksys-Belkin has infringed
4 at least claim 1 of the '596 Patent by using the process recited in that claim with
5 the Accused Products performing a process for associating devices. *See* Exs. 1-3
6 (showing that Linksys-Belkin routinely uses and tests Accused Products to be Wi-
7 Fi Certified, “an internationally recognized seal of approval for products indicating
8 that they have met industry-agreed standards for interoperability, security, and a
9 range of application specific protocols,” and that Certification means that a product
10 has been rigorously tested in a variety of ways to validate interoperability at an
11 Authorized Test Laboratory (which includes labs located in the United States) or a
12 member testing site (e.g. at Linksys’s Life Lab)); Exs. 1, 4 (showing, e.g., Linksys-
13 Belkin conducts rigorous functional testing on varieties of products and
14 technologies for the home networking business in the United States, including at
15 the Linksys Life Lab); Ex. 5 (showing, e.g., Linksys-Belkin automatically updating
16 the firmware of Accused Products thereby directing and/or controlling the
17 performance of a process for provisioning); Ex. 6 at 1, 3-4, 6, 16, 23; Ex. 3
18 (showing the Linksys EA8300 Router supports Wi-Fi Protected Setup (“WPS”)
19 and is WPS-certified); Ex. 7 at 1, 9, 11 (showing, for example, that WPS access
20 points perform a process for associating devices, such as the PushButton
21 Configuration (“PBC”) method). The process for associating devices performed in
22 the Accused Products comprises the step of tracking an operating parameter of a
23 first device, wherein the operating parameter of the first device comprises any of a
24 power on of the first device, and an onset of a signal transmission of the first
25 device. *See* Ex. 7 at 9, 11-13, 25, 77, 80 (showing, for example, WPS access
26 points track racks the PBC operating parameter of the first device found in the
27 onset signal of the Probe Request {WSC IE PBC}, where the Probe Request is
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1 activated when a PBC button is pressed on the first device (enrollee) that is seeking
2 access to the network). The process for associating devices performed in the
3 Accused Products further comprises the step of automatically associating the first
4 device with at least one other device if the tracked operating parameter occurs
5 within a time interval. *See* Ex. 7 at 12-13, 77-78, 80 (showing, for example, WPS
6 access points automatically associate the wireless device seeking access with the
7 access point if the signal transmission initiated by a button on the wireless device
8 occurs within the 120-second time period (“Walk Time”).

9 66. On information and belief, Linksys-Belkin has induced infringement
10 of the ’596 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly
11 inducing, directing, causing, and encouraging others, including, but not limited to,
12 its partners, resellers, distributors, customers, operators, and end users, to use
13 within the United States the Accused Products thereby infringing claim 1 of the
14 ’596 Patent by, among other things, providing the Accused Products, software
15 and/or firmware updates, specifications, instructions, manuals, advertisements,
16 marketing materials, and technical assistance relating to the installation, set up,
17 use, operation, and maintenance of said products. *See* ¶¶ 33-43 above (explaining
18 Linksys-Belkin’s notice of infringement); Ex. 6 at 1, 3-4, 6, 16, 23 (Linksys-
19 Belkin, e.g., providing instructions and assistance relating to the installation, set
20 up, use, operation, and maintenance of the Linksys EA8300 Router).

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

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

27 69. CommWorks has complied with the statutory and judicial
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1 requirements for collecting past damages with respect to the '596 Patent.

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

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

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

11 72. For example, on information and belief, Linksys-Belkin has infringed
12 at least claim 1 of the '979 Patent by using the process recited in that claim with
13 the Accused Products performing a provisioning process performed by a
14 provisioning system having provisioning logic. *See* Exs. 1-3 (showing that
15 Linksys-Belkin routinely uses and tests Accused Products to be Wi-Fi Certified,
16 "an internationally recognized seal of approval for products indicating that they
17 have met industry-agreed standards for interoperability, security, and a range of
18 application specific protocols," and that Certification means that a product has
19 been rigorously tested in a variety of ways to validate interoperability at an
20 Authorized Test Laboratory (which includes labs located in the United States) or a
21 member testing site (e.g. at Linksys's Life Lab)); Exs. 1, 4 (showing, e.g., Linksys-
22 Belkin conducts rigorous functional testing on varieties of products and
23 technologies for the home networking business in the United States, including at
24 the Linksys Life Lab); Ex. 5 (showing, e.g., Linksys-Belkin automatically updating
25 the firmware of Accused Products thereby directing and/or controlling the
26 performance of a process for provisioning); Ex. 6 at 1, 3-4, 6, 16, 23; Ex. 3
27 (showing the Linksys EA8300 Router supports Wi-Fi Protected Setup ("WPS"))
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1 and is WPS-certified); Ex. 7 at 1, 11-14 (showing, for example, that WPS access
2 points include a provisioning system having a provisioning logic (i.e. software
3 and/or hardware components used to implement interfaces such as A, M, and/or E
4 illustrated below) that perform the PushButton Configuration (“PBC”)
5 provisioning process). The provisioning process performed in the Accused
6 Products comprises tracking, by the provisioning logic, an operating parameter of a
7 first device, wherein the operating parameter of the first device comprises any of a
8 power on of the first device, and an onset of a signal transmission of the first
9 device. *See* Ex. 7 at 12-13, 25, 80 (showing, for example, WPS access points’
10 provisioning logic tracks and monitors a PBC operating parameter, such as an
11 onset of a Probe Request {WSC IE PBC} sent by the first device (enrollee)). The
12 provisioning process performed in the Accused Products further comprises sending
13 a signal to initiate provisioning of the first device with a network if the tracked
14 operating parameter occurs within a designated time interval. *See* Ex. 7 at 12-13,
15 77-78, 80 (showing that, for example, WPS access points’ send a Probe Response
16 {WSC IE, PBC} signal to initiate provisioning of the first device (enrollee) if the
17 Probe Request {WSC IE PBC} occurs within the 120-second walk time).

18 73. On information and belief, Linksys-Belkin has induced infringement
19 of the ’979 Patent pursuant to 35 U.S.C. § 271(b), by actively and knowingly
20 inducing, directing, causing, and encouraging others, including, but not limited to,
21 its partners, resellers, distributors, customers, operators, and end users, to use
22 within the United States the Accused Products thereby infringing claim 1 of the
23 ’979 Patent by, among other things, providing the Accused Products, software
24 and/or firmware updates, specifications, instructions, manuals, advertisements,
25 marketing materials, and technical assistance relating to the installation, set up,
26 use, operation, and maintenance of said products. *See* ¶¶ 33-43 above (explaining
27 Linksys-Belkin’s notice of infringement); Ex. 6 at 1, 3-4, 6, 16, 23 (Linksys-
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1 Belkin, e.g., providing instructions and assistance relating to the installation, set
2 up, use, operation, and maintenance of the Linksys EA8300 Router).

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

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

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

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

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

15 78. On information and belief, Linksys-Belkin has infringed the '904
16 Patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents,
17 by performing methods for contention free traffic detection using Accused
18 Products.

19 79. For example, on information and belief, Linksys-Belkin has infringed
20 at least claim 7 of the '904 Patent by performing a method comprising detecting a
21 received frame is a priority frame based, at least in part, on information in the
22 received frame. *See* Exs. 1-3 (showing that Linksys-Belkin routinely uses and tests
23 Accused Products to be Wi-Fi Certified, “an internationally recognized seal of
24 approval for products indicating that they have met industry-agreed standards for
25 interoperability, security, and a range of application specific protocols,” and that
26 Certification means that a product has been rigorously tested in a variety of ways
27 to validate interoperability at an Authorized Test Laboratory (which includes labs
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1 located in the United States) or a member testing site (e.g. at Linksys's Life Lab));
2 Exs. 1, 4 (showing, e.g., Linksys-Belkin conducts rigorous functional testing on
3 varieties of products and technologies for the home networking business in the
4 United States, including at the Linksys Life Lab); Ex. 5 (showing, e.g., Linksys-
5 Belkin automatically updating the firmware of Accused Products thereby directing
6 and/or controlling the performance of a process for provisioning); Exs. 3, 8
7 (showing, e.g., the Linksys EA8300 Router supports Wi-Fi Multimedia ("WMM"),
8 has WMM enabled by default, and is WMM-certified); Ex. 9 at 7, 10, 12, 25-26
9 (showing that, for example, WMM compatible Access Points detect the priority of
10 data frames by mapping to an Access Category ("AC") based, at least in part, on
11 information in the QoS Control field of a received frame, such as the User Priority
12 ("UP") subfield); Ex. 10 at 12, 51, 60, 67, 287 (showing that, for example, 802.11-
13 2007+ compatible Access Points detect the priority of data frames by mapping to
14 an Access Category ("AC") based, at least in part, on information in the QoS
15 Control field of a received frame, such as the User Priority ("UP") TID subfield).
16 The method further comprises extracting a bit pattern from a predetermined
17 position in the received frame. *See* Ex. 9 at 10, 12, 25 (showing, for example, that
18 in WMM compatible Access Points extract a bit pattern (i.e. UP subfield bit
19 pattern) from a predetermined position in a data frame, such as in the QoS Control
20 field); Ex. 10 at 51, 60, 67, 253 (showing, for example, that 802.11-2007+
21 compatible Access Points extract a bit pattern (i.e. TID) UP from a predetermined
22 position in a data frame, such as in the QoS Control field). The method further
23 comprises comparing the extracted bit pattern with a search pattern. *See* Ex. 9 at
24 25-26 (showing, for example, that WMM compatible Access Points compare the
25 extracted UP bit pattern with a search pattern, such as the AC); Ex. 10 at 252, 258-
26 259 (showing, for example, that 802.11-2007+ compatible Access Points compare
27 the extracted TID bit pattern UP with the AC search pattern). In the method, the
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1 detecting is based on a match between the extracted bit pattern and the search
2 pattern. *See* Ex. 9 at 25-26 (showing, for example, that WMM compatible Access
3 Points determine the AC of the WMM Data frame if the UP of said frame matches
4 to an AC search pattern); Ex. 10 at 51, 252, 268-269 (showing, for example, that
5 802.11-2007+ compatible Access Points determine the priority AC of the data
6 frame if the TID UP bit pattern matches an AC search pattern). The method
7 further comprises transmitting the received frame in a transmit period reserved for
8 priority frames in response to the detecting. *See* Ex. 9 at 25-27, 39 (showing, for
9 example, that WMM compatible Access Points detect a data frame to be high
10 priority and transmits said frame from a high priority queue, with the transmitting
11 occurring while frames in said queue are being sent in succession onto the wireless
12 medium during said queue's Transmission Opportunity ("TXOP") interval); Ex. 10
13 at 5, 15, 51, 69, 252-253, 268-269, 1021-1023 (showing, for example, that 802.11-
14 2007+ compatible Access Points detect a data frame to be high priority and
15 transmits said frame from a high priority queue, with the transmitting occurring
16 while frames in said queue are being sent in succession onto the wireless medium
17 during said queue's Transmission Opportunity ("TXOP") interval). The method
18 adjusts a duration of the transmit period reserved for priority frames based on
19 statistic information regarding sent priority frames. *See* Ex. 9 at 25, 27 (showing,
20 for example, that WMM compatible Access Points adjust the duration of the TXOP
21 interval (such as the TXOP limit) based on statistic information regarding sent
22 priority frames, such as when using a lower PHY rate than selected for the initial
23 transmission attempt of the first data frame, for retransmission of a data frame or
24 for the initial transmission of a data frame if any previous data frame in the current
25 data frame set has been retransmitted); Ex. 10 at 5, 15, 287, 1024-1025 (showing,
26 for example, that 802.11-2007+ compatible Access Points adjust the duration of
27 the TXOP based on statistic information regarding sent priority frames, such as
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1 when using a lower PHY rate than selected for the initial transmission attempt of
2 the first data frame, for retransmission of a data frame or for the initial
3 transmission of a data frame if any previous data frame in the current data frame
4 set has been retransmitted).

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

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

9 **PRAYER FOR RELIEF**

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

- 12 A. Entry of judgment in favor of CommWorks against Linksys-Belkin on
13 all counts;
- 14 B. Entry of judgment that Linksys-Belkin has infringed the Patent-in-
15 Suit;
- 16 C. Entry of judgment that Linksys-Belkin's infringement of the '807
17 Patent, the '285 Patent, the '596 Patent, and the '979 Patent has been willful;
- 18 D. Award of compensatory damages adequate to compensate
19 CommWorks for Linksys-Belkin's infringement of the '807 Patent, the '285
20 Patent, the '596 Patent, and the '979 Patent, in no event less than a
21 reasonable royalty trebled as provided by 35 U.S.C. § 284;
- 22 E. Award of compensatory damages adequate to compensate
23 CommWorks for Linksys-Belkin's infringement of the '465 Patent and the
24 '904 Patent, in no event less than a reasonable royalty as provided by 35
25 U.S.C. § 284;
- 26 F. CommWorks' costs;
- 27 G. Pre-judgement and post-judgement interest on CommWorks' award;
- 28

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.

6
7 Respectfully Submitted,

8 Date: November 1, 2023

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