

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

**SOVEREIGN PEAK VENTURES,
LLC,**

Plaintiff,

v.

**LG ELECTRONICS, INC., and
LG ELECTRONICS U.S.A., INC.,**

Defendants.

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JURY TRIAL DEMANDED

CIVIL ACTION NO. 2:20-CV-00109-JRG

PLAINTIFF’S AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Sovereign Peak Ventures, LLC (“SPV”) files this Amended Complaint against Defendants LG Electronics, Inc. (“LG KR”) and LG Electronics U.S.A., Inc., (“LG USA”) (collectively “LG” or “Defendants”) for infringement of U.S. Patent No. 8,902,871 (the “871 patent”), U.S. Patent No. 9,357,441 (the “441 patent”), and U.S. Patent No. 10,039,144 (the “144 patent”), U.S. Patent No. 9,431,017 (the “017 patent”), U.S. Patent No. 9,747,903 (the “903 patent”), U.S. Patent No. 10,102,861 (the “861 patent”), and U.S. Patent No. 6,877,038 (the “038”), collectively, the “Asserted Patents.”

THE PARTIES

1. Sovereign Peak Ventures, LLC is a Texas limited liability company, located at 1400 Preston Rd, Suite 289, Plano, TX 75093.
2. Upon information and belief, LG KR is a multinational corporation organized under the laws of Korea, with its principal place of business located at LG Twin Towers, 128 Yeoui-daero, Yeongdungpo-gu, Seoul 150-721, Republic of Korea.

3. Upon information and belief, LG USA is a corporation organized under the laws of the State of Delaware, with regular and established places of business in Texas at least at 21251-2155 Eagle Parkway, Fort Worth, Texas 76177; 14901 Beach St, Fort Worth, TX 76177; and 9420 Research Blvd, Austin, Texas 78759. LG USA has at least one regular and established places of business in this District.

4. Upon information and belief, LG KR was spun off from its predecessor LG Electronics Investment Ltd. in 2002. LG and its subsidiaries are made up of five business segments: Home Appliance & Air Solutions, Home Entertainment, Mobile Communications, Vehicle component Solutions and Business Solutions. The Mobile Communications segment of LG “manufactures and sells mobile communication equipment,” including importing, distributing, and selling mobile phones in the U.S. *See Consolidated Interim Financial Statements*, LG ELECTRONICS, INC. (September 20, 2019), at p. 9, *available at* https://www.lg.com/global/pdf/ir_report/LGE_19%203Q_consolidated_f_signed.pdf. LG is a publicly traded company and is listed on the Korea stock exchange.

5. LG KR maintains a corporate presence in the United States via at least its wholly-owned, U.S.-based sales subsidiary LG USA, which is organized under the laws of Delaware with its principal place of business located at 1000 Sylvan Avenue, Englewood Cliffs, NJ, 07632, USA. Upon information and belief, LG USA also owns and controls LG Electronics Alabama, Inc. (an Alabama corporation) and LG Electronics Mobilecomm USA, Inc. (a California corporation, referred to herein as “LG Mobilecomm”). In 2018, LG Mobilecomm was merged into LG USA.

6. Upon information and belief, LG KR and its U.S.-based subsidiaries (which act as part of a global network of overseas sales and manufacturing subsidiaries on behalf of LG) have operated as agents of one another and vicariously as parts of the same business group to work in

concert together and enter into agreements that are nearer than arm's length. For example, LG KR, alone and via at least LG USA's activities, conducts business in the United States, including importing, distributing, and selling mobile phones that incorporate devices, systems, and processes that infringe the Asserted Patents in Texas and this judicial district. *See Trois v. Apple Tree Auction Center, Inc.*, 882 F.3d 485, 490 (5th Cir. 2018) ("A defendant may be subject to personal jurisdiction because of the activities of its agent within the forum state...."); *see also Cephalon, Inc. v. Watson Pharmaceuticals, Inc.*, 629 F. Supp. 2d 338, 348 (D. Del. 2009) ("The agency theory may be applied not only to parents and subsidiaries, but also to companies that are 'two arms of the same business group,' operate in concert with each other, and enter into agreements with each other that are nearer than arm's length.").

7. Through offers to sell, sales, imports, distributions, and other related agreements to transfer ownership of LG's mobile phones with distributors and customers operating in and maintaining a significant business presence in the U.S. and/or its U.S. subsidiary LG USA, LG does business in the U.S., the state of Texas, and in the Eastern District of Texas.

JURISDICTION AND VENUE

8. This action arises under the patent laws of the United States, namely 35 U.S.C. §§ 271, 281, and 284-285, among others.

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

10. Upon information and belief, LG KR is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial business in this State and judicial district, including: (A) at least part of its infringing activities alleged herein; and (B) regularly doing or soliciting business, engaging in

other persistent conduct, and/or deriving substantial revenue from infringing goods offered for sale, sold, and imported and services provided to Texas residents vicariously through and/or in concert with its alter egos, intermediaries, agents, distributors, importers, customers, subsidiaries, and/or consumers. For example, LG has “operations in more than 100 locations around the world” in a group made up of 134 subsidiaries (among other associates and joint ventures), including those subsidiaries having a significant business presence in the U.S. *See Company Information*, LG ELECTRONICS, INC., <https://www.lg.com/global/investor-relations-company-info> (last visited Feb. 27, 2020).

11. This Court has personal jurisdiction over LG KR, directly or through intermediaries, distributors, importers, customers, subsidiaries, and/or consumers including its U.S. based, wholly-owned subsidiary, LG USA. Through direction and control of this subsidiary, LG KR has committed acts of direct and/or indirect patent infringement within Texas, and elsewhere within the United States, giving rise to this action and/or has established minimum contacts with Texas such that personal jurisdiction over LG KR would not offend traditional notions of fair play and substantial justice.

12. LG USA is a wholly owned subsidiary of LG. *See Consolidated Interim Financial Statements*, LG ELECTRONICS, INC. (September 20, 2019), at pp. 16-17, available at https://www.lg.com/global/pdf/ir_report/LGE_19%203Q_consolidated_f_signed.pdf. LG KR describes LG USA’s major business as its “sales of electronic products” in the United States. *Id.* Upon information and belief, LG KR has a 100% controlling ownership interest in LG USA and maintains more than half of LG USA’s voting rights as its basis for control. *Id.* Upon information and belief, LG compensates LG USA for its sales support services in the United States. As such, LG has a direct financial interest in LG USA, and vice versa.

13. With respect to the '871 patent, '441 patent, and '144 patent, the Accused Products comprise LG devices that support Wi-Fi Direct, including, but not limited to, LG's mobile phones (e.g., LG G7 ThinQ), TVs (e.g., LG 65" G 4K OLED TV), tablets (e.g., LG G Pad F2 8.0), and home entertainment equipment (LG Laser Smart Home Theater Projector, HF80JA), as well as, their components, and processes related to the same. With respect to the '017 patent, '903 patent, and '861 patent, the Accused Products comprise televisions that include digital assistant software (such as Amazon Alexa or Google Assistant) that provides natural language processing and household automation functionality (e.g. the ability to issue voice commands through the TV remote control to control smart home devices). On information and belief, televisions with LG's "AI ThinQ" branding include such features. The Accused Products include, but are not limited to the following LG television models: OLED65C9PUA, OLED65E9PUA, OLED65B9PUA, OLED77W9PUA, 75SM9970PUA, 65SM9000PUA, 75SM9070PUA, 65SM8600PUA, 75SM8670PUA, 65SM9500PUA, OLED77C9AUB, OLED88Z9PUA, OLED65C9AUA, OLED65E9AUA, 75SM8670AUA, 65SM8600AUA, 65SM8100AUA, 65UM7300PUA, 70UM7370PUA, 60UM7100DUA, 75UM7570PUD, 75UM7570AUE, 75UM8070PUA, 86UM8070AUB, 65UM7300AUE, 70UM7370AUB, 43LM5700DUA, 65UM6900PUA, 75UM6970PUB, 55UM6910PUC, 43UM6950DUB, 49UM6900PUA, 60UM6900PUA, 65UK6300PUE, 43LM5700PUA, 32LM570BPUA, 32LM620BPUA, OLED65B8PUA, OLED65C8PUA, OLED65E8PUA, OLED65W8PUA, 65SK8000PUA, 75SK8070PUA, 65SK9000PUA, 65SK9500PUA, 55UK7700PUD, 65UK6090PUA, 75UK6190PUB, 86UK6570PUB, OLED65C8AUA, 65SK8000AUB, 75SK8070AUB, 65UK6200PUA, 65UK6500AUA, 86UK6570AUA, 70UK6570AUB, 86UK7570PUB, 32LK540BPUA, 49LK5700PUA, 32LK610BBUA, 32LK610BPUA, 24LF454B, 24LJ4540, 24LH4830-PU,

24LJ4540-WU, 24LJ4840-WU. With respect to the '038 patent, the Accused Products comprise LG televisions and displays that are preloaded with one or more streaming applications that utilizes a TCP protocol and automatically adjusts resolution rates during playback, such as Netflix. On information and belief, televisions with LG's Smart webOS Operating System include such applications. The Accused Products include, but are not limited to the following LG television models: OLED65C9PUA, OLED65E9PUA, OLED65B9PUA, OLED77W9PUA, 75SM9970PUA, 65SM9000PUA, 75SM9070PUA, 65SM8600PUA, 75SM8670PUA, 65SM9500PUA, OLED77C9AUB, OLED88Z9PUA, OLED65C9AUA, OLED65E9AUA, 75SM8670AUA, 65SM8600AUA, 65SM8100AUA, 65UM7300PUA, 70UM7370PUA, 60UM7100DUA, 75UM7570PUD, 75UM7570AUE, 75UM8070PUA, 86UM8070AUB, 65UM7300AUE, 70UM7370AUB, 43LM5700DUA, 65UM6900PUA, 75UM6970PUB, 55UM6910PUC, 43UM6950DUB, 49UM6900PUA, 60UM6900PUA, 65UK6300PUE, 43LM5700PUA, 32LM570BPUA, 32LM620BPUA, OLED65B8PUA, OLED65C8PUA, OLED65E8PUA, OLED65W8PUA, 65SK8000PUA, 75SK8070PUA, 65SK9000PUA, 65SK9500PUA, 55UK7700PUD, 65UK6090PUA, 75UK6190PUB, 86UK6570PUB, OLED65C8AUA, 65SK8000AUB, 75SK8070AUB, 65UK6200PUA, 65UK6500AUA, 86UK6570AUA, 70UK6570AUB, 86UK7570PUB, 32LK540BPUA, 49LK5700PUA, 32LK610BBUA, 32LK610BPUA, 24LF454B, 24LJ4540, 24LH4830-PU, 24LJ4540-WU, 24LJ4840-WU. Upon information and belief, LG KR controls or otherwise directs and authorizes all activities of LG USA, including LG USA's using, offering for sale, selling, and/or importing the Accused Products, their components, and/or products containing the same that incorporate the fundamental technologies covered by the Asserted Patents. LG USA is authorized to import, distribute, sell, or offer for sale the Accused Products on behalf of its controlling parent LG KR.

For example, LG KR researches, designs, develops, and manufactures mobile phones and then directs LG USA to import, distribute, offer for sale, and sell the Accused Products in the United States. *See, e.g., United States v. Hui Hsiung*, 778 F.3d 738, 743 (9th Cir. 2015) (finding that the sale of infringing products to third parties rather than for direct import into the U.S. did not “place [defendants’] conduct beyond the reach of United States law [or] escape culpability under the rubric of extraterritoriality”). Furthermore, LG USA also administers, on behalf of LG, requests for service under and any disputes arising from LG’s limited warranty of LG’s products sold in the U.S., including in Texas and this judicial district. *See, e.g., User Guide LG G7 ThinQ, LM-G210TM*, LG, pp. 202-204, available at <http://gscs-b2c.lge.com/downloadFile?fileId=EnTAsmzn9Y5WNZqf0T7sQ> (“Procedure for Resolving Disputes” under LG’s Limited Warranty). Thus, LG USA conducts infringing activities on behalf of LG.

14. Upon information and belief, LG USA’s corporate presence in the United States gives LG substantially the business advantages that it would have enjoyed if it conducted its business through its own offices or paid agents in the state. Upon information and belief, LG USA is authorized to import, distribute, sell, and offer for sale LG’s products, including mobile phones incorporating infringing devices and processes, on behalf of LG KR. For example, LG USA operates within LG’s global network of sales subsidiaries in North and South America, Europe, Asia, Africa, and the Middle East. In the U.S., including within the Eastern District of Texas, LG’s mobile phones, which incorporate infringing devices and processes, are imported, distributed, offered for sale, and sold.

15. Via LG’s alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers maintaining a business presence, operating in, and/or residing in the U.S., LG’s products, including products and processes accused of infringing the Asserted

Patents are or have been widely distributed and sold in retail stores, both brick and mortar and online, in Texas including within this judicial district. *See Litecubes, LLC v. Northern Light Products, Inc.*, 523 F.3d 1353, 1369-70 (Fed. Cir. 2008) (“[T]he sale [for purposes of § 271] occurred at the location of the buyer.”); *see also Semcon IP Inc. v. Kyocera Corp.*, No. 2:18-cv-00197-JRG, 2019 WL 1979930, at *3 (E.D. Tex. May 3, 2019) (denying accused infringer’s motion to dismiss because plaintiff sufficiently plead that purchases of infringing products outside of the United States for importation into and sales to end users in the U.S. may constitute an offer to sell under § 271(a)). For example, LG phones are sold to end users by LG’s subsidiaries, distributors, and customers, including, but not limited to, LG USA, online and at retail stores located throughout the Eastern District of Texas.

16. Upon information and belief, LG KR has placed and continues to place infringing products and/or products that practice infringing processes into the stream of commerce via established distribution channels comprising at least subsidiaries and distributors, such as LG USA, and customers, with the knowledge and/or intent that those products are and/or will be imported, used, offered for sale, sold, and continue to be sold in the United States and Texas, including in this judicial district. For example, in 2018 LG reported 16,208 billion KRW (about 13.42 billion USD) in world-wide net sales in its Mobile Communications division. *See Consolidated Financial Statements*, LG ELECTRONICS, INC. (December 31, 2018), at p. 58, available at https://www.lg.com/global/pdf/ir_report/LGE_18%204Q_consolidated_f_signed.pdf. Of that amount, LG USA (combined with LG Mobilecomm) had 12,184 billion KRW (about 10.09 billion USD) in U.S. sales of LG products and services. *See id.* at p. 24. As a result, LG has, vicariously through and/or in concert with its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers, placed infringing LG devices

and related wireless network services into the stream of commerce via established distribution channels with the knowledge and/or intent that those products were sold and continue to be sold in the United States and Texas, including in this judicial district.

17. In the alternative, the Court has personal jurisdiction over LG KR under Federal Rule of Civil Procedure 4(k)(2), because the claims for patent infringement in this action arise under federal law, LG KR is not subject to the jurisdiction of the courts of general jurisdiction of any state, and exercising jurisdiction over LG KR is consistent with the U.S. Constitution.

18. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391 because, among other things, LG KR is not a resident in the United States, and thus may be sued in any judicial district, including this one, pursuant to 28 U.S.C. § 1391(c)(3). *See In re HTC Corp.*, 889 F.3d 1349, 1357 (Fed. Cir. 2018) (“The Court’s recent decision in *TC Heartland* does not alter” the alien-venue rule.).

19. On information and belief, LG USA is subject to this Court’s specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to its substantial business in this State and judicial district, including: (A) at least part of its own infringing activities alleged herein; and (B) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from infringing goods offered for sale, sold, and imported and services provided to Texas residents. LG USA has conducted and regularly conducts business within the United States and this District. LG USA has purposefully availed itself to the privileges of conducting business in the United States, and more specifically in Texas and this District. LG USA has sought protection and benefit from the laws of the State of Texas by placing infringing products into the stream of commerce through an established

distribution channel with awareness and/or intent that they will be purchased by consumers in this District.

20. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391 because, among other things, LG USA has regular and established places of business in this District, including at least 21251-2155 Eagle Parkway, Fort Worth, Texas 76177 and 14901 Beach St, Fort Worth, TX 76177.

THE ASSERTED PATENTS AND TECHNOLOGY

21. The Asserted Patents were invented by employees of Panasonic Corporation (“Panasonic”). Founded in 1918, Panasonic has been at the forefront of the electronics industry for over a century. Panasonic made numerous innovations in the home appliance, battery, mobile phone, and television industries. Indeed, Panasonic’s invention of the “Paper Battery” in 1979 is widely credited as enabling the compact electronics of today. In 1991, Panasonic released the Mova P, the smallest and lightest mobile phone on the market, which revolutionized the industry by showing the demand for a compact, lightweight device. Panasonic also produced the first wide-format plasma display and developed the first digital television for the U.S. market. Panasonic’s history of innovation is also borne out by its intellectual property. Indeed, a search of the USPTO database where the patent assignee is “Panasonic” yields over 27,000 matches.

22. Upon information and belief, a significant portion of the revenue of LG is derived from the manufacture and sale of LG’s mobile phones, tablets, TVs, and home theater equipment.

23. The Accused Products support Wi-Fi Direct. For example, upon information and belief, the LG G7 mobile phone is certified with the Wi-Fi Alliance, sold in the United States, and supports Wi-Fi Direct, as described below.

Wi-Fi CERTIFIED™ Interoperability Certificate
 This certificate lists the features that have successfully completed Wi-Fi Alliance interoperability testing.
 Learn more: www.wi-fi.org/certification/programs

Certification ID: WFA77254 Page 1 of 2

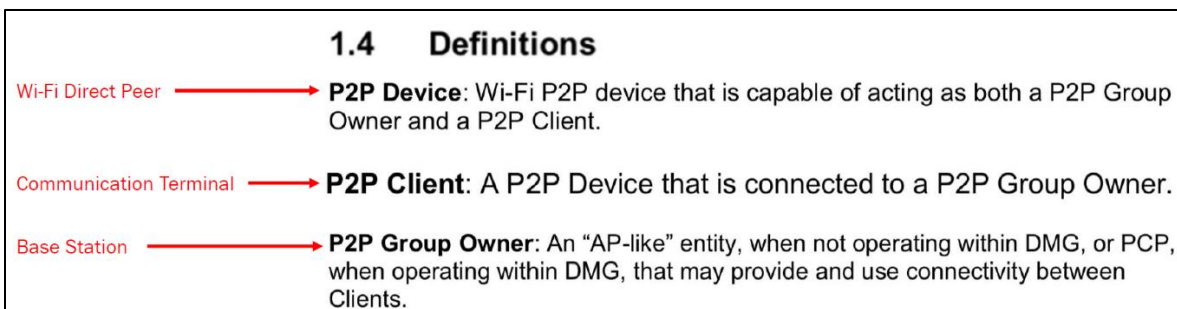
Date of Last Certification	April 12, 2018
Company	LG Electronics
Product	LM-G710EAW
Model Number	LM-G710EAW
Product Identifier(s)	
Category	Phones
Subcategory	Smartphone, multi-mode (Wi-Fi and other)
Hardware Version	Product: Ver 1.0, Wi-Fi Component: Ver 1.0
Firmware Version	Product: Ver 1.0, Wi-Fi Component: Ver 1.0
Operating System	Android, version: O-OS
Frequency Band(s)	2.4 GHz, 5 GHz

Summary of Certifications

CLASSIFICATION	PROGRAM
Connectivity	Wi-Fi CERTIFIED™ a, b, g, n, ac
	WPA™ - Enterprise, Personal
	WPA2™ - Enterprise, Personal
	Wi-Fi Direct®
Optimization	WMM®
	WMM®-Admission Control
	WMM®-Power Save
Access	Passpoint®
	Wi-Fi Protected Setup™
Applications & Services	Miracast® - Source
	Voice-Enterprise

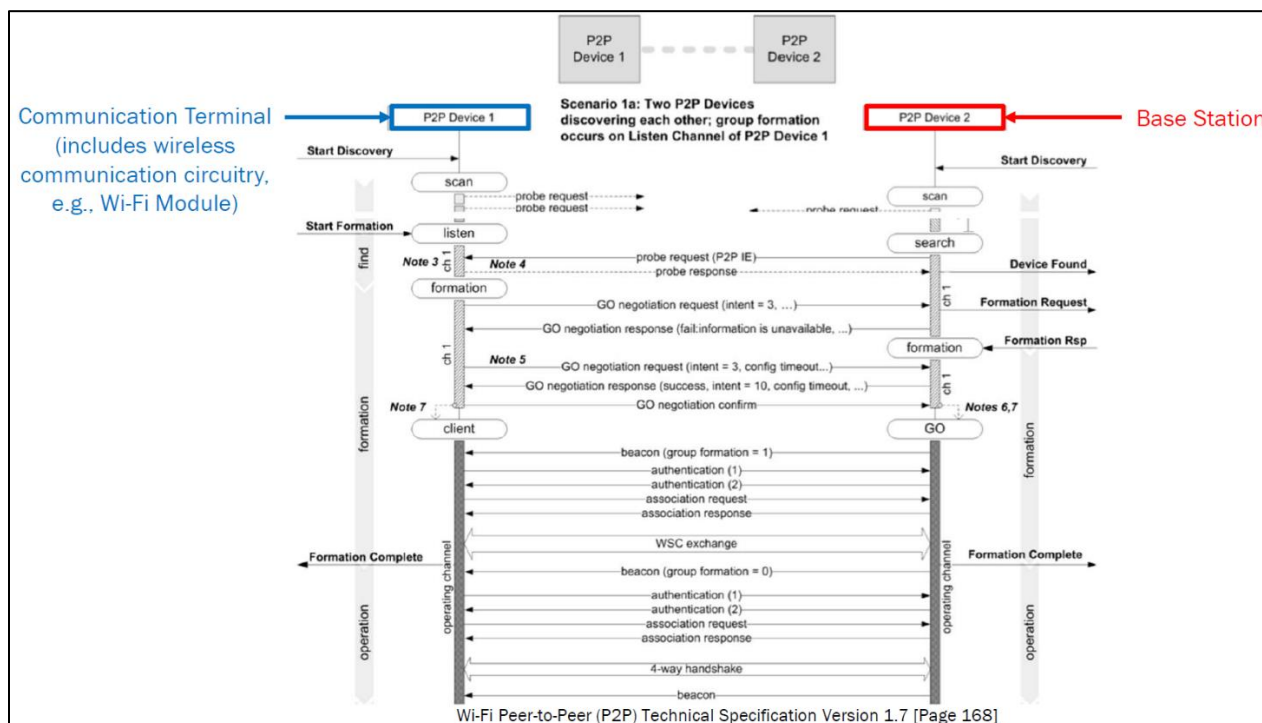
See, generally, WI-FI ALLIANCE, <https://www.wi-fi.org/>.

24. Using Wi-Fi Direct connectivity, the LG G7 is configured to act as a Wi-Fi Direct peer such that one peer is as a “communication terminal” and another Wi-Fi Direct peer acts as a “base station,” as indicated below.

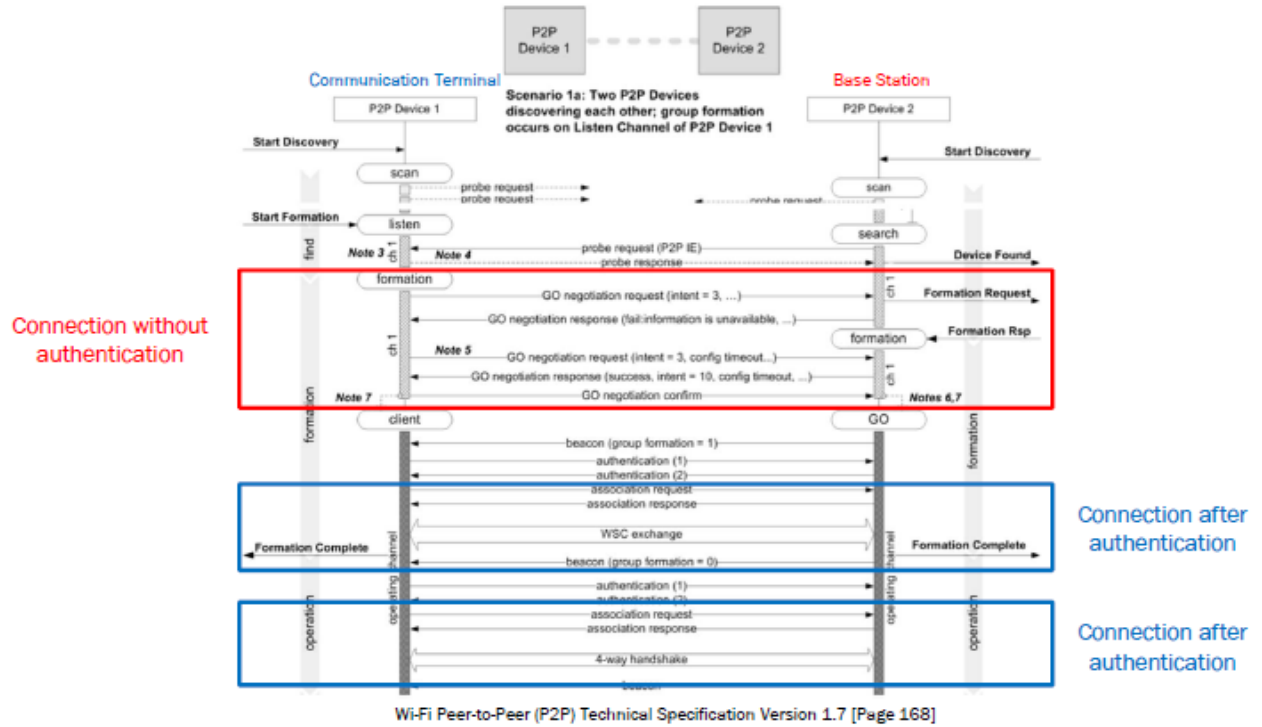


See *Wi-Fi Peer-to-Peer (P2P) Technical Specification Version 1.7*, WI-FI ALLIANCE, available via <https://www.wi-fi.org/>, pp. 14-17.

25. The Wi-Fi Direct peer (e.g., an LG G7) has wireless communication circuitry (e.g., a Wi-Fi module) that communicates with another Wi-Fi Direct peer.

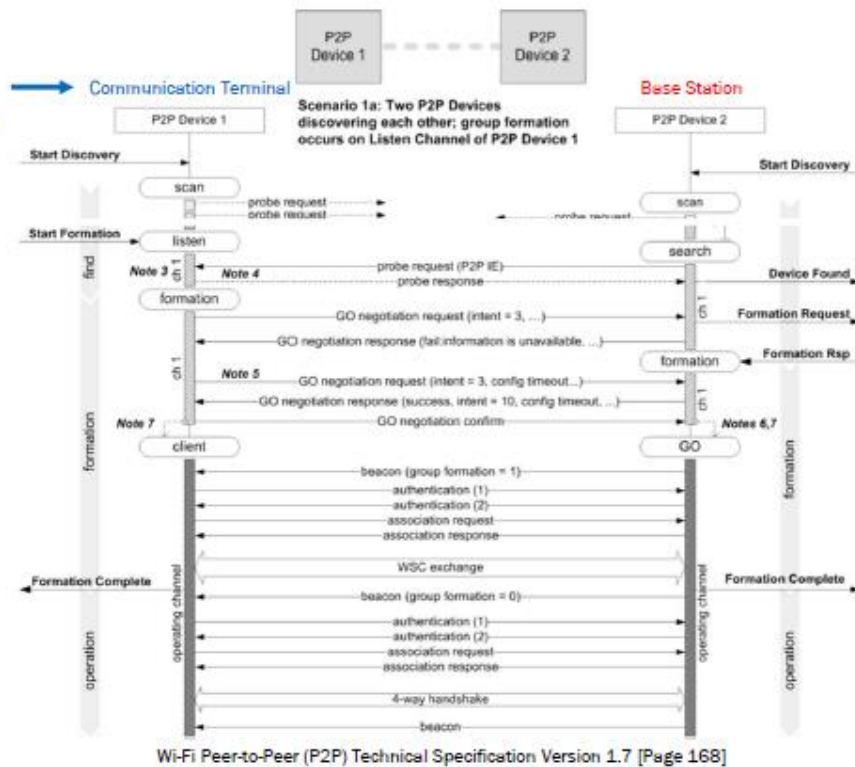


26. The Wi-Fi Direct peer (e.g., an LG G7) establishes a connection with another Wi-Fi Direct peer device using a connection that does not require authentication or a connection that does require authentication.



27. The Wi-Fi Direct peer (e.g., an LG G7) has control circuitry (e.g., a Wi-Fi module processor) that controls the wireless communication circuitry.

Includes wireless communication circuitry, e.g., Wi-Fi module, and control circuitry, (e.g., Wi-Fi module processor).



28. The Accused Products support built-in assistant technology. For example, Accused Products marketed under LG’s “AI ThinQ” branding, and have built-in Amazon Alexa and/or Google Assistant functionality. *See, e.g., TVs, LG ELECTRONICS, INC.,* <https://www.lg.com/us/tvs> (last visited Mar. 9, 2020) (sort by “Optional Features” and select “Google Assistant | Alexa”). For example, upon information and belief, the LG OLED77C9PUB is sold in the United States, and has Google Assistant and Amazon Alexa built-in.

The screenshot displays the LG OLED77C9PUB product page. On the left, a promotional banner reads "Now Meet Artificial Intelligence" and describes LG Premium TVs with AI ThinQ®. The main product image shows the TV displaying a vibrant red and black abstract pattern. To the right of the image, the product name "OLED77C9PUB" is listed, along with its specifications: "LG C9 77 inch Class 4K Smart OLED TV w/ AI ThinQ® (76.7\" Diagonal)". A star rating of 4.7 (27 reviews) is shown. Below this, "Key Features" are listed, including "LG ThinQ AI | Google Assistant | Alexa", "LG OLED Display", "LG α9 Gen 2 Intelligent Processor", and "Dolby Vision | Dolby Atmos". Available sizes are listed as 77", 65", and 55", with the 77" size selected. The suggested price is \$6999.⁹⁹

Below the product image, a section titled "AI TV (Artificial Intelligence)" provides a detailed breakdown of features:

AI TV (Artificial Intelligence)	
LG ThinQ® AI Yes	<u>Google Assistant</u> Yes
<u>Alexa Built-In</u> Yes (Available via firmware update)	<u>Google Home Compatible</u> Yes (Google Home device sold separately)
<u>Amazon Alexa Compatible</u> Yes (Amazon Alexa device sold separately)	Intelligent Voice Recognition Yes

29. The LG OLED77C9PUB, having Google Assistant and Amazon Alexa built-in is a device management system connected to a plurality of target devices for managing the plurality of target devices.

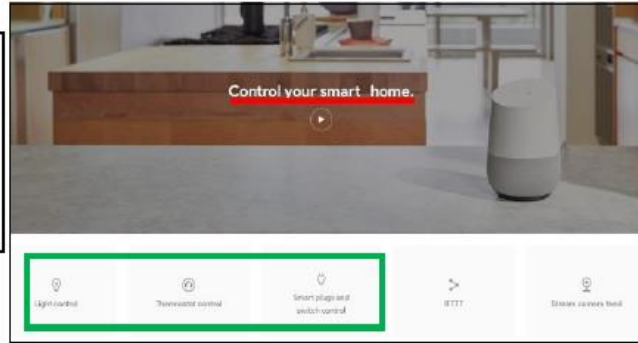
Change Channel

- "Ok Google, talk to LG to change channel to 12 on TV."
- "Ok Google, talk to LG to change channel to '000'(channel name) on TV."

Content Search & Recommendations

- "Ok Google, talk to LG to search '000'(VOD title)' on TV."
- "Ok Google, talk to LG to search videos with '000'(Cast name)' on TV."
- "Ok Google, talk to LG to show recommended videos on TV."
- "Ok Google, talk to LG to search my photos/videos/music on TV."

<https://www.lg.com/us/support/works-with-google-alexa-voice-assistant>

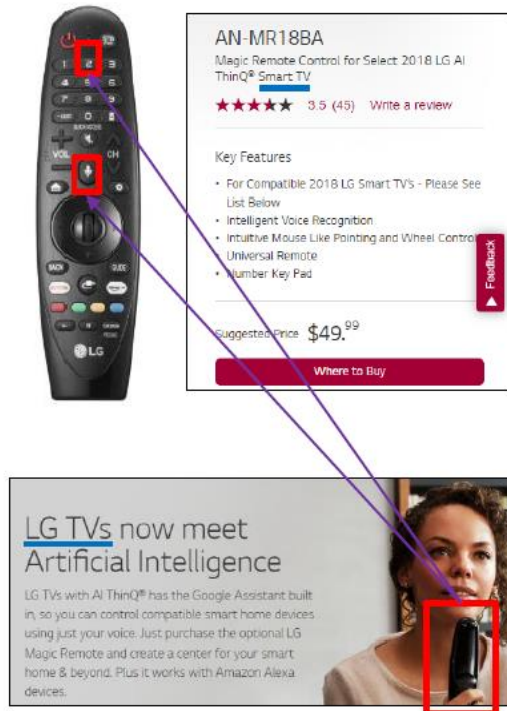


LG's 2018 AI TVs can perform hundreds of voice commands utilizing the company's own open smart platform as well as the built in Google Assistant. With LG's proprietary ThinQ, users can immediately connect to

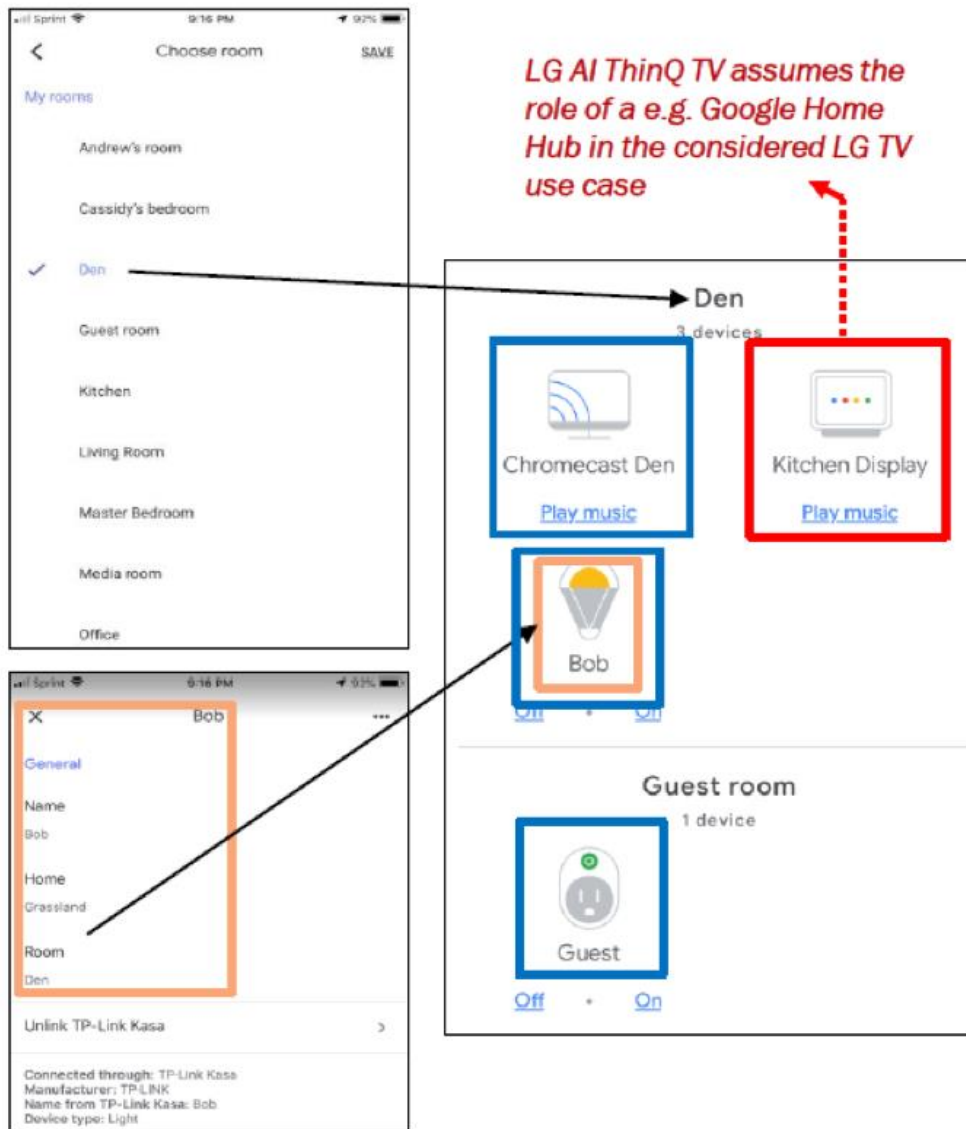
Searching for content is even simpler and more convenient with LG 2018 AI TVs, which can instantly retrieve information or switch to a channel that offers the content requested by the viewer. "Switch to Discovery channel"

https://store.google.com/us/product/google_home_learn?hl=en-US

30. The LG OLED77C9PUB receives instruction information from the device's voice input apparatus, which is associated with a first target device among the plurality of target devices. As shown below, the LG Magic Remote, which is associated and compatible with the LG OLED77C9PUB, receives instruction information that includes first voice information indicating an operation instruction for any target device among the plurality of target devices.

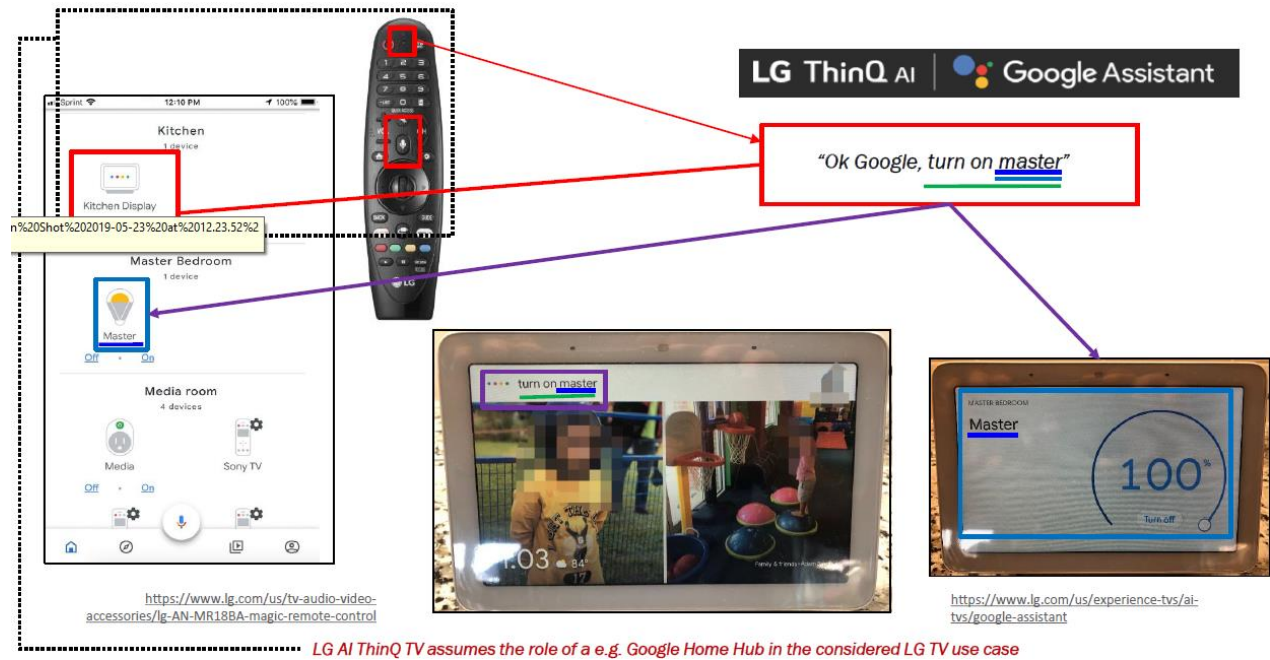


31. For example, when the user is in a room (for example, the “Den” as in the example below) and voices the command “OK Google, turn on the lights,” the LG OLED77C9PUB with Google Assistant built-in turns on only the lights in the Den, e.g., the light named “Bob,” in the example below.



32. The voice input apparatus determines whether or not second information indicating a second target device is included in the instruction information. For example, as shown below, the LG OLED77C9PUB with Google Assistant determines that second voice information, e.g., the

word “Master” indicating a second target device, is or is not included in the instruction information.



COUNT I

(INFRINGEMENT OF U.S. PATENT NO. 8,902,871)

33. Plaintiff incorporates paragraphs 1 through 32 herein by reference.

34. SPV is the assignee of the '871 patent, entitled “Wireless Base Station and Wireless Communication Terminal and Wireless Communication System,” with ownership of all substantial rights in the '871 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

35. The '871 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '871 patent issued from U.S. Patent Application No. 13/607,931.

36. LG has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '871 patent in this judicial district and elsewhere in Texas and the United States.

37. Upon information and belief, LG designs, develops, manufactures, assembles and markets mobile phones, tablets, TVs, and home theater equipment. *See Products*, LG ELECTRONICS INC., <https://www.lg.com/us#> (last visited Mar. 6, 2020) (follow “Mobile” and “TV/AUDIO/VIDEO” for product listing in these categories). Over five thousand LG devices are certified products supporting Wi-Fi Direct through the Wi-Fi Alliance. Two such products are the LG G7 ThinQ (a mobile phone) and the LG G Pad F2 8.0 (a tablet). *See, e.g., User Guide, LG G7 ThinQ, LM-G710TM*, LG ELECTRONICS INC., p. 130 available at <http://gscs-b2c.lge.com/downloadFile?fileId=EnTASmzn9Y5WNZqf0T7sQ>.

38. LG directly infringes the '871 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '871 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, LG sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '871 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, LG directly infringes the '871 patent through its direct involvement in the activities of its

subsidiaries, including LG USA, including by selling and offering for sale the Accused Products directly to LG USA and importing the Accused Products into the United States for LG USA. Upon information and belief, LG USA conducts activities that constitute direct infringement of the '871 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, LG offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, LG is vicariously liable for this infringing conduct of LG USA (under both the alter ego and agency theories) because, as an example and upon information and belief, LG and LG USA are essentially the same company, and LG has the right and ability to control LG USA's infringing acts and receives a direct financial benefit from LG USA's infringement.

39. For example, LG infringes claim 16 of the '871 patent via the Accused Products. The Accused Products perform the "method implemented by a wireless base station connected to a wireless communication terminal" of claim 16. For example, the Accused Products connect to Wi-Fi and are certified products supporting Wi-Fi Direct through the Wi-Fi Alliance. In Wi-Fi Direct, each Accused Product is enabled to function as a wireless base station that is configured to connect to a wireless communication terminal (e.g., a second device with Wi-Fi Direct capability).

40. The Accused Products perform a wireless communication controlling step of controlling communication with the wireless communication terminal. For example, a Wi-Fi Direct peer device (e.g. an Accused Product functioning as a base station) has a wireless communication section (e.g., the Wi-Fi module) that communicates with another Wi-Fi Direct peer device (i.e., a communication terminal) using a predetermined communication method (e.g., Wi-Fi Direct protocols).

41. In the Accused Products, the wireless communication controlling step establishes a connection with the wireless communication terminal by using (i) a first connection which does not require an authentication procedure for connection with the wireless communication terminal, or (ii) a second connection which requires the authentication procedure for connection with the wireless communication terminal. For example, the Accused Products, functioning as a base station, establish a connection with the communication terminal using a connection that does not require authentication or a connection that does require authentication.

42. In the Accused Products, the wireless communication controlling step further comprises: a first wireless communication controlling step of controlling communication with the wireless communication terminal in accordance with a first wireless communication method. For example, a Wi-Fi Direct peer device (i.e. the Accused Product/base station) has a first wireless communication section (e.g., IEEE 802.11 portion of Wi-Fi module) that communicates with another Wi-Fi Direct peer device (i.e., the communication terminal) using a first method (e.g., IEEE 802.11).

43. In the Accused Products, the wireless communication controlling step further comprises a second wireless communication controlling step of controlling communication with the wireless communication terminal in accordance with a second wireless communication method. For example, the Accused Products have a second wireless communication section (e.g., a P2P portion of Wi-Fi module) that communicates with another Wi-Fi Direct peer device using a second wireless communication method (e.g., P2P protocol described in the "Wi-Fi Peer-to-Peer (P2P) Technical Specification").

44. In the Accused Products, the second wireless communication controlling step performs transmitting, to the wireless communication terminal, profile information that is

necessary for the first wireless communication step. For example, the Accused Products transmit to another Wi-Fi Direct peer device (i.e., the communication terminal), via the second method (e.g., P2P), profile information (e.g., operating channel attributes) necessary for the devices to communicate via the first method (e.g., IEEE 802.11).

45. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

46. At a minimum, LG has known of the '871 patent at least as early as the service date of the original complaint in this matter on April 16, 2020. Further, on information and belief, LG has known of the '871 patent at least as early as the filing date of the original complaint. In addition, LG has known about the '871 patent since at least April 14, 2020, when LG received a letter providing notice of its infringement.

47. Upon information and belief, since at least the above-mentioned date when LG was on notice of its infringement, LG has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '871 patent to directly infringe one or more claims of the '871 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned date, LG does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '871 patent. Upon information and belief, LG intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused

Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing and certifying features related to Wi-Fi Direct in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States. *See, e.g., Global Network, LG ELECTRONICS INC., <http://www.lgnewsroom.com/global-network/north-america/> (last visited Mar. 3, 2020) (stating that “[t]he company has been very active in the [North American] region as an exemplary model of globalization with success in local plants, strategic alliances, and mergers and acquisitions” and listing LG’s U.S.-based subsidiaries).*

48. Upon information and belief, despite having knowledge of the ’871 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the ’871 patent, LG has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. LG’s infringing activities relative to the ’871 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

49. SPV has been damaged as a result of LG’s infringing conduct described in this Count. LG is, thus, liable to SPV in an amount that adequately compensates SPV for LG’s infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II

(INFRINGEMENT OF U.S. PATENT NO. 9,357,441)

50. Plaintiff incorporates paragraphs 1 through 49 herein by reference.

51. SPV is the assignee of the '441 patent, entitled "Wireless Base Station and Wireless Communication Terminal and Wireless Communication System," with ownership of all substantial rights in the '441 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

52. The '441 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '441 patent issued from U.S. Patent Application No. 14/747,164.

53. LG has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '441 patent in this judicial district and elsewhere in Texas and the United States.

54. Upon information and belief, LG designs, develops, manufactures, assembles and markets mobile phones, tablets, TVs, and home theater equipment. *See Products*, LG ELECTRONICS INC., <https://www.lg.com/us#> (last visited Mar. 6, 2020) (follow "Mobile" and "TV/AUDIO/VIDEO" for product listing in these categories). Over five thousand LG devices are certified products supporting Wi-Fi Direct through the Wi-Fi Alliance. Two such products are the LG G7 ThinQ and the LG G Pad F2 8.0. *See, e.g., User Guide, LG G7 ThinQ, LM-G710TM*, LG ELECTRONICS INC., p. 130 *available at* <http://gscs-b2c.lge.com/downloadFile?fileId=EnTAsmzn9Y5WNZqf0T7sQ>.

55. LG directly infringes the '441 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '441 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, LG sells

and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '441 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, LG directly infringes the '441 patent through its direct involvement in the activities of its subsidiaries, including LG USA, including by selling and offering for sale the Accused Products directly to LG USA and importing the Accused Products into the United States for LG USA. Upon information and belief, LG USA conducts activities that constitutes direct infringement of the '441 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, LG offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, LG is vicariously liable for this infringing conduct of LG USA (under both the alter ego and agency theories) because, as an example and upon information and belief, LG and LG USA are essentially the same company, and LG has the right and ability to control LG USA's infringing acts and receives a direct financial benefit from LG USA's infringement.

56. For example, LG infringes claim 1 of the '441 patent via the Accused Products. The Accused Products comprise the "wireless communication terminal" of claim 1. For example, the Accused Products connect to Wi-Fi and are certified products supporting Wi-Fi Direct through the Wi-Fi Alliance. In Wi-Fi Direct, each Accused Product is enabled to function as a

communication terminal that communicates with another device (e.g., another device with Wi-Fi Direct capability) that is enabled to function as a base station.

57. The Accused Products comprise wireless communication circuitry operative to communicate with a wireless base station by using (i) a non-authentication connection which does not require an authentication procedure for connection with the wireless base station, or (ii) an authentication connection which requires the authentication procedure for connection with the wireless base station. For example, in the Accused Products (i.e., a Wi-Fi Direct peer), the communication terminal has wireless communication circuitry (e.g., Wi-Fi module) that communicates with another Wi-Fi Direct peer (i.e., the base station). The communication terminal establishes a connection with the base station using a connection that does not require authentication or a connection that does require authentication.

58. The Accused Products comprise control circuitry operative to receive, by using the wireless communication circuitry, communication channel information from the wireless base station with a first communication method prior to the authentication connection starting with a second communication method, the communication channel information being necessary for the second communication method to select a communication channel for communicating with the wireless base station. In the Accused Products, the communication terminal has control circuitry (e.g., Wi-Fi module processor) that controls the wireless communication circuitry. The communication terminal (functioning as a Wi-Fi Direct peer device) receives from the base station (e.g., another Wi-Fi Direct peer device), via the first method (e.g., P2P), communication channel information (e.g., channel list and operating channel attributes) necessary for the devices to communicate via the second method (e.g., IEEE 802.11). The control circuitry receives the

communication channel information prior to the authentication connection starting with a second communication method.

59. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's allegations that each limitation of claim 1 is met.

60. At a minimum, LG has known of the '441 patent at least as early as the service date of the original complaint in this matter on April 16, 2020. Further, on information and belief, LG has known of the '441 patent at least as early as the filing date of the original complaint. In addition, LG has known about the '441 patent since at least April 14, 2020, when LG received a letter providing notice of its infringement.

61. Upon information and belief, since at least the above-mentioned date when LG was on notice of its infringement, LG has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '441 patent to directly infringe one or more claims of the '441 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned date, LG does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '441 patent. Upon information and belief, LG intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing and

certifying features related to Wi-Fi Direct in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States. *See, e.g., Global Network, LG ELECTRONICS INC.*, <http://www.lgnewsroom.com/global-network/north-america/> (last visited Mar. 3, 2020) (stating that “[t]he company has been very active in the [North American] region as an exemplary model of globalization with success in local plants, strategic alliances, and mergers and acquisitions” and listing LG’s U.S.-based subsidiaries).

62. Upon information and belief, despite having knowledge of the ’441 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the ’441 patent, LG has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. LG’s infringing activities relative to the ’441 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

63. SPV has been damaged as a result of LG’s infringing conduct described in this Count. LG is, thus, liable to SPV in an amount that adequately compensates SPV for LG’s infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT III

(INFRINGEMENT OF U.S. PATENT NO. 10,039,144)

64. Plaintiff incorporates paragraphs 1 through 63 herein by reference.

65. SPV is the assignee of the ’144 patent, entitled “Wireless Base Station and Wireless Communication Terminal and Wireless Communication System” with ownership of all

substantial rights in the '144 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

66. The '144 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '144 patent issued from U.S. Patent Application No. 15/142,258.

67. LG has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '144 patent in this judicial district and elsewhere in Texas and the United States.

68. Upon information and belief, LG designs, develops, manufactures, assembles and markets mobile phones, tablets, TVs, and home theater equipment. *See Products*, LG ELECTRONICS INC., <https://www.lg.com/us#> (last visited Mar. 6, 2020) (follow “Mobile” and “TV/AUDIO/VIDEO” for product listing in these categories). Over five thousand LG devices are certified products supporting Wi-Fi Direct through the Wi-Fi Alliance. Two such products are the LG G7 ThinQ (a mobile phone) and the LG G Pad F2 8.0 (a tablet). *See, e.g., User Guide, LG G7 ThinQ, LM-G710TM*, LG ELECTRONICS INC., p. 130 *available at* <http://gscs-b2c.lge.com/downloadFile?fileId=EnTAsmzn9Y5WNZqf0T7sQ>.

69. LG directly infringes the '144 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '144 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, LG sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the

Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '144 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, LG directly infringes the '144 patent through its direct involvement in the activities of its subsidiaries, including LG USA, including by selling and offering for sale the Accused Products directly to LG USA and importing the Accused Products into the United States for LG USA. Upon information and belief, LG USA conducts activities that constitutes direct infringement of the '144 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, LG offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, LG is vicariously liable for this infringing conduct of LG USA (under both the alter ego and agency theories) because, as an example and upon information and belief, LG and LG USA are essentially the same company, and LG has the right and ability to control LG USA's infringing acts and receives a direct financial benefit from LG USA's infringement.

70. For example, LG infringes claim 1 of the '144 patent via the Accused Products. The Accused Products comprise the "wireless communication device" of claim 1. For example, the Accused Products connect to Wi-Fi and are certified products supporting Wi-Fi Direct through the Wi-Fi Alliance. In Wi-Fi Direct, each Accused Product is enabled to function as a communication terminal that communicates with another device (e.g., another device with Wi-Fi Direct capability) that is enabled to function as a wireless station.

71. The Accused Products comprise wireless communication circuitry operative to communicate with a wireless station by using (i) a non-authentication connection which does not require an authentication procedure for connection with the wireless station, or (ii) an authentication connection which requires the authentication procedure for connection with the wireless station. For example, the Accused Products (functioning as a Wi-Fi Direct peer device) establish a connection with another Wi-Fi Direct peer device (i.e., a wireless station) using a connection that does not require authentication or a connection that does require authentication.

72. The Accused Products comprise control circuitry operative to receive, by using the wireless communication circuitry, profile information from the wireless station with a first communication method prior to the authentication connection starting with a second communication method, the profile information being necessary for the second communication method to communicate with the wireless station. For example, the Accused Products (i.e., Wi-Fi Direct peer devices) receive from another Wi-Fi Direct peer device (i.e., the wireless station), via the first communication method (e.g., P2P), profile information (e.g., channel list and operating channel attributes) necessary for the devices to communicate via the second communication method (e.g., IEEE 802.11).

73. The Accused Products comprise the control circuitry that is operative to control the wireless communication circuitry to receive a content with the second communication method, and the control circuitry further controls the wireless communication circuitry to receive information that is related to the content with the first communication method. For example, the Accused Products receive content (e.g., WSC Exchange data, such as a Device Password) from another Wi-Fi Direct peer device (i.e., the wireless station), via the second communication method (e.g., IEEE 802.11). And the Accused Products receive information that is related to the content

(e.g., WSC IE data, such as a Device Password ID) from the wireless station, via the first communication method (e.g., P2P).

74. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

75. At a minimum, LG has known of the '144 patent at least as early as the service date of the original complaint in this matter on April 16, 2020. Further, on information and belief, LG has known of the '144 patent at least as early as the filing date of the original complaint. In addition, LG has known about the '144 patent since at least April 14, 2020, when LG received a letter providing notice of its infringement.

76. Upon information and belief, since at least the above-mentioned date when LG was on notice of its infringement, LG has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '144 patent to directly infringe one or more claims of the '144 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned date, LG does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '144 patent. Upon information and belief, LG intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing and

certifying features related to Wi-Fi Direct in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States. *See, e.g., Global Network, LG ELECTRONICS INC.*, <http://www.lgnewsroom.com/global-network/north-america/> (last visited Mar. 3, 2020) (stating that “[t]he company has been very active in the [North American] region as an exemplary model of globalization with success in local plants, strategic alliances, and mergers and acquisitions” and listing LG’s U.S.-based subsidiaries).

77. Upon information and belief, despite having knowledge of the ’144 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the ’144 patent, LG has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. LG’s infringing activities relative to the ’144 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

78. SPV has been damaged as a result of LG’s infringing conduct described in this Count. LG is, thus, liable to SPV in an amount that adequately compensates SPV for LG’s infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT IV

(INFRINGEMENT OF U.S. PATENT NO. 9,431,017)

79. Plaintiff incorporates paragraphs 1 through 78 herein by reference.

80. SPV is the assignee of the ’017 patent, entitled “Device Control Method, Device Management System, and Voice Input Apparatus,” with ownership of all substantial rights in

the '017 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

81. The '017 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '017 patent issued from U.S. Patent Application No. 14/667,661.

82. LG has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '017 patent in this judicial district and elsewhere in Texas and the United States.

83. Upon information and belief, LG designs, develops, manufactures, assembles, and markets TVs that have built-in Amazon Alexa and/or Google Assistant functionality. *See, e.g., TVs*, LG ELECTRONICS, INC., <https://www.lg.com/us/tvs> (last visited Mar. 9, 2020) (sort by “Optional Features” and select “Google Assistant | Alexa”). LG refers to its TVs utilizing this functionality as Smart TVs and brands them as “AI ThinQ.”

84. LG directly infringes the '017 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '017 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, LG sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '017 patent. *See, e.g., Lake Cherokee Hard Drive Techs.,*

L.L.C. v. Marvell Semiconductor, Inc., 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, LG directly infringes the '017 patent through its direct involvement in the activities of its subsidiaries, including LG USA, including by selling and offering for sale the Accused Products directly to LG USA and importing the Accused Products into the United States for LG USA. Upon information and belief, LG USA conducts activities that constitute direct infringement of the '017 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, LG offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, LG is vicariously liable for this infringing conduct of LG USA (under both the alter ego and agency theories) because, as an example and upon information and belief, LG and LG USA are essentially the same company, and LG has the right and ability to control LG USA's infringing acts and receives a direct financial benefit from LG USA's infringement.

85. For example, LG infringes claim 6 of the '017 patent via the Accused Products such as at least LG TVs that have built-in Amazon Alexa and/or Google Assistant functionality, for example the LG OLED77C9PUB. The Accused Products include the "device management system that is connected to a plurality of target devices arranged in the same household and that manages the plurality of target devices" of claim 6. For example, LG TVs with built-in Google Assistant are each a device management system. The plurality of target devices that are controlled by LG TVs with built-in Google Assistant are arranged in groups (e.g., rooms) in the same household. The target devices may include, for example, IOT devices, such as smart lights, smart plugs, smart locks, and smart thermostats.

86. The Accused Products comprise a device management apparatus. For example, the Accused Products comprise LG Smart TVs which function as a device management apparatus.

87. The Accused Products comprise a voice input apparatus. For example, LG's Magic Remote, which is designed and intended to be used with the Accused Products, receives voice input that is sent to the TV via the remote-to-TV pairing.

88. The Accused Products include the device management apparatus which, in operation, receives, from the voice input apparatus associated with a first target device among the plurality of target devices, instruction information that includes first voice information indicating an operation instruction for any target device among the plurality of target devices. For example, the Accused Products (e.g., LG TVs with built-in Google Assistant) receive instruction information that includes first voice information from the voice input apparatus (e.g., LG's Magic Remote as paired with the TV) indicating an operation instruction for any target device among the plurality of target devices.

89. In the Accused Products, the device management apparatus recognizes the operation instruction from the first voice information included in the received instruction information. For example, the Accused Products (e.g., LG TVs with built-in Google Assistant) are configured to use a processor to recognize the operation instruction to control the intended smart home device.

90. In the Accused Products, the device management apparatus specifies the first target device by referencing a first database in which the identification information and a device ID of the first target device are associated. For example, the Accused Products (e.g., LG TVs with built-in Google Assistant) interface with target devices added to a user's Google Home app, which

comprises a database. The Home app allows the target device to be assigned to a room and is accordingly associated with the devices of that room.

91. In the Accused Products, the device management apparatus determines whether or not second voice information indicating a second target device among the plurality of target devices is included in the instruction information. For example, the Accused Products are configured to use a processor to determine whether or not a second voice information is included in the instruction information for purposes of what is known as “room relevancy” (e.g. to trigger a target device in the same room as an Accused Product even if the name of the target device is not included in the instruction information).

92. In the Accused Products, the device management apparatus transmits, (i) when the second voice information is not included in the instruction information, a control command for executing the recognized operation instruction to the first target device, and (ii) when the second voice information is included in the instruction information, the control command to the second target device. For example, if a specific target device or group (e.g., second voice information) is not included in the instruction information, then a first control command for executing the recognized operation instruction is transmitted by the Accused Products (e.g., a LG TV with built-in Google Assistant) to the first target device. When a LG TV with built-in Google Assistant determines that second voice information (e.g. a specific device name) is included in the instruction information, then the first control command is transmitted to the second target device.

93. In the Accused Products, the voice input apparatus transmits the instruction information to the device management apparatus. For example, the remote control transmits instruction information to the accused LG TV.

94. In the alternative, LG and virtual assistant providers, such as Amazon and Google, jointly infringe the method claims of the '017 patent. LG contracted virtual assistant providers to provide software that performs certain steps of the method claims of the '017 patent.

95. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

96. At a minimum, LG has known of the '017 patent at least as early as the service date of the original complaint in this matter on April 16, 2020. Further, on information and belief, LG has known of the '017 patent at least as early as the filing date of the original complaint. In addition, LG has known about the '017 patent since at least April 14, 2020, when LG received a letter providing notice of its infringement.

97. Upon information and belief, since at least the above-mentioned date when LG was on notice of its infringement, LG has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '017 patent to directly infringe one or more claims of the '017 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned date, LG does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '017 patent. Upon information and belief, LG intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available

instructions or manuals for these products to purchasers and prospective buyers, designing and testing digital assistant features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States. *See, e.g., Global Network*, LG ELECTRONICS INC., <http://www.lgnewsroom.com/global-network/north-america/> (last visited Mar. 3, 2020) (stating that “[t]he company has been very active in the [North American] region as an exemplary model of globalization with success in local plants, strategic alliances, and mergers and acquisitions” and listing LG’s U.S.-based subsidiaries).

98. Upon information and belief, despite having knowledge of the ’017 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the ’017 patent, LG has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. LG’s infringing activities relative to the ’017 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

99. SPV has been damaged as a result of LG’s infringing conduct described in this Count. LG is, thus, liable to SPV in an amount that adequately compensates SPV for LG’s infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT V

(INFRINGEMENT OF U.S. PATENT NO. 9,747,903)

100. Plaintiff incorporates paragraphs 1 through 99 herein by reference.

101. SPV is the assignee of the '903 patent, entitled "Device Control Method, Device Management System, and Voice Input Apparatus," with ownership of all substantial rights in the '903 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

102. The '903 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '903 patent issued from U.S. Patent Application No. 15/217,116.

103. LG has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '903 patent in this judicial district and elsewhere in Texas and the United States.

104. Upon information and belief, LG designs, develops, manufactures, assembles, and markets TVs that have built-in Amazon Alexa and/or Google Assistant functionality. *See, e.g.*, TVs, LG ELECTRONICS, INC., <https://www.lg.com/us/tvs> (last visited Mar. 9, 2020) (sort by "Optional Features" and select "Google Assistant | Alexa"). LG refers to its TVs utilizing this functionality as Smart TVs and brands them as "AI ThinQ."

105. LG directly infringes the '903 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '903 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, LG sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those

products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '903 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, LG directly infringes the '903 patent through its direct involvement in the activities of its subsidiaries, including LG USA, including by selling and offering for sale the Accused Products directly to LG USA and importing the Accused Products into the United States for LG USA. Upon information and belief, LG USA conducts activities that constitutes direct infringement of the '903 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, LG offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, LG is vicariously liable for this infringing conduct of LG USA (under both the alter ego and agency theories) because, as an example and upon information and belief, LG and LG USA are essentially the same company, and LG has the right and ability to control LG USA's infringing acts and receives a direct financial benefit from LG USA's infringement.

106. For example, LG infringes claim 2 of the '903 patent via the Accused Products such as at least LG TVs that have built-in Amazon Alexa and/or Google Assistant functionality, for example the LG OLED77C9PUB. The Accused Products include the "device management system" of claim 2. For example, LG TVs with built-in Google Assistant are each a device management system. The plurality of target devices that are controlled by LG TVs with built-in Google Assistant are arranged in groups (e.g., rooms) in the same household. The target devices may include, for example, IOT devices, such as smart lights, smart plugs, smart locks, and smart thermostats.

107. The Accused Products comprise a device management apparatus. For example, the Accused Products comprise LG Smart TVs which function as a device management apparatus.

108. The Accused Products comprise a voice input apparatus. For example, LG's Magic Remote, which is designed and intended to be used with the Accused Products, receives voice input that is sent to the TV via the remote-to-TV pairing.

109. The Accused Products include the device management apparatus which, in operation, receives, from the voice input apparatus associated with a first target device among a plurality of target devices, instruction information that includes first voice information indicating an operation instruction for any target device among the plurality of target devices, the plurality of target devices being arranged in a same household. For example, the Accused Products (e.g., LG TVs with built-in Google Assistant) receive instruction information that includes first voice information from the voice input apparatus (e.g., LG's Magic Remote) indicating an operation instruction for any target device among the plurality of target devices that are arranged in the same household.

110. In the Accused Products, the device management apparatus recognizes the operation instruction from the first voice information included in the received instruction information, wherein the instruction information includes identification information that identifies the voice input apparatus. For example, the Accused Products (e.g., LG TVs with built-in Google Assistant) configured to use a processor to recognize the operation instruction from the first voice information included in the received instruction information. The instruction information, e.g., voice information received by the Accused Product via the TV remote, includes identification information that identifies the voice input apparatus (e.g., the TV that is paired to the remote).

111. In the Accused Products, the device management apparatus specifies the first target device by referencing a first database in which the identification information and a device ID of the first target device are associated. For example, the Accused Products, e.g., LG TVs with built-in Google Assistant, interface with target devices added to a user's Google Home app, which comprises a database. The Home app allows the target device to be assigned to a room and is accordingly associated with the devices of that room.

112. In the Accused Products, the device management apparatus determines whether second voice information indicating a second target device among the plurality of target devices is included in the instruction information; and transmits, (i) when the second voice information is not included in the instruction information, a control command for executing the recognized operation instruction to the first target device, and (ii) when the second voice information is included in the instruction information, the control command to the second target device. For example, if a specific target device or group (e.g., second voice information) is not included in the instruction information, then a first control command for executing the recognized operation instruction is transmitted by the Accused Products (e.g., an LG TV with built-in Google Assistant) to the first target device. When a LG TV with built-in Google Assistant determines that second voice information (e.g. a specific device name) is included in the instruction information, then the first control command is transmitted to the second target device.

113. In the Accused Products, the voice input apparatus transmits the instruction information to the device management apparatus. For example, the remote control transmits instruction information to the accused LG TV.

114. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

115. In the alternative, LG and virtual assistant providers, such as Amazon and Google, jointly infringe the method claims of the '903 patent. LG contracted virtual assistant providers to provide software that performs certain steps of the method claims of the '903 patent.

116. At a minimum, LG has known of the '903 patent at least as early as the service date of the original complaint in this matter on April 16, 2020. Further, on information and belief, LG has known of the '903 patent at least as early as the filing date of the original complaint. In addition, LG has known about the '903 patent since at least April 14, 2020, when LG received a letter providing notice of its infringement.

117. Upon information and belief, since at least the above-mentioned date when LG was on notice of its infringement, LG has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '903 patent to directly infringe one or more claims of the '903 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned date, LG does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '903 patent. Upon information and belief, LG intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, designing and testing digital assistant features in the Accused Products, and/or providing technical support,

replacement parts, or services for these products to these purchasers in the United States. *See, e.g., Global Network*, LG ELECTRONICS INC., <http://www.lgnewsroom.com/global-network/north-america/> (last visited Mar. 3, 2020) (stating that “[t]he company has been very active in the [North American] region as an exemplary model of globalization with success in local plants, strategic alliances, and mergers and acquisitions” and listing LG’s U.S.-based subsidiaries).

118. Upon information and belief, despite having knowledge of the ’903 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the ’903 patent, LG has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. LG’s infringing activities relative to the ’903 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

119. SPV has been damaged as a result of LG’s infringing conduct described in this Count. LG is, thus, liable to SPV in an amount that adequately compensates SPV for LG’s infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT VI

(INFRINGEMENT OF U.S. PATENT NO. 10,102,861)

120. Plaintiff incorporates paragraphs 1 through 119 herein by reference.

121. SPV is the assignee of the ’861 patent, entitled “Device Control Method, Device Management System, and Voice Input Apparatus” with ownership of all substantial rights in

the '861 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

122. The '861 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '861 patent issued from U.S. Patent Application No. 15/656,426.

123. LG has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '861 patent in this judicial district and elsewhere in Texas and the United States.

124. Upon information and belief, LG designs, develops, manufactures, assembles, and markets TVs that have built-in Amazon Alexa and/or Google Assistant functionality. *See, e.g., TVs, LG ELECTRONICS, INC., <https://www.lg.com/us/tvs> (last visited Mar. 9, 2020) (sort by "Optional Features" and select "Google Assistant | Alexa").* LG refers to its TVs utilizing this functionality as Smart TVs and brands them as "AI ThinQ."

125. LG directly infringes the '861 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '861 patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, LG sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '861 patent. *See, e.g., Lake Cherokee Hard Drive Techs.,*

L.L.C. v. Marvell Semiconductor, Inc., 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, LG directly infringes the '861 patent through its direct involvement in the activities of its subsidiaries, including LG USA, including by selling and offering for sale the Accused Products directly to LG USA and importing the Accused Products into the United States for LG USA. Upon information and belief, LG USA conducts activities that constitutes direct infringement of the '861 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, LG offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, LG is vicariously liable for this infringing conduct of LG USA (under both the alter ego and agency theories) because, as an example and upon information and belief, LG and LG USA are essentially the same company, and LG has the right and ability to control LG USA's infringing acts and receives a direct financial benefit from LG USA's infringement.

126. LG infringes claim 9 of the '861 patent via the Accused Products such as at least LG TVs that have built-in Amazon Alexa and/or Google Assistant functionality, for example the LG OLED77C9PUB. Those Accused Products include the "system for managing a plurality of target devices, the plurality of target devices being arranged in a same household" of claim 9. For example, the LG OLED77C9PUB TV with Google Assistant built-in is connected to a plurality of target devices for managing the plurality of target devices. The target devices may include, for example, IOT devices, such as smart lights, smart plugs, smart locks, and smart thermostats.

127. The Accused Products comprise at least one processor. For example, the LG OLED77C9PUB TV utilizes a LG a9 Gen 2 Intelligent Processor.

128. The Accused Products comprise at least one memory including at least one set of instructions that, when executed by the at least one processor, cause the at least one processor to perform operations. For example, the LG a9 Gen 2 Intelligent Processor utilizes at least one memory module that includes instructions (e.g., executable code) that are executed by the process to cause the processor to perform operations.

129. The Accused Products includes a processor that performs the operation of receiving, by an input associated with a first target device among the plurality of target devices, a voice command that includes first voice information, the voice command indicating an operation instruction for one of the plurality of target devices, the first voice information including identification information that identifies the first target device. For example, the Accused Products (e.g., LG TVs with built-in Google Assistant) receive by an input (e.g., a user presses a button on the remote that is paired with the TV) a voice command; the voice command includes first voice information (e.g., the user speaks a command) indicating an operation instruction for any target device among the plurality of target devices. The first voice information identifies the first target device (a device type name or the name of a light or a room name with a light). The Accused Product (e.g., the LG TV with built-in Google Assistant) is added as a device to the Google Home app to receive commands and control devices. The Accused Product is associated with specific target devices through the groups/room configuration via the Google Home app.

130. The Accused Products include a processor that performs the operation of specifying the first target device by referencing a database in which the identification information and a device ID of the first target device are associated. For example, to control other devices, Accused Products such as the LG OLED77C9PUB use Google's HomeGraphApiService (which supports storing and querying devices, rooms, structures and their relationships), to reference the Google Home

database (where said relationships are stored) to specify the first target device. Such relationships include a relationship between the received identification information and a device ID of the first target device (e.g., a first light).

131. The Accused Products are configured to use a processor to perform the operation of recognizing the operation instruction from the voice command. For example, Accused Products, such as the LG OLED77C9PUB, are configured to use a processor to recognize the operation instruction from the voice command.

132. The Accused Products are configured to use a processor to perform the operation of determining whether or not the voice command includes second voice information that identifies a second target device among the plurality of target devices as an operation object for the operation instruction. For example, Accused Products, such as the LG OLED77C9PUB, are configured to use a processor to determine whether or not second voice information is included in the voice command that identifies a second target device (e.g., a second light).

133. The Accused Products are configured to use a processor to perform the following operation: when the second voice information is not included in the voice command, causing the first target device to execute the operation instruction. For example, when second voice information is not included (e.g., the user does not specify a second target device, such as a second light, by name), the Accused Products, such as the LG OLED77C9PUB, use a processor to cause the operation instruction for just the first target device (e.g., the first light).

134. The Accused Products are configured to use a processor to perform the following operation: when the second voice information is included in the voice command, transmitting a control command to the second target device identified as the operation object for causing the second target device to execute the operation instruction. For example, when second voice

information is included (e.g., the user does specify a second target device, such as a second light, by name), the Accused Products, such as the LG OLED77C9PUB, use a processor to cause the operation instruction for the second target device.

135. In the alternative, LG and virtual assistant providers, such as Amazon and Google, jointly infringe the method claims of the '861 patent. LG contracted virtual assistant providers to provide software that performs certain steps of the method claims of the '861 patent.

136. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

137. At a minimum, LG has known of the '861 patent at least as early as the service date of the original complaint in this matter on April 16, 2020. Further, on information and belief, LG has known of the '861 patent at least as early as the filing date of the original complaint. In addition, LG has known about the '861 patent since at least April 14, 2020, when LG received a letter providing notice of its infringement.

138. Upon information and belief, since at least the above-mentioned date when LG was on notice of its infringement, LG has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '861 patent to directly infringe one or more claims of the '861 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned date, LG does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '861 patent. Upon information and belief, LG intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the

infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, designing and testing digital assistant features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States. *See, e.g., Global Network*, LG ELECTRONICS INC., <http://www.lgnewsroom.com/global-network/north-america/> (last visited Mar. 3, 2020) (stating that “[t]he company has been very active in the [North American] region as an exemplary model of globalization with success in local plants, strategic alliances, and mergers and acquisitions” and listing LG’s U.S.-based subsidiaries).

139. Upon information and belief, despite having knowledge of the ’861 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the ’861 patent, LG has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. LG’s infringing activities relative to the ’861 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

140. SPV has been damaged as a result of LG’s infringing conduct described in this Count. LG is, thus, liable to SPV in an amount that adequately compensates SPV for LG’s infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT VII

(INFRINGEMENT OF U.S. PATENT NO. 6,877,038)

141. Plaintiff incorporates paragraphs 1 through 140 herein by reference.

142. SPV is the assignee of the '038 patent, entitled "Data Transmission Method and Apparatus" with ownership of all substantial rights in the '038 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

143. The '038 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '038 patent issued from U.S. Patent Application No. 10/633,574.

144. LG has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '038 patent in this judicial district and elsewhere in Texas and the United States.

145. Upon information and belief, LG designs, develops, manufactures, assembles and markets TVs that are preloaded with one or more streaming applications that utilizes a TCP protocol and automatically adjusts resolution rates during playback, such as Netflix. *See, e.g., LG TV – Premium App and App Store*, LG ELECTRONICS, INC., <https://www.lg.com/us/support/video-tutorials/lg-tv-premium-apps-app-store-netcast-CT10000018-1342475530905> (last visited May 5, 2020). LG's Smart TVs with webOS are preloaded with Netflix. *See, e.g., Netflix 4K Streaming - UHD Smart TV Video*, LG ELECTRONICS, INC., <https://www.lg.com/us/support/video-tutorials/netflix-4k-streaming-uhd-smart-tv-video-CT10000018-1432737966475> (last visited May 5, 2020).

146. LG directly infringes the '038 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '038

patent to, for example, its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, upon information and belief, LG sells and makes the Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the '038 patent. *See, e.g., Lake Cherokee Hard Drive Techs., LLC v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013). Furthermore, LG directly infringes the '038 patent through its direct involvement in the activities of its subsidiaries, including LG USA, including by selling and offering for sale the Accused Products directly to LG USA and importing the Accused Products into the United States for LG USA. Upon information and belief, LG USA conducts activities that constitute direct infringement of the '038 patent under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing those Accused Products. For example, and upon information and belief, LG offers for sale, sells, and imports the Accused Products within the U.S. to, for example, its distributors, customers, subsidiaries, importers, and/or consumers. Further, LG is vicariously liable for this infringing conduct of LG USA (under both the alter ego and agency theories) because, as an example and upon information and belief, LG and LG USA are essentially the same company, and LG has the right and ability to control LG USA's infringing acts and receives a direct financial benefit from LG USA's infringement.

147. The Accused Products infringe the '038 patent including, at least, claim 1. For example, the Accused Products include TVs that are preloaded with the Netflix application, including, but not limited to, the OLED65C9PUA. The Accused Products perform a method for receiving data packets from a transmitter. For example, on information and belief, the

OLED65C9PUA receives data packets (e.g., streaming content) from a transmitter (e.g., Netflix servers).

148. The Accused Products are programmed to decide that a data packet is missing. For example, on information and belief, the OLED65C9PUA is configured to use HTTP Live Streaming (HLS) when streaming content. HLS utilizes the TCP protocol, which is designed to do error checking, meaning that it can detect missing data packets. Further, the Accused Products, including the OLED65C9PUA, are programmed to recognize TCP errors, which, in some instances, correspond to missing data packets.

149. The Accused Products make a retransmission decision, based on channel conditions, importance of the missing data packet and bit rates of previously received data packets, as to whether a retransmission request for the missing data packet is to be sent. For example, on information and belief, when running Netflix, the OLED65C9PUA utilizes a “Quality of Experience” or “QoE” metric in making viewing decisions, including retransmission decisions. The QoE metric is a function of the factors affecting quality of experience. Among other things, the QoE metric considers re-buffering count, bit rate, and startup time. The QoE metric informs the retransmission decision.

150. The Accused Products send the retransmission request to the transmitter if the retransmission decision is affirmative. For example, on information and belief, the OLED65C9PUA will send a retransmission request to the Netflix servers if it detects a packet loss corresponding to its buffer and the QoE does not necessitate downgrading the content resolution.

151. The Accused Products receive a packet retransmitted by the transmitter in response to the retransmission request. For example, on information and belief, the Accused Products utilize

a TCP protocol. In response to a retransmission request, the OLED65C9PUA receives a packet (e.g., video content) retransmitted by the transmitter (e.g., Netflix servers).

152. The technology discussion above and the exemplary Accused Products provide context for Plaintiff's infringement allegations.

153. At a minimum, LG has known of the '038 patent at least as early as the filing date of this amended complaint. In addition, LG has known about the '038 patent since at least May 7, 2020, when LG received a letter providing notice of its infringement.

154. Upon information and belief, since at least the above-mentioned date when LG was on notice of its infringement, LG has actively induced, under U.S.C. § 271(b), its distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the Accused Products that include or are made using all of the limitations of one or more claims of the '038 patent to directly infringe one or more claims of the '038 patent by using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned date, LG does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '038 patent. Upon information and belief, LG intends to cause, and has taken affirmative steps to induce infringement by its distributors, importers, customers, subsidiaries, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing wireless charging features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States. *See, e.g., Global Network,*

LG ELECTRONICS INC., <http://www.lgnewsroom.com/global-network/north-america/> (last visited Mar. 3, 2020) (stating that “[t]he company has been very active in the [North American] region as an exemplary model of globalization with success in local plants, strategic alliances, and mergers and acquisitions” and listing LG’s U.S.-based subsidiaries).

155. Upon information and belief, despite having knowledge of the ’038 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the ’038 patent, LG has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. LG’s infringing activities relative to the ’038 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

156. SPV has been damaged as a result of LG’s infringing conduct described in this Count. LG is, thus, liable to SPV in an amount that adequately compensates SPV for LG’s infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

CONCLUSION

157. Plaintiff SPV is entitled to recover from LG the damages sustained by Plaintiff as a result of LG’s wrongful acts, and willful infringement, in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court.

158. Plaintiff has incurred and will incur attorneys’ fees, costs, and expenses in the prosecution of this action. The circumstances of this dispute may give rise to an exceptional case

within the meaning of 35 U.S.C. § 285, and Plaintiff is entitled to recover its reasonable and necessary attorneys' fees, costs, and expenses.

JURY DEMAND

159. Plaintiff hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

160. Plaintiff respectfully requests that the Court find in its favor and against LG, and that the Court grant Plaintiff the following relief:

1. A judgment that LG has infringed the Asserted Patents as alleged herein, directly and/or indirectly by way of inducing infringement of such patents;
2. A judgment for an accounting of all damages sustained by Plaintiff as a result of the acts of infringement by LG;
3. A judgment and order requiring LG to pay Plaintiff damages under 35 U.S.C. § 284, including up to treble damages as provided by 35 U.S.C. § 284, and any royalties determined to be appropriate;
4. A judgment and order requiring LG to pay Plaintiff pre-judgment and post-judgment interest on the damages awarded;
5. A judgment and order finding this to be an exceptional case and requiring LG to pay the costs of this action (including all disbursements) and attorneys' fees as provided by 35 U.S.C. § 285; and
6. Such other and further relief as the Court deems just and equitable.

Dated: May 7, 2020

Respectfully submitted,

/s/ Patrick J. Conroy

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