

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

CELERITY IP, LLC, and INNOVATIVE)
SONIC LTD.,)

Plaintiffs,)

v.)

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

Defendants.)

Civil No. 2:24-cv-00132

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Celerity IP, LLC (“Celerity”) and Innovative Sonic Ltd. (“IS” or “ISL”) (collectively, “Plaintiffs”) bring this Complaint for Patent Infringement (“Complaint”) and for Jury Trial against LG Electronics, Inc. (“LGE”) and LG Electronics U.S.A., Inc. (“LGEUS”) (collectively, “LG” or “Defendants”). Plaintiffs allege as follows:

THE PARTIES

1. Plaintiff ISL is a corporation organized and existing under the laws of the Republic of Mauritius having its principal place of business at 3F., No. 58, Jhouzih Street, Neihu District, Taipei City 114, Taiwan, Republic of China.

2. ISL is the assignee of U.S. Patent No. 8,411,626 (“the ’626 patent”) (attached as Exhibit 1, U.S. Patent No. 8,472,628 (“the ’628 patent”) (attached as Exhibit 2), U.S. Patent No. 8,855,095 (“the ’095 patent”) (attached as Exhibit 3), U.S. Patent No. 8,559,962 (“the ’962 patent”) (attached as Exhibit 4), and U.S. Patent No. 8,565,128 (“the ’128 patent”) (attached as Exhibit 5) (collectively, “the Asserted Patents”).

3. Plaintiff Celerity is a corporation organized and existing under the laws of Texas, with its principal place of business at 7160 Dallas Parkway, Suite 235 Plano, TX 75024. Celerity is the exclusive licensing agent with respect to LG for the Asserted Patents with rights to enforce the Asserted Patents.

4. Defendant LGE is a Korean corporation with a principal place of business at LG Twin Towers, 128 Yeoui-daero, Yeongdungpo-gu, Seoul, 07366, South Korea.

5. On information and belief, Defendant LGEUS is a Delaware corporation with regular and established places of business within this District at 2153-2155 Eagle Pkwy, Fort Worth, TX 76177 and 14901 Beach St, Fort Worth, TX 76177. *See* Answer ¶¶ 4, 9, *SpaceTime3D, Inc. v. LG Elecs, Inc.*, No. 2:22-CV-00049-RWS, Dkt. 19 (E.D. Tex. June 20, 2022); Answer ¶ 5, *Celerity IP, LLC v. LG Elecs, Inc.*, No. 2:23-CV-00316-RSP, Dkt. 21 (E.D. Tex. Nov. 27, 2023).

6. On information and belief, Defendant LGEUS is a wholly owned subsidiary of Defendant LGE. Defendant LGEUS may be served with process through its Texas registered agent, United States Corporation Co.

JURISDICTION AND VENUE

7. This is an action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code § 1, *et seq.* Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

8. This Court has specific personal jurisdiction over Defendants because Defendants conducted and continue to conduct business in this Judicial District. Plaintiffs' causes of action arise from Defendants' contacts with and activities in the State of Texas and this Judicial District. Upon information and belief, the Defendants have committed acts of infringement within the State of Texas and this Judicial District by, *inter alia*, directly and/or indirectly making, using, selling, offering to sell, and/or importing products that infringe one or more claims of the Asserted Patents

within this district. Defendants' infringing acts within this Judicial District give rise to this action and have established minimum contacts with the forum state of Texas.

9. Defendants conduct and have conducted business in this District and maintain regular and established places of business within this District. For example, Defendants have maintained regular and established places of business with offices and/or other facilities in this Judicial District of Texas at least at 2153-2155 Eagle Pkwy, Fort Worth, TX 76177 and 14901 Beach St, Fort Worth, TX 76177. Defendants placed or contributed to placing and/or induced the placing of infringing products, including, but not limited to, LG's VELVET 5G devices, into the stream of commerce, via established distribution channels, knowing or understanding that such products would be sold and used in the United States, including in this Judicial District. On information and belief, Defendants also have derived substantial revenues from infringing acts in this Judicial District, including from the sale and use of infringing products including, but not limited to, LG's VELVET 5G devices.

10. Defendants have established minimum contacts with this forum such that the exercise of jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice.

11. Defendants have repeatedly and recently conceded that this Court has personal jurisdiction over them, in other patent infringement actions related to consumer electronic devices. *See e.g., SpaceTime3D, Inc. v. LG Elecs, Inc.*, No. 2:22-CV-00049-RWS (E.D. Tex. June 20, 2022), ECF No. 19 ¶ 8 (In a recent patent infringement case regarding LGE's accused smartphones, LGE stated that "LGE does not contest that the Court has personal jurisdiction over LGE Inc. or LGEUS for the purposes of this particular action."); *WFR IP LLC v. LG Elecs.*, No. 2:22-CV-00245-RWS-RSP (E.D. Tex. Nov. 23, 2022), ECF No. 16 ¶ 5. Other patent

infringement actions against LG in this District include actions related to smartphones. *See WFR IP LLC v. LG Elecs.*, No. 2:22-CV-00245-RWS-RSP (E.D. Tex. Nov. 23, 2022), ECF No. 16 ¶¶ 12-14.

12. Venue in this Judicial District is proper as to Defendant LGE under 28 U.S.C. § 1391(c)(3) because LGE is a foreign corporation and venue for a foreign corporation is proper in any district in the United States. 28 U.S.C. § 1391(c)(3) (“a defendant not resident in the United States may be sued in any judicial district”); *In re HTC Corp.*, 889 F.3d 1349, 1354 (Fed. Cir. 2018) (affirming that “a foreign corporation is subject suit in any judicial district”).

13. Venue in this Judicial District is also proper as to Defendant LGEUS under 28 U.S.C. §§ 1391(b)-(c) and 1400(b) because it has (1) committed acts of direct and indirect patent infringement in this Judicial District by, *inter alia*, making, using, selling, offering to sell, or importing products that infringe one or more claims of the Asserted Patents, and inducing and contributing to such infringement, as explained above with respect to personal jurisdiction; and (2) has a regular and established place of business in this Judicial District, at least at 2153-2155 Eagle Pkwy, Fort Worth, TX 76177 and 14901 Beach St, Fort Worth, TX 76177. *See In re Cray Inc.*, 871 F.3d 1355, 1362-63 (Fed. Cir. 2017); <https://www.bbb.org/us/tx/fort-worth/profile/electronic-equipment-repair/lg-electronics-0825-235972227> (Better Business Bureau listing for LG Electronics at 2155 Eagle Pkwy, Fort Worth, TX 76177-2311); <https://taxweb.dentoncounty.gov/Accounts/AccountDetails?taxAccountNumber=657779DEN> (2022 Denton county tax records showing that LG maintains an “electronics warehouse” at 14901 Beach St, Fort Worth, TX 76177). For example, publicly available information indicates that LG performs engineering, assembly, distribution, and more in this district. *See, e.g.*, <https://www.indeed.com/cmp/Lg-Electronics/reviews?fcountry=US&floc=Fort+Worth%2C+TX>

(hiring website); <https://www.simplyhired.com/company/LG%20Electronics/?l=Fort+Worth%2C+TX> (hiring website).

14. Defendants have also failed to contest that venue is proper in this district in other recent patent infringement actions, including in an action involving these same parties. *See, e.g., Celerity IP, LLC v. LG Elecs, Inc.*, No. 2:23-CV-00316-RSP (E.D. Tex. Nov. 27, 2023), ECF No. 21 ¶¶ 12-13 (In a recent patent infringement case between these same parties regarding LGE’s accused smartphones, Defendants stated that “LG does not contest that venue is proper in this District” for LGE and LGEUS “for the purposes of this particular action”); *SpaceTime3D, Inc. v. LG Elecs, Inc.*, No. 2:22-CV-00049-RWS (E.D. Tex. June 20, 2022), ECF No. 19 ¶¶ 18-19 (In a recent patent infringement case regarding LGE’s accused smartphones, LGE stated that “LGE does not contest that the venue is proper in this District”); *WFR IP LLC v. LG Elecs.*, No. 2:22-CV-00245-RWS-RSP (E.D. Tex. Nov. 23, 2022), ECF No. 16 ¶ 6; *Arigna Tech. Ltd., LG Elecs., Inc.*, No. 2:21-cv-00377, (E.D. Tex. Jan. 26, 2022), ECF No. 24 ¶¶ 13-14; *Hardin v. LG Elecs., Inc.*, No. 2:21-cv-00289, (E.D. Tex. Nov. 22, 2021), ECF No. 14 ¶ 6; *Seven Networks, LLC v. LG Elecs., Inc.*, No. 2:21-cv-88, (E.D. Tex. June 7, 2021), ECF No. 12 ¶ 5.

FACTUAL BACKGROUND

15. Innovative Sonic Ltd. is the assignee of each Asserted Patent. On June 30, 2021, Celerity became the exclusive licensing agent for IS’s portfolio of patents relating to telecommunication standards such as 4G and 5G.

16. IS owns a substantial portfolio of patents commercially essential to various 3GPP standards, including 4G/LTE and 5G.

17. The Asserted Patents generally relate to various functional operations of 4G- and/or 5G-compliant devices that allow the devices to operate within a 4G and/or 5G network and allow users to communicate over 4G and/or 5G networks.

18. The '626 patent, titled "Method and Apparatus for Handling UL-SCH Transmission," relates to handling Uplink Shared Channel (UL-SCH) transmission in a user equipment (UE) of a wireless communication system, to prevent a Message 3 (Msg3) transmission from colliding with a retransmission of a previous transmission block already stored in an uplink (UL) hybrid automatic repeat request (HARQ) buffer of the UE. More specifically, the '626 patent relates to techniques for performing a UL-SCH transmission and prioritizing a Msg3 transmission when the Msg3 transmission and a retransmission of a transport block (TB) already stored in an UL HARQ buffer of the UE are scheduled at the same time.

19. The '628 patent, titled "Method of Handling Security Key Change and Related Communication Device," relates to data security in a wireless communication system. More specifically, the '628 patent relates to techniques for applying a radio resource control (RRC) procedure to activate key change, where an RRC message of the RRC procedure comprises an indication of whether an Access Stratum (AS) key set is derived from a base key or a previous base station level key.

20. The '095 patent, titled "Method and Apparatus for a Component Carrier Deactivation Timer in a Wireless Communication System," relates to component carrier (CC) deactivation in a wireless communication system. More specifically, the '095 patent relates to techniques for receiving a Medium Access Control (MAC) Control Element (CE) for CC Management to activate a Secondary CC (SCC) that has been already activated, and restarting a deactivation timer for the SCC based upon the MAC CE for CC Management.

21. The '962 patent, titled "Method and Apparatus for Improving Reconfiguration Procedure for Scheduling Request," relates to improving a reconfiguration procedure for a Scheduling Request (SR) in a user equipment (UE) of a wireless communication system, so as to appropriately reconfigure parameters corresponding to a scheduling request procedure. More specifically, the '962 patent relates to techniques for receiving an upper layer request for reconfiguring an SR parameter of the UE, and applying new configuration provided by the upper layer request to the SR parameter when an SR is triggered and there is no other SR pending in the UE.

22. The '128 patent, titled "Method and Apparatus of Handling a Timer for Triggering Buffer Status Report," relates to techniques for avoiding the waste of network resources in a wireless communication system. More specifically, the '128 patent relates to methods and devices for starting a timer used for triggering a buffer status report, and restarting the timer in a transmission time interval (TTI) for which a semi-persistent scheduling uplink grant has been configured.

23. ETSI maintains an "Intellectual Property Rights Policy" ("IPR Policy") that governs the disclosure of IP during the development of ETSI standards. IS disclosed each of the Asserted Patents pursuant to an applicable ETSI IPR Policy.

24. As of July 2011, ETSI's IPR Policy dated March 29, 2007 ("2007 IPR Policy"), was in effect. Pursuant to the 2007 IPR Policy, on July 12, 2011, IS submitted an "IPR Information Statement and Licensing Declaration" which declared as essential to 4G the families of the '626 patent, the '628 patent, the '962 patent, and the '128 patent.

25. As of December 2013, ETSI's IPR Policy dated March 20, 2013 ("2013 IPR Policy"), was in effect. Pursuant to the 2013 IPR Policy, on December 26, 2013, IS submitted an

“IPR Information Statement and Licensing Declaration” which declared as essential to 4G the families of the ’095 patent.

26. As of July 2020, ETSI’s IPR Policy dated December 4, 2019 (“2019 IPR Policy”), was in effect. Pursuant to the 2019 IPR Policy, on July 9, 2020, IS submitted an “IPR Information Statement and Licensing Declaration” which declared as essential to 5G the families of the ’626 patent and the ’628 patent. In addition, the 2020 information statement and licensing declaration declared as essential to 5G EP2169871, which is the European counterpart for the ’128 patent.

27. Pursuant to each of the 2007 IPR Policy, 2013 IPR Policy, and the 2019 IPR Policy, all published ETSI standards include information pertaining to essential IPR, including all IP that has been declared essential:

<p>7 Information on IPR by ETSI</p> <p>7.1 Any published STANDARD or TECHNICAL SPECIFICATION shall include information pertaining to ESSENTIAL IPRs which are brought to the attention of ETSI prior to such publication.</p> <p>7.2 ETSI shall establish appropriate procedures to allow access to information at any time with respect to ESSENTIAL IPRs which have been brought to the attention of ETSI.</p>

(2007 IPR Policy)

<p>7 Information on IPR by ETSI</p> <p>7.1 Any published STANDARD or TECHNICAL SPECIFICATION shall include information pertaining to ESSENTIAL IPRs which are brought to the attention of ETSI prior to such publication.</p> <p>7.2 ETSI shall establish appropriate procedures to allow access to information at any time with respect to ESSENTIAL IPRs which have been brought to the attention of ETSI.</p>

(2013 IPR Policy)

7	Information on IPR by ETSI
7.1	Any published STANDARD or TECHNICAL SPECIFICATION shall include information pertaining to ESSENTIAL IPRs which are brought to the attention of ETSI prior to such publication.
7.2	ETSI shall establish appropriate procedures to allow access to information at any time with respect to ESSENTIAL IPRs which have been brought to the attention of ETSI.

(2019 IPR Policy)

28. ETSI members, and the public, can crosscheck the ETSI database for IP that has been declared essential to the ETSI standards: <https://ipr.etsi.org/>.

29. Each published ETSI standards document contains a disclaimer regarding the fact that there are essential and potentially essential patents that may be implicated by the standards, and further directs all interested parties to the aforementioned ETSI IPR database where one can search to confirm whether such essential IPR exists:

3GPP TS 36.321 version 14.13.0 Release 14	2	ETSI TS 136 321 V14.13.0 (2020-11)
<hr/>		
Intellectual Property Rights		
Essential patents		
IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for ETSI members and non-members , and can be found in ETSI SR 000 314: <i>"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"</i> , which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (https://ipr.etsi.org/).		

30. LG is also a member of ETSI, as evidenced by the participation of at least five LG subsidiary entities in ETSI,¹ and participates in ETSI working groups where standards are discussed and developed in collaboration with other ETSI members. On information and belief, LG, as a participating and contributing member of ETSI, was aware of patents declared as essential

¹ The five LG entities include LG Electronics Deutschland, LG Electronics Finland, LG Electronics France, LG Electronics Polska, and LG Electronics UK. See <https://www.etsi.org/membership> (last visited February 18, 2024).

to any ETSI standard, including IS's patents, because the purpose of the IPR Policy is for ETSI members to have notice of potentially essential IP.

31. On information and belief, LG also prosecutes its own patents directed to technology relating to cellular telecommunication networks and associated handheld devices. On information and belief, LG has had awareness of IS's declared patents, including the Asserted Patents, due to LG's citations of IS patents during LG's prosecution of its own patent portfolio. Specifically, LG has cited at least the '626 patent and the '128 patent in information disclosure statements submitted to the USPTO during prosecution of LG's own patents.

32. In addition to LG's actual notice of the Asserted Patents due to IS's public disclosure of its essential patents through ETSI and LG's active participation in ETSI, LG has been on actual notice of the Asserted Patents through extensive communications with IS and Via Licensing Corporation ("Via"). IS was a licensor member of Via's LTE patent licensing pool.²

33. On August 15, 2018, IS sent LG a letter notifying LG that IS owns a portfolio of patents relevant to the 4G standard ("First Letter"). The First Letter was accompanied by a list of IS's 4G assets and explained that all of LG's 4G compliant devices infringe IS's 4G assets. The First Letter invited LG to license IS's essential 4G assets and informed LG that the terms IS offered were consistent with FRAND. The First Letter specifically identified all of the Asserted Patents in an exhibit by application number and patent number.

34. LG did not respond to IS's First Letter.

35. On September 12, 2018, IS sent a follow up letter to LG ("Second Letter").

² In April 2022, Via announced that its LTE licensing pool would wind down. The Via LTE pool has since ceased operations.

36. On February 18, 2019, IS sent LG an excel spreadsheet containing all of IS's 4G patent assets organized by family, including the Asserted Patents. On information and belief, LG reviewed the contents of IS's excel spreadsheet containing IS's patent assets.

37. On March 4, 2019, LG sent an email to IS that identified 12 patents from IS's excel spreadsheet to further discuss with IS. LG also highlighted those patents in a copy of IS's excel spreadsheet attached to the email.

38. On March 20, 2019, IS sent LG numerous claim charts, including claim charts demonstrating how LG's 4G compliant devices directly and indirectly infringe patents in IS's portfolio.

39. On May 28, 2019, IS sent LG additional claim charts demonstrating how LG's 4G compliant devices directly and indirectly infringe, including a claim chart for EP2180749, which is the European counterpart for the '626 patent, and a claim chart for EP2169871, which is the European counterpart for the '128 patent. The charted claims for EP2180749 and EP2169871 provided to LG are substantially similar to the independent method claims of the '626 patent and the '128 patent, respectively.

40. LG has sold at least the 4G- and 5G-compliant devices listed in Exhibit 6 ("LG Devices"), each of which infringed and infringes each of the Asserted Patents because the LG Devices were and are compliant with the 4G/LTE and/or 5G ETSI standard and supported all applicable features embodied in or otherwise covered by the Asserted Patents.

41. LG represents that its products implement the 4G/LTE and 5G standards. For example, LG's VELVET 5G smartphones are 4G/LTE- and 5G- compliant:

 **Connectivity**

- **Network**¹: 5G (Sub6, mmWave), LTE, UMTS, GSM, CDMA
- **Frequencies**: 5G: n66, n2, n5, n260, n261, n78 (VZW roaming); 4G: B2, 3, 4, 5, 7, 12, 13, 20, 28, 46, 48, 66; UMTS: B1,2,5,8; GSM: 850, 900, 1800, 1900; CDMA: BC0, BC1
- **Mobile Hotspot**² – share a data connection with up to 10 wireless devices³
- **Bluetooth**[®] Wireless Technology Version 5.1
- **Supported Bluetooth Profiles**: HSP, HFP, OPP, A2DP, AVRCP, HID, PBAP, MAP, PAN, HOGP
- **Wi-Fi Direct**[®] – connect directly to devices
- **USB⁴ Tethering**² – share your Internet connection
- **Media Sync** – allow nearby devices to access content
- **Screen Sharing** – wirelessly mirror device screen
- **MIDI Device** – connect to musical instruments via USB⁴
- **Location**: Dual band GPS, Glonass and Galileo

See LG VELVET 5G UW Specifications & Features 4 (2020),

https://www.lg.com/us/support/products/documents/VELVET_5G_UW_PDF_Specsheet_VZN_08042020.pdf

COUNT I

DEFENDANTS' INFRINGEMENT OF U.S. PATENT NO. 8,411,626

42. Plaintiffs restate and incorporate by reference all of the allegations made in the preceding paragraphs as though fully set forth herein.

43. ISL is the owner, by assignment, of U.S. Patent No. 8,411,626. A true copy of U.S. Patent No. 8,411,626 granted by the U.S. Patent & Trademark Office is attached as Exhibit 1.

44. The '626 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

45. LG has directly infringed, literally or under the doctrine of equivalents, one or more claims of the '626 patent by making, using, importing, selling, and/or offering for sale in the United States LG's cellular devices that are 4G/LTE- and/or 5G-compliant, in violation of 35 U.S.C. § 271(a).

46. On information and belief, LG has had knowledge of the '626 patent and its application to LG's 4G compliant devices and thus knew of LG's infringement, since July 12, 2011, when IS disclosed the '626 patent family to ETSI. LG had further knowledge of its infringement of the '626 patent at least as early as August 15, 2018, when LG received the First Letter explicitly identifying the '626 patent, correlating the '626 patent to the 4G/LTE standard,

and identifying the class of LG's products which comply with and incorporate LTE as infringing. Therefore, on information and belief, LG knew of, or was willfully blind to, the '626 patent and LG's infringement because LG made and sold 4G handsets, had been informed that the '626 patent was part of IS's standard essential patent portfolio for the 4G/LTE standard, and had been provided claim charts showing how representative IS patents necessarily covered LG products that comply with the 4G standard.

47. On information and belief, LG knew of, or was willfully blind to, the fact that its 5G compliant devices, like LG VELVET 5G, also infringe IS's standard essential patents, including the '626 patent. On information and belief, LG was aware through its participation in ETSI that many of the technologies developed for 4G, including, for example, the Medium Access Control and Radio Resource Control protocols, were carried forward into 5G and covered by IS's declared patent rights, including the '626 patent.

48. LG has also indirectly infringed, literally or under the doctrine of equivalents, the '626 patent because LG, with knowledge of the '626 patent, induced and/or contributed to the direct infringement of the '626 patent by its customers, subsidiaries, retailers, cellular network providers, and/or other end users of the LG Devices by causing such customers, subsidiaries, and/or other end users to practice the claims in the '626 patent. With knowledge of the '626 patent, LG specifically intended for customers, subsidiaries, and/or other end users to acquire and use the LG Devices in a manner than infringes one or more claims of the '626 patent. LG instructed customers, subsidiaries, and/or other end users to acquire and utilize the LG Devices in accordance with the 4G/LTE and 5G standards, with the knowledge and specific intent to encourage and facilitate the infringement through the dissemination of the LG Devices and/or the creation and

dissemination of promotional and marketing materials, supporting materials, instructions, product manuals, and/or technical information relating to the LG Devices and infringing uses thereof.

49. LG actively, knowingly, and intentionally contributed to the infringement of the '626 patent by making, using, selling, offering to sell, and/or importing into the United States, the LG Devices, with the knowledge that they are especially designed or adapted to operate in a manner that infringes the '626 patent; with the knowledge that third parties, including those set forth above, would continue to, either alone or in combination with LG, infringe the claims of the '626 patent, and with the knowledge that the infringing technology in the accused products is not a staple article of commerce suitable for substantial non-infringing use.

50. An exemplary claim chart comparing independent claim 7 of the '626 patent to the use of an exemplary accused LG product VELVET 5G is attached as Exhibit 7.

51. As LG has had knowledge of the '626 patent and LG's infringement of the '626 patent at least as early as August 15, 2018 (and likely much earlier due to LG's involvement in ETSI), and because LG failed to secure a license from IS despite several years of dialogue between the parties, LG's acts of infringement of the '626 patent are willful, and have caused a substantial damage to Plaintiffs.

52. As a result of LG's direct, indirect, and willful infringement of at least claim 7 of the '626 patent, Plaintiffs have suffered monetary damages and under 35 U.S.C. § 284 are entitled to a monetary judgment in an amount adequate to compensate for LG's past infringement, together with enhanced damages, attorneys' fees, interest, and costs.

COUNT II

DEFENDANTS' INFRINGEMENT OF U.S. PATENT NO. 8,472,628

53. Plaintiffs restate and incorporate by reference all of the allegations made in the preceding paragraphs as though fully set forth herein.

54. ISL is the owner, by assignment, of U.S. Patent No. 8,472,628. A true copy of U.S. Patent No. 8,472,628 granted by the U.S. Patent & Trademark Office is attached as Exhibit 2.

55. The '628 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

56. LG has directly infringed, literally or under the doctrine of equivalents, one or more claims of the '628 patent by making, using, importing, selling, and/or offering for sale in the United States LG's cellular devices that are 4G/LTE- and/or 5G-compliant, in violation of 35 U.S.C. § 271(a).

57. On information and belief, LG has had knowledge of the '628 patent and its application to LG's 4G compliant devices and thus knew of LG's infringement, since July 12, 2011 when IS disclosed the '628 patent family to ETSI. LG had further knowledge of LG's infringement of the '628 patent at least as early as August 15, 2018, when LG received the First Letter explicitly identifying the '628 patent, correlated the patent to the 4G/LTE standard, and identified the class of LG's products which comply with and incorporate LTE as infringing. Therefore, on information and belief, LG knew of, or was willfully blind to, the '628 patent and LG's infringement because LG made and sold 4G handsets, had been informed that the '628 patent was part of IS's standard essential patent portfolio for the 4G/LTE standard, and had been provided claim charts showing how representative IS patents necessarily covered LG products that comply with the 4G standard.

58. On information and belief, LG knew or was willfully blind to the fact that its 5G compliant devices, like LG VELVET 5G, also infringe IS's standard essential patents, including the '628 patent. On information and belief, LG was aware through its participation in ETSI that many of the technologies developed for 4G, including, for example, the Medium Access Control

and Radio Resource Control protocols, were carried forward into 5G and covered by IS's declared patent rights, including the '628 patent.

59. LG has also indirectly infringed, literally or under the doctrine of equivalents, the '628 patent because LG, with knowledge of the '628 patent, induced and/or contributed to the direct infringement of the '628 patent by its customers, subsidiaries, retailers, cellular network providers, and/or other end users of the LG Devices by causing such customers, subsidiaries, and/or other end users to practice the claims in the '628 patent. With knowledge of the '628 patent, LG specifically intended for customers, subsidiaries, and/or other end users to acquire and use the LG Devices in a manner than infringes one or more claims of the '628 patent. LG instructed customers, subsidiaries, and/or other end users to acquire and utilize the LG Devices in accordance with the 4G/LTE and 5G standards, with the knowledge and specific intent to encourage and facilitate the infringement through the dissemination of the LG Devices and/or the creation and dissemination of promotional and marketing materials, supporting materials, instructions, product manuals, and/or technical information relating to the LG Devices and infringing uses thereof.

60. LG actively, knowingly, and intentionally contributed to the infringement of the '628 patent by making, using, selling, offering to sell, and/or importing into the United States, the LG Devices, with the knowledge that they are especially designed or adapted to operate in a manner that infringes the '628 patent; with the knowledge that third parties, including those set forth above, would continue to, either alone or in combination with LG, infringe the claims of the '628 patent, and with the knowledge that the infringing technology in the accused products is not a staple article of commerce suitable for substantial non-infringing use.

61. An exemplary claim chart comparing independent claim 5 of the '628 patent to the use of an exemplary accused LG product VELVET 5G is attached as Exhibit 8.

62. As LG has had knowledge of the '628 patent and LG's infringement of the '628 patent at least as early as August 15, 2018 (and likely much earlier due to LG's involvement in ETSI), and because LG failed to secure a license from IS despite several years of dialogue between the parties, LG's acts of infringement of the '628 patent are willful, and have caused a substantial damage to Plaintiffs.

63. As a result of LG's direct, indirect, and willful infringement of at least claim 5 of the '628 patent, Plaintiffs have suffered monetary damages and under 35 U.S.C. § 284 are entitled to a monetary judgment in an amount adequate to compensate for LG's past infringement, together with enhanced damages, attorneys' fees, interest, and costs.

COUNT III

DEFENDANTS' INFRINGEMENT OF U.S. PATENT NO. 8,855,095

64. Plaintiffs restate and incorporate by reference all of the allegations made in the preceding paragraphs as though fully set forth herein.

65. ISL is the owner, by assignment, of U.S. Patent No. 8,855,095. A true copy of U.S. Patent No. 8,855,095 granted by the U.S. Patent & Trademark Office is attached as Exhibit 3.

66. The '095 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

67. LG has directly infringed, literally or under the doctrine of equivalents, one or more claims of the '095 patent by making, using, importing, selling, and/or offering for sale in the United States LG's cellular devices that are 4G/LTE- and/or 5G-compliant, in violation of 35 U.S.C. § 271(a).

68. On information and belief, LG has had knowledge of the '095 patent and its application to LG's 4G/LTE and 5G compliant devices and thus knew of LG's infringement, since July 12, 2011 when IS disclosed the '095 patent family to ETSI. LG had further knowledge of

LG's infringement of the '095 patent at least as early as August 15, 2018, when LG received the First Letter explicitly identifying the '095 patent, correlated the patent to the 4G/LTE standard, and identified the class of LG's products which comply with and incorporate LTE as infringing. Therefore, on information and belief, LG knew of, or was willfully blind to, the '095 patent and LG's infringement because LG made and sold 4G handsets, had been informed that the '095 patent was part of IS's standard essential patent portfolio for the 4G/LTE standard, and had been provided claim charts showing how representative IS patents necessarily covered LG products that comply with the 4G standard.

69. On information and belief, LG knew or was willfully blind to the fact that its 5G compliant devices, like LG VELVET 5G, also infringe IS's standard essential patents, including the '095 patent. On information and belief, LG was aware through its participation in ETSI that many of the technologies developed for 4G, including, for example, the Medium Access Control and Radio Resource Control protocols, were carried forward into 5G and covered by IS's declared patent rights.

70. LG has also indirectly infringed, literally or under the doctrine of equivalents, the '095 patent because LG, with knowledge of the '095 patent, induced and/or contributed to the direct infringement of the '095 patent by its customers, subsidiaries, retailers, cellular network providers, and/or other end users of the LG Devices by causing such customers, subsidiaries, and/or other end users to practice the claims in the '095 patent. With knowledge of the '095 patent, LG specifically intended for customers, subsidiaries, and/or other end users to acquire and use the LG Devices in a manner than infringes one or more claims of the '095 patent. LG instructed customers, subsidiaries, and/or other end users to acquire and utilize the LG Devices in accordance with the 4G/LTE and 5G standards, with the knowledge and specific intent to encourage and

facilitate the infringement through the dissemination of the LG Devices and/or the creation and dissemination of promotional and marketing materials, supporting materials, instructions, product manuals, and/or technical information relating to the LG Devices and infringing uses thereof.

71. LG actively, knowingly, and intentionally contributed to the infringement of the '095 patent by making, using, selling, offering to sell, and/or importing into the United States, the LG Devices, with the knowledge that they are especially designed or adapted to operate in a manner that infringes the '095 patent; with the knowledge that third parties, including those set forth above, would continue to, either alone or in combination with LG, infringe the claims of the '095 patent, and with the knowledge that the infringing technology in the accused products is not a staple article of commerce suitable for substantial non-infringing use.

72. An exemplary claim chart comparing independent claim 8 of the '095 patent to the use of an exemplary accused LG product VELVET 5G is attached as Exhibit 9.

73. As LG has had knowledge of the '095 patent and LG's infringement of the '095 patent at least as early as August 15, 2018 (and likely much earlier due to LG's involvement in ETSI), and because LG failed to secure a license from IS despite several years of dialogue between the parties, LG's acts of infringement of the '095 patent are willful, and have caused a substantial damage to Plaintiffs.

74. As a result of LG's direct, indirect, and willful infringement of at least claim 8 of the '095 patent, Plaintiffs have suffered monetary damages and under 35 U.S.C. § 284 are entitled to a monetary judgment in an amount adequate to compensate for LG's past infringement, together with enhanced damages, attorneys' fees, interest, and costs.

COUNT IV

DEFENDANTS' INFRINGEMENT OF U.S. PATENT NO. 8,559,962

75. Plaintiffs restate and incorporate by reference all of the allegations made in the preceding paragraphs as though fully set forth herein.

76. ISL is the owner, by assignment, of U.S. Patent No. 8,559,962. A true copy of U.S. Patent No. 8,559,962 granted by the U.S. Patent & Trademark Office is attached as Exhibit 4.

77. The '962 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

78. LG has directly infringed, literally or under the doctrine of equivalents, one or more claims of the '962 patent by making, using, importing, selling, and/or offering for sale in the United States LG's cellular devices that are 4G/LTE- and/or 5G-compliant, in violation of 35 U.S.C. § 271(a).

79. On information and belief, LG has had knowledge of the '962 patent and its application to LG's 4G/LTE and 5G compliant devices and thus knew of LG's infringement, since July 12, 2011 when IS disclosed the '962 patent family to ETSI. LG had further knowledge of LG's infringement of the '962 patent at least as early as August 15, 2018, when LG received the First Letter explicitly identifying the '962 patent, correlated the patent to the 4G/LTE standard, and identified the class of LG's products which comply with and incorporate LTE as infringing. Therefore, on information and belief, LG knew of, or was willfully blind to, the '962 patent and LG's infringement because LG made and sold 4G handsets, had been informed that the '962 patent was part of IS's standard essential patent portfolio for the 4G/LTE standard, and had been provided claim charts showing how representative IS patents necessarily covered LG products that comply with the 4G standard.

80. On information and belief, LG knew or was willfully blind to the fact that its 5G compliant devices, like LG VELVET 5G, also infringe IS's standard essential patents, including the '962 patent. On information and belief, LG was aware through its participation in ETSI that many of the technologies developed for 4G, including, for example, the Medium Access Control and Radio Resource Control protocols, were carried forward into 5G and covered by IS's declared patent rights.

81. LG has also indirectly infringed, literally or under the doctrine of equivalents, the '962 patent because LG, with knowledge of the '962 patent, induced and/or contributed to the direct infringement of the '962 patent by its customers, subsidiaries, retailers, cellular network providers, and/or other end users of the LG Devices by causing such customers, subsidiaries, and/or other end users to practice the claims in the '962 patent. With knowledge of the '962 patent, LG specifically intended for customers, subsidiaries, and/or other end users to acquire and use the LG Devices in a manner than infringes one or more claims of the '962 patent. LG instructed customers, subsidiaries, and/or other end users to acquire and utilize the LG Devices in accordance with the 4G/LTE and 5G standards, with the knowledge and specific intent to encourage and facilitate the infringement through the dissemination of the LG Devices and/or the creation and dissemination of promotional and marketing materials, supporting materials, instructions, product manuals, and/or technical information relating to the LG Devices and infringing uses thereof.

82. LG actively, knowingly, and intentionally contributed to the infringement of the '962 patent by making, using, selling, offering to sell, and/or importing into the United States, the LG Devices, with the knowledge that they are especially designed or adapted to operate in a manner that infringes the '962 patent; with the knowledge that third parties, including those set forth above, would continue to, either alone or in combination with LG, infringe the claims of the

'962 patent, and with the knowledge that the infringing technology in the accused products is not a staple article of commerce suitable for substantial non-infringing use.

83. An exemplary claim chart comparing independent claim 7 of the '962 patent to the use of an exemplary accused LG product VELVET 5G is attached as Exhibit 10.

84. As LG has had knowledge of the '962 patent and LG's infringement of the '962 patent at least as early as August 15, 2018 (and likely much earlier due to LG's involvement in ETSI), and because LG failed to secure a license from IS despite several years of dialogue between the parties, LG's acts of infringement of the '962 patent are willful, and have caused a substantial damage to Plaintiffs.

85. As a result of LG's direct, indirect, and willful infringement of at least claim 7 of the '962 patent, Plaintiffs have suffered monetary damages and under 35 U.S.C. § 284 are entitled to a monetary judgment in an amount adequate to compensate for LG's past infringement, together with enhanced damages, attorneys' fees, interest, and costs.

COUNT V

DEFENDANTS' INFRINGEMENT OF U.S. PATENT NO. 8,565,128

86. Plaintiffs restate and incorporate by reference all of the allegations made in the preceding paragraphs as though fully set forth herein.

87. ISL is the owner, by assignment, of U.S. Patent No. 8,565,128. A true copy of U.S. Patent No. 8,565,128 granted by the U.S. Patent & Trademark Office is attached as Exhibit 5.

88. The '128 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

89. LG has directly infringed, literally or under the doctrine of equivalents, one or more claims of the '128 patent by making, using, importing, selling, and/or offering for sale in the United

States LG's cellular devices that are 4G/LTE- and/or 5G-compliant, in violation of 35 U.S.C. § 271(a).

90. On information and belief, LG has had knowledge of the '128 patent and its application to LG's 4G/LTE and 5G compliant devices and thus knew of LG's infringement, since July 12, 2011 when IS disclosed the '128 patent family to ETSI. LG had further knowledge of LG's infringement of the '128 patent at least as early as August 15, 2018, when LG received the First Letter explicitly identifying the '128 patent, correlated the patent to the 4G/LTE standard, and identified the class of LG's products which comply with and incorporate LTE as infringing. Therefore, on information and belief, LG knew of, or was willfully blind to, the '128 patent and LG's infringement because LG made and sold 4G handsets, had been informed that the '128 patent was part of IS's standard essential patent portfolio for the 4G/LTE standard, and had been provided claim charts showing how representative IS patents necessarily covered LG products that comply with the 4G standard.

91. On information and belief, LG knew or was willfully blind to the fact that its 5G compliant devices, like LG VELVET 5G, also infringe IS's standard essential patents, including the '128 patent. On information and belief, LG was aware through its participation in ETSI that many of the technologies developed for 4G, including, for example, the Medium Access Control and Radio Resource Control protocols, were carried forward into 5G and covered by IS's declared patent rights, including the European counterpart of the '128 patent.

92. LG has also indirectly infringed, literally or under the doctrine of equivalents, the '128 patent because LG, with knowledge of the '128 patent, induced and/or contributed to the direct infringement of the '128 patent by its customers, subsidiaries, retailers, cellular network providers, and/or other end users of the LG Devices by causing such customers, subsidiaries,

and/or other end users to practice the claims in the '128 patent. With knowledge of the '128 patent, LG specifically intended for customers, subsidiaries, and/or other end users to acquire and use the LG Devices in a manner than infringes one or more claims of the '128 patent. LG instructed customers, subsidiaries, and/or other end users to acquire and utilize the LG Devices in accordance with the 4G/LTE and 5G standards, with the knowledge and specific intent to encourage and facilitate the infringement through the dissemination of the LG Devices and/or the creation and dissemination of promotional and marketing materials, supporting materials, instructions, product manuals, and/or technical information relating to the LG Devices and infringing uses thereof.

93. LG actively, knowingly, and intentionally contributed to the infringement of the '128 patent by making, using, selling, offering to sell, and/or importing into the United States, the LG Devices, with the knowledge that they are especially designed or adapted to operate in a manner that infringes the '128 patent; with the knowledge that third parties, including those set forth above, would continue to, either alone or in combination with LG, infringe the claims of the '128 patent, and with the knowledge that the infringing technology in the accused products is not a staple article of commerce suitable for substantial non-infringing use.

94. An exemplary claim chart comparing independent claim 5 of the '128 patent to the use of an exemplary accused LG product VELVET 5G is attached as Exhibit 11.

95. As LG has had knowledge of the '128 patent and LG's infringement of the '128 patent at least as early as August 15, 2018 (and likely much earlier due to LG's involvement in ETSI), and because LG failed to secure a license from IS despite several years of dialogue between the parties, LG's acts of infringement of the '128 patent are willful, and have caused a substantial damage to Plaintiffs.

96. As a result of LG's direct, indirect, and willful infringement of at least claim 5 of the '128 patent, Plaintiffs have suffered monetary damages and under 35 U.S.C. § 284 are entitled to a monetary judgment in an amount adequate to compensate for LG's past infringement, together with enhanced damages, attorneys' fees, interest, and costs.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs request that the Court grant the relief set forth below:

A. Enter judgment that Defendants have directly infringed one or more claims of the Asserted Patents;

B. Enter judgment that Defendants have indirectly infringed one or more claims of the Asserted Patents;

C. Enter judgment that Defendants' acts of patent infringement are willful with respect to each Asserted Patent;

D. Order Defendants to pay supplemental damages to Plaintiffs, including interest, with an accounting, as needed, of all infringements and/or damages not presented at trial;

E. Award Plaintiffs increased damages and attorney fees pursuant to 35 U.S.C. §§ 284 and 285;

F. Award Plaintiffs the interest and costs incurred in this action; and

G. Grant Plaintiffs such other and further relief, including equitable relief, as the Court deems just and proper.

DEMAND FOR JURY TRIAL

Plaintiffs demand a jury trial for all issues deemed to be triable by a jury.

Dated: February 23, 2024

Respectfully submitted,

/s/ Jamie H. McDole

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