

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NORTH CAROLINA
WESTERN DIVISION**

TELEFONAKTIEBOLAGET LM ERICSSON,

PLAINTIFF,

VS.

**LENOVO (UNITED STATES), INC., LENOVO
(SHANGHAI) ELECTRONICS TECHNOLOGY
CO. LTD., LENOVO BEIJING, LTD., LENOVO
GROUP, LTD., MOTOROLA (WUHAN)
MOBILITY TECHNOLOGIES
COMMUNICATION CO., LTD., AND
MOTOROLA MOBILITY, LLC,**

DEFENDANTS.

CIVIL ACTION NO.: 5:23-cv-569

JURY TRIAL DEMANDED

ORIGINAL COMPLAINT

Plaintiff Telefonaktiebolaget LM Ericsson (“Ericsson”) files this Original Complaint against Lenovo (United States), Inc., Lenovo (Shanghai) Electronics Technology Co. Ltd., Lenovo Beijing, Ltd., Lenovo Group, Ltd., Motorola (Wuhan) Mobility Technologies Communication Co., Ltd., and Motorola Mobility, LLC, (collectively, “Defendants” or “Lenovo”) and alleges as follows:

INTRODUCTION

1. Lenovo needs a license to Ericsson’s industry-leading patent portfolio to sell its cellular-enabled phones, tablets, and computers. For over ten years, Ericsson tried to negotiate a patent license with Lenovo to ensure that Lenovo pays a fair royalty for its use of Ericsson’s patented technology. For over ten years, Lenovo delayed. Despite numerous offers by Ericsson, many calls and in-person meetings in North Carolina, and Ericsson’s offer to engage in binding arbitration, Lenovo never signed a single license with Ericsson. Every day that passes where

Lenovo refuses to negotiate in good faith and sign a license is a day that Lenovo deprives Ericsson of royalties to reinvest in developing the next generation of telecommunications technology.

2. Lenovo's delay tactics began as early as 2008, when Ericsson told Lenovo it was using Ericsson's patents and needed to take a license. Lenovo acknowledged the size of Ericsson's patent portfolio, and instead of debating whether it needed a license, Lenovo said it wanted to "move forward in discussing [the] business terms" of a license. That was more than a decade ago.

3. Since then, Lenovo dragged out negotiations, all while using Ericsson's patented technology. Lenovo promised to provide feedback on Ericsson's offers, only to repeatedly miss its own deadlines. Lenovo made offers designed to devalue Ericsson's patent portfolio. Lenovo even rejected Ericsson's offer to engage in binding arbitration in a neutral forum. The most recent evidence of Lenovo's continued delay is Lenovo's refusal to sign a reasonable NDA that would allow the parties to continue to have open and frank licensing discussions. Despite having quickly signed an NDA and two NDA addendums, all of which have expired, Lenovo has delayed negotiations over the terms of a new NDA for over *two years*. Last year, Lenovo even brought in its outside counsel to lead the NDA negotiations. Lenovo's outside counsel quickly proposed objectionable terms that would allow Lenovo to share Ericsson's confidential information with dozens of companies and law firms and prevent Ericsson from exercising its patent rights—all while Lenovo retains the ability to file lawsuits against Ericsson in China.

4. Lenovo cannot continue to benefit from its delay. In addition to finding Lenovo liable for infringing Ericsson's patents, Ericsson asks this Court to resolve the dispute between the parties by declaring that Ericsson complied with its contractual F/RAND obligations and Lenovo did not.

PARTIES

5. Plaintiff Telefonaktiebolaget LM Ericsson (“Ericsson”) is a corporation organized under the laws of the Kingdom of Sweden with its principal place of business at Torshamnsgatan 21, Kista, 164 83, Stockholm, Sweden. Telefonaktiebolaget LM Ericsson is the sole owner by assignment of all right, title, and interest in the Asserted Patents.

6. Defendant Lenovo (United States), Inc. (“Lenovo USA”) is a company organized under the laws of the Delaware, with its principal place of business at 8001 Development Drive, Morrisville, North Carolina 27560. Lenovo USA operates as a subsidiary of Lenovo Group.

7. Defendant Lenovo (Shanghai) Electronics Technology Co. Ltd. is a company organized under the laws of the People’s Republic of China, with its principal place of business at Section 304-305, Building No.4, #222, Meiyue Road, China (Shanghai) Pilot Free Trade Zone, Shanghai, China, 200131. Lenovo (Shanghai) Electronics Technology Co. Ltd. operates as a subsidiary of Lenovo Group.

8. Defendant Lenovo Beijing, Ltd. is a company organized under the laws of the People’s Republic of China, with its principal place of business at Lenovo Building, 6 Chuangye Rd, Shangdi Haidian District, Beijing, China 100085. Lenovo Beijing, Ltd. operates as a subsidiary of Lenovo Group.

9. Defendant Lenovo Group, Ltd. (“Lenovo Group”) is a company organized under the laws of the People’s Republic of China, with its principal place of business at Lincoln House, 23rd Floor, Taikoo Place, 979 King’s Road, Quarry Bay, Hong Kong, China.

10. Defendant Motorola (Wuhan) Mobility Technologies Communication Co., Ltd. is a Chinese company located at No.19, Gaoxin 4th Road, Wuhan East Lake High-tech Zone, Wuhan, Wuhan Hubei 430000, China. Motorola (Wuhan) operates as a subsidiary of Lenovo Group.

11. Defendant Motorola Mobility, LLC (“Motorola”) is organized under the laws of the State of Delaware, with its principal place of business at 222 W. Merchandise Mart Plaza, Chicago, IL 60654. Motorola Mobility is a direct, wholly owned subsidiary of Motorola Mobility Holdings LLC, which is indirectly a wholly owned subsidiary of Lenovo Group. Motorola Mobility Holdings LLC is Motorola Mobility, LLC’s only member. Motorola Mobility Holdings LLC’s only member is Motorola Mobility Holdings UK Limited, a company incorporated under the laws of England and Wales with its principal place of business in the United Kingdom. Motorola Mobility Holdings UK Limited is a corporation and a citizen of a foreign state.

12. Defendants design, manufacture, use, import into the United States, sell, and/or offer for sale in the United States phones, tablets, computers, and similar products and services (the “Accused Products”) that practice the 5G Standard and infringe the Asserted Patents.

JURISDICTION AND VENUE

13. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331, 1332, 1367, and/or 1338.

14. The amount in controversy exceeds \$75,000.

15. Venue is proper in this judicial district under 28 U.S.C. §§ 1391, 1400, and/or the common-law doctrine of pendent venue. Lenovo USA and Motorola both maintain offices in North Carolina and this District, have employees in North Carolina, including senior executives,¹ have committed acts of infringement in North Carolina and this District, and have argued that venue is proper in this District in prior patent infringement cases.²

¹ *E.g.*, Francois Laflamme, Motorola Mobility’s Chief Global Marketing & Strategy Officer, who is based in North Carolina. <https://www.linkedin.com/in/francois-laflamme-2b52318/> (last accessed October 11, 2023).

² *E.g.*, *MyMail, Ltd. v. Motorola Mobility, LLC et al.*, 1:18-cv-00048-LY, Dkt. No. 22 at pp. 1, 11 (W.D. Tex.) (“If, however, this Court chooses, in lieu of dismissal, to transfer this case, Lenovo and Motorola respectfully submit that the Eastern District of North Carolina (EDNC), and specifically the Raleigh Division, is both a proper forum for this dispute and the most convenient forum. . . . Under the patent venue statute, the Eastern District of North Carolina is a proper venue for both Lenovo and Motorola. See 28 U.S.C. § 1400.”)

16. This Court has general personal jurisdiction over Lenovo USA, which has its principal place of business in North Carolina. The Court also has specific personal jurisdiction over all Defendants. Defendants have continuous and systematic business contacts with the State of North Carolina that subject them to the personal jurisdiction of the Court. Defendants, directly or through subsidiaries or intermediaries (including distributors, retailers, and others), conduct their business extensively throughout the State of North Carolina and the Eastern District of North Carolina. Defendants purposefully and voluntarily placed the Accused Products into this District and into the stream of commerce with the intention and expectation that they will be purchased and used by consumers in this District. The Accused Products have been and continue to be purchased and used by consumers in this District.

17. Defendants committed acts of patent infringement within the State of North Carolina and, more particularly, within the Eastern District of North Carolina. Jurisdiction over Lenovo USA and Motorola in the matter is also proper because they have voluntarily submitted themselves to the jurisdiction of the courts by commencing litigations within the State of North Carolina, by registering with the North Carolina Secretary of State's Office to do business in the State of North Carolina, and/or by appointing a registered agent.

18. All Defendants are part of the same corporate structure and distribution chain for making, importing, offering to sell, selling, and/or using the Accused Products, including in the State of North Carolina generally and this District in particular. The Defendants share the same management, common ownership, advertising platforms, facilities, distribution chains and platforms, and accused product lines and products involving related technologies. Thus, they operate as a unitary business venture.

19. Lenovo USA also engaged in negotiations over a license to Ericsson's patents from North Carolina and this District and purposefully and intentionally created continuous and systematic business contacts in North Carolina and this District regarding licensing negotiations with Ericsson. When Ericsson contacted Lenovo Group in 2010 regarding Lenovo Group's need to take a license to Ericsson's patents, Lenovo Group directed Ericsson to Lenovo USA and appointed employees of Lenovo USA based in North Carolina and this District to negotiate on behalf of Lenovo. When Lenovo USA continued to stall negotiations, Ericsson reached out again and requested to negotiate directly with Lenovo Group. Lenovo Group employees agreed to meet but insisted that employees of Lenovo USA based in North Carolina and this District also participate in the negotiations. After the meeting with Lenovo Group and Lenovo USA, employees of Lenovo USA continued to negotiate with Ericsson. Thus, Lenovo Group appointed Lenovo USA and Lenovo USA's employees to negotiate a license on Lenovo Group's behalf, including employees from North Carolina and this District. Additionally, after its acquisition of Motorola in 2014, Lenovo USA's negotiations in North Carolina and this District were for the benefit of and on behalf of Motorola, its wholly owned subsidiary and a "Lenovo company."³ Lenovo USA also expressed a desire to share technical information with Motorola during licensing negotiations and during licensing meetings in North Carolina.

FACTUAL BACKGROUND

A. Ericsson's Investment in Cellular Telecommunications, HEVC, and Resulting Patents

20. Telefonaktiebolaget LM Ericsson was founded in 1876. Ericsson supplies the cellular network infrastructure equipment used to build mobile networks across the world, serving

³ <https://money.cnn.com/2016/01/08/technology/motorola-dead-lenovo/> (last accessed October 11, 2023).

more than one billion mobile subscribers in over 180 countries. Ericsson's equipment is deployed in cellular networks worldwide.

21. Ericsson has a long history of innovation in the telecommunication industry and in the creation of the cellular standards. In addition to supplying equipment for 2G, 3G, 4G, and 5G networks, Ericsson was also well known for its mobile phone business, which ended in 2012 with the divestment of the popular "Sony Ericsson" brand. Years earlier, Ericsson coined the "smartphone" term when unveiling its GS88 handset in 1997, and it showcased an early version of a tablet with its Cordless Web Screen in 2000.

22. Ericsson has been at the forefront of every step of cellular standardization: Ericsson launched 2G phones on the first 2G network in 1991, Ericsson made the first 3G call in 2001, and Ericsson built the first 4G network in 2009. Ericsson continues to be at the forefront: Ericsson completed the first 5G trial system in Europe in 2016, and Ericsson has deployed its equipment throughout 5G networks in the United States.

23. Ericsson prioritizes innovation and has invested \$4-5 billion annually in research and development over the past decade. Ericsson's research and development activities include participating in the development of the 2G, 3G, 4G, and 5G cellular standards over the last 30+ years. Ericsson's engineers have attended hundreds of standardization meetings and made tens of thousands of technical contributions to the standards.

24. Ericsson protects its investments in research and development with intellectual property. Ericsson owns tens of thousands of patents related to wireless telecommunication technology, and Ericsson continues to develop and secure intellectual property as it innovates in this industry. Because Ericsson chooses to voluntarily contribute many of its cellular innovations to the standard-setting process—through technical contributions in standardization meetings—

Ericsson has many patents essential to the cellular standards. Industry members attending the standardization meetings, including Lenovo, choose to adopt Ericsson's technology into the standard because Ericsson's technology is the best.

25. As a result of its extensive research and development efforts, Ericsson has been awarded more than sixty thousand patents worldwide. Many of Ericsson's patents are essential to the telecommunications standards, including the 4G (LTE, LTE-Advanced, and LTE-Advanced Pro) and 5G (New Radio or NR) standards promulgated by ETSI, and the HEVC (H.265) video coding standard promulgated by the International Telecommunications Union (ITU) (collectively, "Essential Patents").

26. Lenovo's products use Ericsson's Essential Patents, and Lenovo requires a license to Ericsson's Essential Patents.

B. Standard Development Organizations and the F/RAND Commitment

27. The European Telecommunications Standards Institute (ETSI) is an independent, non-profit standard development organization (SDO) that produces globally accepted standards for the telecommunication industry. ETSI has more than 900 members from more than 60 countries across five continents, including Ericsson. ETSI was responsible for the creation of the technical specifications for 2G (second generation, encompassing GSM, GPRS, as well as EDGE, which is frequently included within 2G but which is also referred to as 2.5G).

28. In 1998, ETSI and other SDOs founded and became organizational partners of the Third Generation Partnership Project (3GPP). 3GPP created the technical specifications for 3G (third generation, encompassing WCDMA/UMTS and HSPA), 4G (fourth generation, encompassing LTE, LTE-Advanced, and LTE Advanced-Pro), and 5G (fifth generation, encompassing NR) mobile systems.

29. 3GPP working group meetings are attended by hundreds of engineers from dozens of companies involved in the cellular industry. These companies, including Ericsson, contribute their ideas and inventions for the improvement of the 3GPP technical specifications.

30. ETSI developed and promulgated an Intellectual Property Rights (IPR) Policy, the construction, validity, and performance of which is governed by French law. The ETSI IPR Policy is intended to strike a balance between the needs of standardization for public use on the one hand and the rights of IPR owners on the other hand.

31. Section 4.1 of the ETSI IPR Policy relates to disclosure of IPRs and provides that:

each MEMBER shall use its reasonable endeavours, in particular during the development of a STANDARD or TECHNICAL SPECIFICATION where it participates, to inform ETSI of ESSENTIAL IPRs in a timely fashion. In particular, a MEMBER submitting a technical proposal for a STANDARD or TECHNICAL SPECIFICATION shall, on a bona fide basis, draw the attention of ETSI to any of that MEMBER's IPR which might be ESSENTIAL if that proposal is adopted.

32. Section 15.6 of the ETSI IPR Policy defines the term "ESSENTIAL" to mean that:

it is not possible on technical (but not commercial) grounds, taking into account normal technical practice and the state of the art generally available at the time of standardization, to make, sell, lease, otherwise dispose of, repair, use or operate EQUIPMENT or METHODS which comply with a STANDARD without infringing that IPR.

33. Ericsson has complied with the ETSI IPR Policy regarding its patents for which Lenovo seeks a license. Ericsson timely submits IPR Information Statement and Licensing Declarations to ETSI which identify patents it believes may be, or may become, essential (as defined by the ETSI IPR Policy) in relation to the ETSI work items, standards, and/or technical specifications in accordance with Clause 4.1 of the ETSI IPR Policy.

34. ETSI also requests that essential patent holders publicly declare their licensing positions by submitting an IPR Information Statement and Licensing Declaration. Clause 6.1 of the ETSI IPR Policy states that:

[w]hen an ESSENTIAL IPR relating to a particular STANDARD or TECHNICAL SPECIFICATION is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licenses on fair, reasonable, and non-discriminatory (“FRAND”) terms and conditions under such IPR[.]

35. The ETSI IPR Policy includes a form IPR Licensing Declaration, which is contractual in nature. As Ericsson owns cellular Essential Patents, Ericsson has declared that it is prepared to grant licenses on FRAND terms and conditions.

36. Ericsson conditioned its FRAND commitment upon reciprocity, as expressly permitted by Clause 6.1 of the ETSI IPR Policy. Specifically, Ericsson stated that its FRAND Commitment pertaining to its cellular Essential Patents is subject to the “condition that those who seek licenses agree to reciprocate.” As a manufacturer of cellular infrastructure equipment, when Ericsson licenses its Essential Patents, Ericsson negotiates cross-license agreements that provide Ericsson a reciprocal license to the other company’s cellular standard essential patents.

37. The ITU is an SDO that publishes the HEVC/H.265 standard. The ITU was formed in 1865 at the International Telegraph Convention and, in 1947, became a specialized agency of the United Nations, responsible for issues that concern information and communication technologies. The ITU handles a number of different matters and thus is organized into various sectors. One of the sectors is Telecommunication Standardization or “ITU-T.” The mission of ITU-T is to ensure efficient and timely production of standards related to the field of telecommunications. The standards developed by ITU-T are referred to as “Recommendations.”

38. Within ITU-T, members come together in various teams or groups to propose and contribute innovative technology that best meets the aims of the organization and its members and draft the Recommendations. A goal of ITU-T is to draft Recommendations that incorporate

the best available technology to ensure that the standards are the highest possible quality. The HEVC/H.265 standard is explicitly detailed in the H.265 Recommendation.

39. As it searches for the best available technical solutions, the ITU considers that many parts of its standards will be covered by claims in patents owned by members and third parties. To assist with the usage of patented technologies in standardized communication protocols, the ITU adopted a Common Patent Policy which states that “a patent embodied fully or partly in a Recommendation | Deliverable must be accessible to everybody without undue constraints.” This patent policy applies to the ITU and ITU-T.

40. The ITU published Patent Guidelines that define the term “Patent,” as used in the Common Patent Policy, to be:

those claims contained in and identified by patents, utility models and other similar statutory rights based on inventions (including applications for any of these) solely to the extent that any such claims are essential to the implementation of a Recommendation | Deliverable. Essential patents are patents that would be required to implement a specific Recommendation | Deliverable

ITU Patent Guidelines at 2.

41. The definition of “Patent” provided by the Guidelines is also applicable to the Patent Statement and Licensing Declaration Form, which is prepared by each patent holder when declaring to HEVC/H.265. The ITU thus deems “essential” only patent claims that are required for implementation of a specific Recommendation.

42. Ericsson voluntarily and publicly committed that it is prepared to grant licenses under its portfolio of patents to claims that are essential to practice the HEVC/H.265 standard on reasonable and non-discriminatory (“RAND”) terms.

43. Consistent with the Common Patent Policy set by the ITU, on February 15, 2013, Ericsson timely submitted a Patent Statement and Licensing Declaration to ITU in which it declared in good faith that it is “prepared to grant a license to an unrestricted number of applicants

on a worldwide, non-discriminatory basis and on reasonable terms and conditions to make, use, and sell implementations” of the HEVC/H.265 Standard. Ericsson conditioned its RAND commitment upon reciprocity, as expressly permitted by the ITU’s Patent Statement and Licensing Declaration form and Guidelines for Implementation of the Common Patent Policy.

C. Ericsson’s Compliance with Its F/RAND Commitments

44. Ericsson committed that it is prepared to grant licenses to its Essential Patents on F/RAND terms and conditions, subject to reciprocity.

45. Consistent with its F/RAND commitments, Ericsson has widely licensed its portfolios of Essential Patents in over one hundred agreements with members of the telecommunications industry for a global portfolio license. Ericsson reinvests much of the licensing revenue it receives under these global agreements into inventing future generations of standardized telecommunication technologies, spending nearly five billion dollars annually on research and development.

46. Courts around the world have confirmed that Ericsson’s royalty rates comply with its F/RAND commitment. A jury, judge, and appellate court recently confirmed that Ericsson’s offers of either \$2.50 a phone or 1% with a \$1 floor and \$4 cap were FRAND offers on 4G devices. *See HTC Corporation et al. v. Telefonaktiebolaget LM Ericsson et al.*, 407 F. Supp. 3d 631, 640 (E.D. Tex. 2019), *aff’d*, 12 F.4th 476 (5th Cir. 2021). In *Unwired Planet v. Huawei*, another final decision upheld on appeal, a court in the United Kingdom concluded that a FRAND rate that is representative of the value of Ericsson’s 4G SEP portfolio for a multimode handset was 0.8%, without a cap. *See Unwired Planet v. Huawei*, Approved Judgment, 374, [2017] EWHC 2988 (Pat) (United Kingdom High Court of Justice Nov. 30, 2017).

47. Lenovo manufactures smartphones, tablets, and computers. Lenovo purchased Motorola from Google in 2014, instantly making Lenovo the world’s “#3 Smartphone Maker” at the time.⁴

48. Lenovo operates Motorola “as a wholly-owned subsidiary.”⁵

49. Shortly after purchasing Motorola, Lenovo announced that it would “slowly phase out Motorola” and instead employ a “dual brand strategy . . . using Moto and Vibe” branding, despite Motorola Mobility still “exist[ing] as a Lenovo company[.]”⁶

50. On March 3, 2017, to provide transparency and predictability, Ericsson publicly announced its 5G/NR royalty rates upon which it is prepared to grant licenses to the industry. Ericsson made its rate announcement long before the Third Generation Partnership Project (3GPP) finalized its December 2017 non-standalone 5G standard and its June 2018 standalone 5G standard. In its announcement, Ericsson stated that it was prepared to grant licenses, subject to reciprocity, “at a fair and reasonable royalty rate of \$5 per 5G/NR multimode compliant handset,” and in certain circumstances for low priced handsets, “a floor of \$2.5 per 5G/NR multimode compliant handset.”

51. Lenovo was aware of Ericsson’s March 2017 announcement of its 5G royalty rates.

52. Lenovo accepted the 5G non-standalone and standalone standards knowing the standards included Ericsson’s patented technology and knowing Ericsson previously announced its 5G multimode royalty terms.

⁴ <https://news.lenovo.com/pressroom/press-releases/lenovo-completes-full-acquisition-motorola-mobility-from-google/> (last accessed October 11, 2023).

⁵ *Id.*

⁶ <https://money.cnn.com/2016/01/08/technology/motorola-dead-lenovo/> (last accessed October 11, 2023).

D. Lenovo has Dragged out Negotiations for Over a Decade

53. Over a decade has gone by since Ericsson started negotiating a global cross-license with Lenovo, yet Lenovo has not signed a license. Instead, Lenovo has been content dragging out negotiations to delay paying royalties for its use of Ericsson's SEPs. Lenovo's calculated holdout started in 2008 and continues to this day.

54. Ericsson first contacted Lenovo about taking a license to Ericsson's 2G and 3G Essential Patents in 2008. Ericsson reached out to Lenovo again in June of 2010 regarding Lenovo's need to take a license to Ericsson's 2G and 3G Essential Patents. Lenovo Group informed Ericsson that delegates from Lenovo USA would follow up to handle negotiations of the global license for Lenovo, including a Lenovo USA employee based in Lenovo USA's North Carolina headquarters. After this, Ericsson began negotiating with Lenovo USA, which was negotiating on behalf of Lenovo.

55. After an initial delay, Ericsson and Lenovo USA were quickly able to agree on a standard, two-page NDA to allow for both side's confidential information to be protected in negotiations. Ericsson provided claim charts of exemplary patents from its portfolio and invited Lenovo to engage in technical discussions, but Lenovo declined. Instead, Lenovo acknowledged "the size of [Ericsson's] portfolio," noted that "Lenovo sees little value in providing a technical response at this time," and expressed a preference to "move forward in discussing business terms." Lenovo then provided confidential internal sales data under the parties' NDA.

56. Given Lenovo's comment, Ericsson quickly sent Lenovo a draft Global Patent License Agreement ("GPLA") on December 3, 2010. This offer was structured as a global cross-license agreement, where Ericsson and Lenovo would each grant a license to the other, and Lenovo would make net balancing payments to Ericsson in the form of a running royalty, in addition to an upfront release payment to cover Lenovo's past unlicensed sales.

57. Over the next several months, the parties exchanged redlines of the GPLA. Lenovo also sent a patent list to Ericsson asserting certain Lenovo patents that Lenovo contended Ericsson needed to license and that would be captured by a cross-license.

58. As negotiations continued, Lenovo acknowledged that it had been delaying discussions but claimed those delays were due to personnel turnovers. Due to Lenovo's repeated delays, Ericsson reached out again to Lenovo Group in October of 2011. Ericsson explained that it wanted to meet with Lenovo Group so that Ericsson could negotiate directly with Lenovo Group, which would hopefully lead to the parties timely signing a license.

59. Lenovo Group agreed to meet with Ericsson in Beijing but insisted on including at least one representative based in Lenovo USA's North Carolina headquarters in the negotiations. The parties met in Beijing in November 2011, and Ericsson agreed to send an updated draft GPLA, which it sent one week later. Even after this meeting, Lenovo USA continued to negotiate on behalf of Lenovo, acting in negotiations as agent on behalf of all Lenovo affiliated companies.

60. On December 16, 2011, Lenovo sent a tentative counteroffer. Lenovo requested that Ericsson agree to waive all past royalties for the unlicensed products that Lenovo already sold. In February 2012, Lenovo withdrew its counteroffer.

61. Concerned with Lenovo's negotiation tactics, which suggested that Lenovo was not interested in engaging in good faith with Ericsson, Ericsson reached out to Lenovo's Senior Vice President in April of 2012. Ericsson explained that it had been trying to engage in licensing discussions since 2010; that it had sent over 70 emails and scheduled over 15 conference calls; and that it even went to an in-person meeting in China—all without getting any closer to reaching a resolution. Ericsson concluded by asking for a reasonable counteroffer.

62. Lenovo's Senior Vice President responded to the letter on May 7, 2012. Lenovo claimed it intended to "provide [Ericsson] with a fair, reasonable, non-discriminatory counter offer[.]" After receiving this response, Ericsson pushed for a meeting of the companies' top executives to get the negotiations back on course, but Lenovo demurred. Instead, Lenovo insisted in early May 2012 that its general counsel was working to get a counteroffer together as quickly as possible. When, at the end of May, Lenovo had not made a counteroffer, Ericsson and Lenovo exchanged letters, with Lenovo insisting that it was working to provide a counteroffer and that any meeting should happen after it provided a counteroffer.

63. By July 2012, Lenovo had still not provided its promised counteroffer. Instead, Lenovo introduced a new negotiator, who promised to get up to speed and then meet with Ericsson. The companies' negotiators met in North Carolina on August 1, 2012. After the meeting, Lenovo apologized that the meeting was not more productive and asked for updated royalty rates from Ericsson. Though Lenovo sent Ericsson edits to the draft GPLA the next day, it still did not provide a royalty proposal, commenting instead that payment terms would need to be considered after a "broader discussion." Lenovo also indicated that it was willing to discuss a grant back license to Ericsson for Lenovo's patents for "fair value." The parties continued to exchange redlines to the draft GPLA, and on October 4, Lenovo gave a licensing presentation with a tentative counteroffer. The parties continued having calls and negotiating over the terms of the draft GPLA for the rest of 2012, with Lenovo's negotiator even acknowledging and taking responsibility for the ongoing delays.

64. The parties continued negotiating in 2013, with Ericsson reaching out in March to set up a call in the hopes of progressing the negotiations.

65. By 2014, the parties had already been negotiating for almost 4 years. Lenovo knew that Ericsson was a significant patent holder, but Lenovo still had not taken a license. Ericsson set up a call with Lenovo on February 7, 2014. On the call, Lenovo indicated that it did not think Ericsson could successfully enforce its patents against Lenovo and was not interested in taking a license until Lenovo's deal to purchase Motorola was finalized.

66. On October 30, 2014, Lenovo acquired Motorola Mobility. Lenovo instantly became the world's "#3 Smartphone Maker" with this acquisition.⁷

67. Ericsson contacted Lenovo on October 31, 2014, suggesting that the companies continue licensing discussions. After a call in November 2014, Lenovo requested that Ericsson send patent lists, claim charts, and a summary presentation on its portfolio of Essential Patents. Lenovo also expressed its desire to share this information with Motorola's team. Ericsson suggested that it could provide this information and present it at a January 2015 meeting, though it reminded Lenovo that—when Ericsson provided technical information to Lenovo four years earlier—Lenovo said there was no need for technical discussions.

68. Ericsson and Lenovo met at the end of January 2015 in North Carolina. Lenovo expressed interest about purchasing patents from Ericsson and indicated that it was willing to continue negotiations for a global cross-license to Ericsson's patents, but only if Ericsson agreed to base royalties at the chipset level, which Lenovo contended was the fair way to value Ericsson's portfolio.

69. Ericsson disagreed with Lenovo's suggestion regarding the appropriate royalty base or rate, and, on February 2, 2015, Ericsson proposed that the parties engage in binding arbitration and offered to prepare the arbitration agreement.

⁷ <https://news.lenovo.com/pressroom/press-releases/lenovo-completes-full-acquisition-motorola-mobility-from-google/> (last accessed October 11, 2023).

70. More than one month passed before Lenovo rejected Ericsson's offer for binding arbitration. Instead, Lenovo suggested that the parties engage in non-binding arbitration or mediation in China to determine a China-only rate. Lenovo also claimed that Ericsson's view on the valuation of its patents conflicted from guidance from courts, and Lenovo suggested that the parties should wait for ongoing litigation to resolve and provide more guidance on the question.

71. Ericsson sent Lenovo a letter in September 2015 expressing disappointment with Lenovo's "wait-and-see" approach and Lenovo's unwillingness to participate in binding arbitration. Ericsson reiterated that it was still interested in negotiating a patent license with Lenovo to cover Lenovo's cellular-enabled devices. Lenovo disagreed with Ericsson's letter and suggested more face-to-face meetings to discuss next steps. Ericsson agreed and met with Lenovo in North Carolina in late October 2015.

72. By early 2016, the parties had already been negotiating for over five years, and their NDA had expired. Ericsson proposed sending a new offer and also executing an NDA addendum so that the parties could continue to exchange confidential information and have open and informed licensing discussions. Ericsson and Lenovo USA executed the NDA addendum in May of 2016. When that addendum expired in September of 2016, Ericsson reached back out to sign another addendum. Lenovo said it was "glad [Ericsson] remembered the NDA," and Ericsson and Lenovo USA agreed on and signed another NDA addendum to cover negotiations through March 1, 2017.

73. Negotiations continued to be unproductive, especially because Lenovo now claimed Lenovo did not need a license to Ericsson's patent portfolio at all after purchasing Motorola. Ericsson requested that the parties mediate, but Lenovo resisted.

74. Ericsson traveled to North Carolina to meet with Lenovo on July 20, 2017, and Ericsson presented another counteroffer. Ericsson returned to North Carolina in September 2017, but—despite Ericsson having made the last offer—Lenovo did not provide a counteroffer at this meeting. Instead, the parties exchanged more counteroffers in October and November of 2017, respectively.

75. Since the parties were still very far apart, Ericsson again requested mediation, and Lenovo agreed. Mediation took place in April of 2018 and was unsuccessful.

76. Ericsson contacted Lenovo after mediation to arrange a meeting of the companies' respective executives. Lenovo's General Counsel met with Ericsson's Chief Intellectual Property Officer in June of 2018. The parties continued to negotiate, with the negotiations including discussion about Ericsson's 5G patent portfolio and Lenovo's 5G products.

77. In April of 2019, Motorola released its first 5G-upgradeable phone, the "Moto Z3."⁸

78. On June 24, 2021, Ericsson reached out again to Lenovo, hoping that Lenovo would finally be receptive to negotiating and signing a license for Lenovo that provided a fair royalty to Ericsson. By this point, negotiations over a license had been going on for so long that the parties' previous NDA and two NDA addendums had long expired.

79. A little over a month after reaching out in June 2021, Ericsson sent Lenovo a two-page, industry-standard draft NDA. This version of the NDA listed Ericsson and Lenovo Group as the signatories.

80. Lenovo sent redlines of the NDA back in October 2021. Lenovo struck out "Lenovo Group" from the draft and replaced it with Lenovo USA, clarifying that Ericsson and

⁸ See <https://www.techradar.com/news/moto-z3-is-officially-the-first-5g-phone-in-the-world-beating-samsung-by-2-days> (last accessed October 11, 2023).

Lenovo USA would continue to negotiate the terms of the global cross-license between Ericsson and Lenovo.

81. Lenovo's redlines also included language that would prevent the parties from using information exchanged under the NDA in front of a jury or to "establish[] declaratory judgment jurisdiction over the patents or patent applications disclosed" or "to support any argument for challenging the validity of a US patent in any inter partes review (IPR) procedure before the USPTO."

82. While unusual to include language trying to prevent potential future litigation in an NDA governing business discussions, Ericsson was open to compromising so that licensing discussions could continue. Ericsson and Lenovo had a meeting and calls to discuss Lenovo's redlines, and the parties continued to negotiate the NDA for the rest of 2021.

83. Ericsson and Lenovo were still negotiating a new NDA in January of 2022. In February 2022, Lenovo appointed outside litigation counsel to handle negotiations of the NDA with Ericsson. Ericsson and Lenovo continued to have calls and exchange redlines, but, with Lenovo's outside counsel negotiating the NDA and largely running the calls for Lenovo, the parties were making little progress.

84. On March 21, 2022, Lenovo sent back extensive redlines to the NDA. In addition to other edits, Lenovo insisted that it be allowed to share Ericsson's confidential information with nearly 10 other companies that Lenovo claimed were suppliers. Ericsson emailed Lenovo on April 4, 2022, to ask questions about what these companies supplied to Lenovo and what types of patents these suppliers indemnify Lenovo for so that Ericsson could try to understand Lenovo's unusual request. Lenovo never answered these questions.

85. Because there was still no NDA in place, Ericsson sent Lenovo an email on April 5, 2022, reminding Lenovo that Ericsson had been negotiating with Lenovo over a global cross-license for about a decade. Ericsson implored Lenovo to conclude the NDA so the parties could move the negotiations along. Ericsson also sent 4G, 5G, and HEVC patent lists, notifying Lenovo of patents that covered Lenovo's mobile phones, laptop computers, PCs, and tablets. Ericsson disclosed all the Asserted Patents and/or their application numbers (if the patent had not yet issued by April 5, 2022) to Lenovo, providing notice of Lenovo's infringement of the Asserted Patents at least as early as April 5, 2022.

86. Given Lenovo's continued refusal to sign a new, industry-standard NDA, Ericsson offered to renew the NDA that Ericsson and Lenovo USA agreed on and signed back in 2010. In an April 22, 2022, email, Ericsson attached the NDA the companies previously signed and offered to renew it.

87. Between April 22, 2022, and January 18, 2023, Ericsson sent Lenovo at least five follow-up emails, asking Lenovo whether it would agree to renew the parties' old NDA. During this eight-month stretch, Lenovo did not respond to these emails.

88. When Lenovo finally reengaged on January 19, 2023, it refused to renew the parties' prior NDA. Ericsson and Lenovo continued exchanging drafts of a new NDA, with Ericsson sending Lenovo another draft in March of 2023. Ericsson and Lenovo had more calls to discuss the NDA draft, with Lenovo's outside counsel continuing to run the calls for Lenovo.

89. Lenovo responded to Ericsson's March 2023 draft on June 9, 2023, by effectively rewriting the entire NDA. Lenovo's latest rewrite pushed the NDA to nine pages, contained an "NDA within an NDA" meant to allow Lenovo to share Ericsson's confidential information with a host of third-party companies and law firms, and limited Ericsson's ability to enforce its patent

rights against Lenovo—despite Lenovo leaving itself the option of suing Ericsson in China at any time.

90. On October 11, 2023, Ericsson sent Lenovo a letter, expressing Ericsson’s disappointment with Lenovo’s negotiation tactics and Lenovo’s refusal to sign a reasonable NDA. Ericsson also reiterated its license offer under its publicly announced 5G multimode rates.

THE ERICSSON ASSERTED PATENTS

A. The ’817 Patent

91. United States Patent No. 10,425,817 is entitled “Subscription Concealed Identifier” and issued on September 24, 2019. The ’817 Patent expires on July 17, 2038, is based on U.S. Patent Application No. 16/200,037 filed on November 26, 2018, and claims priority to International Patent Application No. PCT/EP2018/069432, filed on July 17, 2018, and U.S. Provisional Patent Application No. 62/536,632, filed on July 25, 2017. A true and correct copy of the ’817 Patent is attached as Exhibit 1.

92. Telefonaktiebolaget LM Ericsson owns, by assignment, all right, title, and interest in and to the ’817 Patent. Five inventors of the ’817 Patent—Noamen Ben Henda, David Castellanos Zamora, Prajwol Kumar Nakarmi, Pasi Saarinen, and Monica Wifvesson—assigned their rights in the ’817 Patent to Telefonaktiebolaget LM Ericsson. Inventor Vesa Torvinen assigned his rights in the ’817 Patent to Oy LM Ericsson AB. Oy LM Ericsson AB in turn assigned its rights in the ’817 Patent to Telefonaktiebolaget LM Ericsson.

93. The asserted ’817 Patent, filed as U.S. Patent Application No. 16/200,037, which claims priority to U.S. Provisional Patent Application No. 62/536,632, was declared to ETSI at least on December 22, 2017.

94. The ’817 Patent relates to protecting privacy in wireless networks. In particular, the ’817 Patent involves, among other things, maintaining the confidentiality of a subscriber’s unique

identifier in a wireless communication network. For example, a subscriber may be permanently assigned a unique identifier by a network operator so that the operator can authenticate the subscriber and allow access to its wireless communication network. This unique identifier is securely stored in the user's mobile device. During the authentication procedure, the user's device may need to send the subscriber permanent identifier over the air in a wireless communication network, such as when a mobile device registers with a network after being powered on. In these situations, it is important to ensure that the privacy of a subscriber's unique identifier is maintained.

95. The '817 Patent describes, among other things, encrypting a subscription permanent identifier (a subscriber's unique identifier) into a subscriber concealed identifier, transmitting it in a wireless communications network, and decrypting the subscription concealed identifier to obtain the subscription permanent identifier. The '817 Patent discloses user equipment generating a subscription concealed identifier from a subscription permanent identifier where the subscriber's subscription identifier is encrypted. The subscription concealed identifier also contains a home network identifier and other data fields in clear-text. The subscription concealed identifier is sent to an authentication server and then a de-concealing server for decrypting. The inventions allow for a subscriber's permanent identifier to remain concealed during wireless transmission from attackers attempting to capture the permanent identifier and, for example, track the user. The inventions further relate to user equipment (*e.g.*, a smartphone), including radio frequency front end circuitry, the transceiver, the modem, and the baseband processing circuitry.

96. On information and belief, Lenovo directly infringes at least Claims 10-16 of the '817 Patent through its manufacture, sale for importation, importation, use (including testing), and sale after importation of the Accused Products.

97. As just one example of Lenovo’s infringement, Lenovo manufactures and sells mobile phones that practice the 5G Standard. An example of a Lenovo Accused Product is the Moto Edge+, which Lenovo advertises as supporting “5G.”



Fast, Faster, Fastest

Blazing 5G speed²

Download shows in seconds, stream with less buffering, and accelerate your experience with the Snapdragon[®] 8 Gen 2 mobile platform.

<p>connectivity</p> <p>Networks + Bands 5G: n1/2/3/5/7/12/14/20/25/26/28/29/30/38/41/41 HPU/E/48/66/70/71/77/77 HPU/E/78 4G: B1/2/3/4/5/7/8/12/13/14/17/18/20/25/26/28/29/30/38/39/40/41/41 HPU/E/46/48/66/71 3G: B1/2/4/5/8 2G: B2/3/5/8</p> <p>NFC Yes</p> <p>SIM Card Dual SIM (eSIM+pSIM)</p>	<p>Bluetooth Technology Bluetooth[®] 5.3</p> <p>Wi-Fi Wi-Fi 802.11 a/b/g/n/ac/ax/ky/r 2.4 GHz 5 GHz 6GHz Wi-Fi 6E, Wi-Fi 7 ready³ Wi-Fi hotspot</p>	<p>Location Services GPS A-GPS L-TEPP SUPL Glonass Galileo</p>
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<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

98. For example, the Moto Edge+ includes a Snapdragon 8 Gen 2 Mobile Platform with an X70 5G Modem that supports 5G modes of operation.

performance	Operating System Android™ 13	Internal Storage 512GB	Sensors Proximity, Ambient light, Accelerometer, Gyroscope, SAR sensor, Magnetometer (compass), Barometer
	Processor Snapdragon® 8 Gen 2 Mobile Platform	Memory (RAM) 8GB LPDDR5X	Security On-screen fingerprint reader, Face unlock, ThinkShield®, Moto Secure
	Certifications HDR10+, Amazon HDR playback, YouTube HDR playback, SGS Low Blue Light, SGS Low Motion Blur, Dolby Vision®		

<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

Unparalleled connectivity

Featuring the Snapdragon X70 5G Modem RF System, Snapdragon 8 Gen 2 is the world's first and only mobile platform with a dedicated 5G AI processor. Plus, gaming, streaming, and communication from home soar via Wi-Fi 7 (the industry's lowest latency offering), all brought to you by the Qualcomm® FastConnect™ 7800 Mobile Connectivity System.

- 5G Dual-SIM Dual-Active (DSDA) enables the simultaneous use of two 5G+5G or 5G+4G SIM cards for ultimate user flexibility
- Blazing Wi-Fi speeds of up to 5.8 Gbps—more than double Wi-Fi 6
- World's first commercial Wi-Fi 7 SoC, with advanced High Band Simultaneous Multi-Link

5G Modem-RF System

Snapdragon® X70 5G Modem-RF System

- 5G mmWave and sub-6 GHz, standalone (SA) and non-standalone (NSA) modes, standalone mmWave and mmWave-sub6 dual connectivity, FDD, TDD
- mmWave: 8 carriers, 2x2 MIMO
- Sub-6 GHz: 4x4 MIMO
- Qualcomm® 5G AI Suite
- Qualcomm® AI-Enhanced Signal Boost
- Qualcomm® 5G PowerSave Gen 3
- Qualcomm® Smart Transmit™ 3.0 technology
- Qualcomm® Wideband Envelope Tracking
- Qualcomm® 5G Ultra-Low Latency Suite
- Global 5G multi-SIM, including 5G-5G/4G Dual-SIM Dual-Active (DSDA)

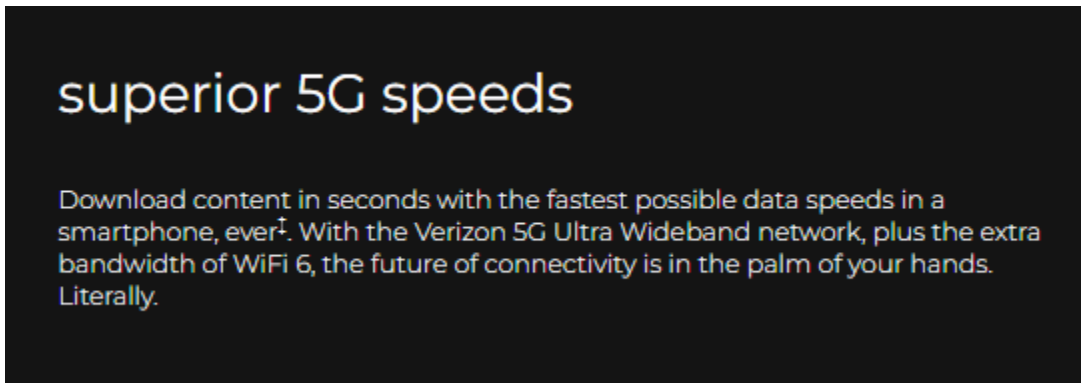
Downlink: Up to 10 Gbps

Uplink: Up to 3.5 Gbps

Multimode support: 5G NR, NR-DC, EN-DC, LTE, CBRS, WCDMA, HSPA, TD-SCDMA, CDMA 1x, EV-DO, GSM/EDGE

<https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/Snapdragon-8-Gen-2-Product-Brief.pdf>

99. Lenovo instructs and encourages users to use the Accused Products in a manner that infringes the asserted claims of the '817 Patent, including by advertising “superior 5G speeds” for its Accused Products.



<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

100. Lenovo knowingly and intentionally induces users of its Accused Products to directly infringe one or more claims of the '817 Patent by encouraging, instructing, and aiding one or more persons in the United States to make, use (including through testing), sell, import, or offer to sell one or more of the Accused Products in a manner that infringes the '817 Patent.

101. For example, as seen in the exemplary advertisement above, Lenovo advertises the Moto Edge+ so that consumers will purchase and use the products, thus inducing those customers to infringe the '817 Patent. On information and belief, Lenovo advertises all of the Accused Products and thus induces infringement of the '817 Patent.

102. On information and belief, Lenovo was aware of the '817 Patent and/or acted with willful blindness as to the existence of the '817 Patent at least as a result of the filing of this Complaint. On April 5, 2022, Ericsson also sent 4G, 5G, and HEVC patent lists, notifying Lenovo of patents that cover equipment such as Lenovo's mobile phones, laptop computers, PCs, and tablets. Ericsson disclosed the '817 Patent to Lenovo as a patent covering Lenovo's equipment "such as Lenovo's mobile phones, laptop computers, PCs & tablets."

103. On information and belief, Lenovo contributes to the infringement of one or more claims of the '817 Patent by offering to sell or selling and/or importing a patented component or material and/or apparatus used to practice a patented process, constituting a material part of the inventions, knowing the same to be especially made or especially adapted for use in an infringement and not a staple article or commodity of commerce suitable for substantial non-infringing use.

104. A claim chart that applies Claim 10 of the '817 Patent to the Accused Products is attached as Exhibit 2.

B. The '669 Patent

105. United States Patent No. 10,306,669 is entitled "Physical uplink control channel (PUCCH) resource allocation," and issued on May 28, 2019. The '669 Patent expires on October 26, 2038, is based on U.S. Application No. 16/203,391, filed on November 28, 2018, which is a continuation of International Patent Application No. PCT/IB2018/058400, filed on October 26,

2018, and claims priority to Provisional Application No. 62/577,578, filed on October 26, 2017. A true and correct copy of the '669 Patent is attached as Exhibit 3.

106. Telefonaktiebolaget LM Ericsson owns, by assignment, all right, title, and interest in and to the '669 Patent. The inventors of the '669 Patent, Havish Koorapaty, Sorour Falahati, Robert Baldemair, and Daniel Larsson, assigned their rights in the '669 Patent to Telefonaktiebolaget LM Ericsson.

107. The asserted '669 Patent, filed as U.S. Application No. 16/203,391, which is a continuation of International Patent Application No. PCT/IB2018/058400, filed on October 26, 2018, was declared to ETSI at least on September 19, 2019.

108. The '669 Patent describes, among other things, a wireless communication system where a wireless device and a network node transmit certain information in downlink (network node to device) and uplink (device to network node) control and share channels. In the claimed system, the signaling the wireless device receives from the network node comprises information that provides a semi-static configuration of two or more uplink control channel resource sets each comprising two or more uplink control channel resources. The '669 patent discloses systems and methods for the wireless device to determine which of the two or more uplink control channel resources, from each of the two or more uplink control channel resource sets, to use for transmitting uplink control information to the network node.

109. The '669 Patent discloses a wireless communication device that is configured to receive one or more downlink control channel messages that schedule downlink share channel transmissions, to determine an uplink control channel resource to use for transmitting uplink control information (*e.g.*, Hybrid Automatic Repeat Request feedback) for the downlink shared channel transmission(s) to a network node based on, *e.g.*, the downlink signaling, and to transmit

the uplink control information using the determined uplink control channel resource. The inventions of the '669 Patent further relate to user equipment (*e.g.*, a smartphone), including radio frequency front end circuitry, the transceiver, the modem, and the baseband processing circuitry.

110. On information and belief, Lenovo directly infringes at least Claims 1, 6, 11, and 18 of the '669 Patent through its manufacture, sale for importation, importation, use (including testing), and sale after importation of the Accused Products.

111. As just one example of Lenovo's infringement, Lenovo manufactures and sells mobile phones that practice the 5G Standard. An example of a Lenovo Accused Product is the Moto Edge+, which Lenovo advertises as supporting "5G."



Fast, Faster, Fastest

Blazing 5G speed²

Download shows in seconds, stream with less buffering, and accelerate your experience with the Snapdragon[®] 8 Gen 2 mobile platform.

connectivity	Networks + Bands 5G: n1/2/3/5/7/12/14/20/25/26/28/29/30/38/41/41 HPU/E48/66/70/71/77/77 HPU/E78 4G: B1/2/3/4/5/7/8/12/13/14/17/18/20/25/26/28/29/30/38/39/40/41/41 HPU/E46/48/66/71 3G: B1/2/4/5/8 2G: B2/3/5/8	Bluetooth Technology Bluetooth® 5.3	
	NFC Yes	Wi-Fi Wi-Fi 802.11 a/b/g/n/ac/ax/k/k/r 2.4 GHz 5 GHz 6GHz Wi-Fi 6E, Wi-Fi 7 ready ³ Wi- Fi hotspot	Location Services GPS AGPS LTEPP SUPL Glonass Galileo
	SIM Card Dual SIM (eSIM+pSIM)		

<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

112. For example, the Moto Edge+ includes a Snapdragon 8 Gen 2 Mobile Platform with an X70 5G Modem that supports 5G modes of operation.

performance	Operating System Android™ 13	Internal Storage 512GB	Sensors Proximity, Ambient light, Accelerometer, Gyroscope, SAR sensor, Magnetometer (compass), Barometer
	Processor Snapdragon® 8 Gen 2 Mobile Platform	Memory (RAM) 8GB LPDDR5X	Security On-screen fingerprint reader, Face unlock, ThinkShield®, Moto Secure
	Certifications HDR10+, Amazon HDR playback, YouTube HDR playback, SGS Low Blue Light, SGS Low Motion Blur, Dolby Vision®		

<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

Unparalleled connectivity

Featuring the Snapdragon X70 5G Modem RF System, Snapdragon 8 Gen 2 is the world's first and only mobile platform with a dedicated 5G AI processor. Plus, gaming, streaming, and communication from home soar via Wi-Fi 7 (the industry's lowest latency offering), all brought to you by the Qualcomm® FastConnect™ 7800 Mobile Connectivity System.

- 5G Dual-SIM Dual-Active (DSDA) enables the simultaneous use of two 5G+5G or 5G+4G SIM cards for ultimate user flexibility
- Blazing Wi-Fi speeds of up to 5.8 Gbps—more than double Wi-Fi 6
- World's first commercial Wi-Fi 7 SoC, with advanced High Band Simultaneous Multi-Link

5G Modem-RF System

Snapdragon® X70 5G Modem-RF System

- 5G mmWave and sub-6 GHz, standalone (SA) and non-standalone (NSA) modes, standalone mmWave and mmWave-sub6 dual connectivity, FDD, TDD
- mmWave: 8 carriers, 2x2 MIMO
- Sub-6 GHz: 4x4 MIMO
- Qualcomm® 5G AI Suite
- Qualcomm® AI-Enhanced Signal Boost
- Qualcomm® 5G PowerSave Gen 3
- Qualcomm® Smart Transmit™ 3.0 technology
- Qualcomm® Wideband Envelope Tracking
- Qualcomm® 5G Ultra-Low Latency Suite
- Global 5G multi-SIM, including 5G-5G/4G Dual-SIM Dual-Active (DSDA)

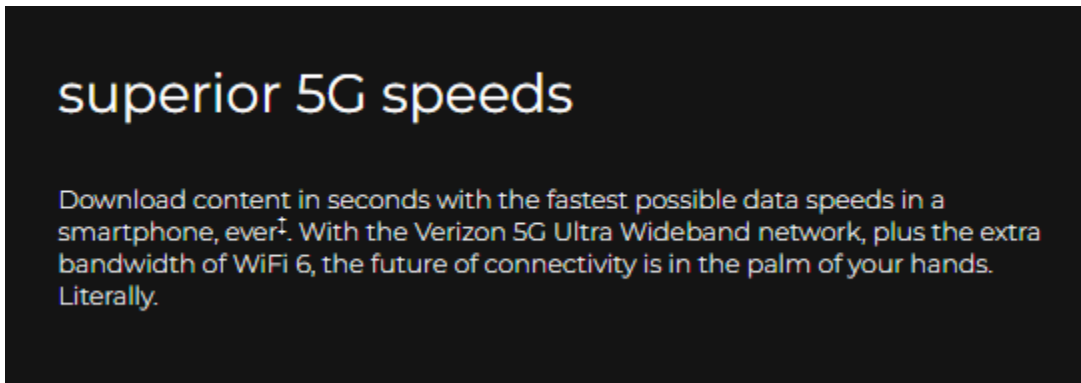
Downlink: Up to 10 Gbps

Uplink: Up to 3.5 Gbps

Multimode support: 5G NR, NR-DC, EN-DC, LTE, CBRS, WCDMA, HSPA, TD-SCDMA, CDMA 1x, EV-DO, GSM/EDGE

<https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/Snapdragon-8-Gen-2-Product-Brief.pdf>

113. Lenovo instructs and encourages users to use the Accused Products in a manner that infringes the asserted claims of the '669 Patent, including by advertising “superior 5G speeds” for its Accused Products.



<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

114. Lenovo knowingly and intentionally induces users of its Accused Products to directly infringe one or more claims of the '669 Patent by encouraging, instructing, and aiding one or more persons in the United States to make, use (including through testing), sell, import, or offer to sell one or more of the Accused Products in a manner that infringes the '669 Patent.

115. For example, as seen in the exemplary advertisement above, Lenovo advertises the Moto Edge+ so that consumers will purchase and use the products, thus inducing those customers to infringe the '669 Patent. On information and belief, Lenovo advertises all of the Accused Products and thus induces infringement of the '669 Patent.

116. On information and belief, Lenovo was aware of the '669 Patent and/or acted with willful blindness as to the existence of the '669 Patent at least as a result of the filing of this Complaint. On April 5, 2022, Ericsson also sent 4G, 5G, and HEVC patent lists, notifying Lenovo of patents that cover equipment such as Lenovo's mobile phones, laptop computers, PCs, and tablets. Ericsson disclosed the '669 Patent to Lenovo as a patent covering Lenovo's equipment "such as Lenovo's mobile phones, laptop computers, PCs & tablets."

117. On information and belief, Lenovo contributes to the infringement of one or more claims of the '669 Patent by offering to sell or selling and/or importing a patented component or material and/or apparatus used to practice a patented process, constituting a material part of the inventions, knowing the same to be especially made or especially adapted for use in an infringement and not a staple article or commodity of commerce suitable for substantial non-infringing use.

118. A claim chart that applies Claim 1 of the '669 Patent to the Accused Products is attached as Exhibit 4.

C. The '342 Patent

119. United States Patent No. 11,317,342 is entitled "Transmission and Reception of System Information in Parts," and issued on April 26, 2022. The '342 Patent expires on November 22, 2038, is based on U.S. Application No. 15/036,283 filed on May 12, 2016, and claims priority to PCT/SE2016/050310 filed on April 12, 2016. A true and correct copy of the '342 Patent is attached as Exhibit 5.

120. Telefonaktiebolaget LM Ericsson owns, by assignment, all right, title, and interest in and to the '342 Patent. The inventors of the '342 Patent, Pal Frenger, Martin Hessler, and Johan Rune, assigned their rights in the '342 Patent to Telefonaktiebolaget LM Ericsson.

121. The asserted '342 Patent, filed as PCT/SE2016/050310, was declared to ETSI at least on May 19, 2017.

122. The '342 Patent describes, among other things, a wireless communication in which system information is transmitted in parts. As background, a traditional wireless communication system broadcasts cell-specific system information from each of the system's cells. Broadcasting system information is often inefficient and costly. Accordingly, approaches that minimize the amount of system information that is broadcast and limit how often information is broadcast are useful.

123. The '342 Patent discloses a wireless communication device that is configured to receive, over a first channel, a first part of system information and an explicit signal that indicates a sequence, such as a demodulation reference signal sequence, with which the wireless communication device is to demodulate or descramble a second part of system information. The wireless communication device is also configured to use the indicated sequence to demodulate or descramble a second part of system information over a second channel. The inventions described in the '342 Patent further relate to user equipment (*e.g.*, a smartphone), including radio frequency front end circuitry, the transceiver, the modem, and the baseband processing circuitry.

124. On information and belief, Lenovo directly infringes at least Claims 1 and 34 of the '342 Patent through its manufacture, sale for importation, importation, use (including testing), and sale after importation of the Accused Products.

125. As just one example of Lenovo’s infringement, Lenovo manufactures and sells mobile phones that practice the 5G Standard. An example of a Lenovo Accused Product is the Moto Edge+, which Lenovo advertises as supporting “5G.”



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Blazing 5G speed²

Download shows in seconds, stream with less buffering, and accelerate your experience with the Snapdragon[®] 8 Gen 2 mobile platform.

<p>connectivity</p> <p>Networks + Bands 5G: n1/2/3/5/7/12/14/20/25/26/28/29/30/38/41/41 HPU/E/48/66/70/71/77/77 HPU/E/78 4G: B1/2/3/4/5/7/8/12/13/14/17/18/20/25/26/28/29/30/38/39/40/41/41 HPU/E/46/48/66/71 3G: B1/2/4/5/8 2G: B2/3/5/8</p> <p>NFC Yes</p> <p>SIM Card Dual SIM (eSIM+pSIM)</p>	<p>Bluetooth Technology Bluetooth[®] 5.3</p> <p>Wi-Fi Wi-Fi 802.11 a/b/g/n/ac/ax/ky/r 2.4 GHz 5 GHz 6GHz Wi-Fi 6E, Wi-Fi 7 ready³ Wi-Fi hotspot</p>	<p>Location Services GPS A-GPS L-TEPP SUPL Glonass Galileo</p>
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<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

126. For example, the Moto Edge+ includes a Snapdragon 8 Gen 2 Mobile Platform with an X70 5G Modem that supports 5G modes of operation.

performance	Operating System Android™ 13	Internal Storage 512GB	Sensors Proximity, Ambient light, Accelerometer, Gyroscope, SAR sensor, Magnetometer (compass), Barometer
	Processor Snapdragon® 8 Gen 2 Mobile Platform	Memory (RAM) 8GB LPDDR5X	Security On-screen fingerprint reader, Face unlock, ThinkShield®, Moto Secure
	Certifications HDR10+, Amazon HDR playback, YouTube HDR playback, SGS Low Blue Light, SGS Low Motion Blur, Dolby Vision®		

<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

Unparalleled connectivity

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- 5G Dual-SIM Dual-Active (DSDA) enables the simultaneous use of two 5G+5G or 5G+4G SIM cards for ultimate user flexibility
- Blazing Wi-Fi speeds of up to 5.8 Gbps—more than double Wi-Fi 6
- World's first commercial Wi-Fi 7 SoC, with advanced High Band Simultaneous Multi-Link

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Snapdragon® X70 5G Modem-RF System

- 5G mmWave and sub-6 GHz, standalone (SA) and non-standalone (NSA) modes, standalone mmWave and mmWave-sub6 dual connectivity, FDD, TDD
- mmWave: 8 carriers, 2x2 MIMO
- Sub-6 GHz: 4x4 MIMO
- Qualcomm® 5G AI Suite
- Qualcomm® AI-Enhanced Signal Boost
- Qualcomm® 5G PowerSave Gen 3
- Qualcomm® Smart Transmit™ 3.0 technology
- Qualcomm® Wideband Envelope Tracking
- Qualcomm® 5G Ultra-Low Latency Suite
- Global 5G multi-SIM, including 5G-5G/4G Dual-SIM Dual-Active (DSDA)

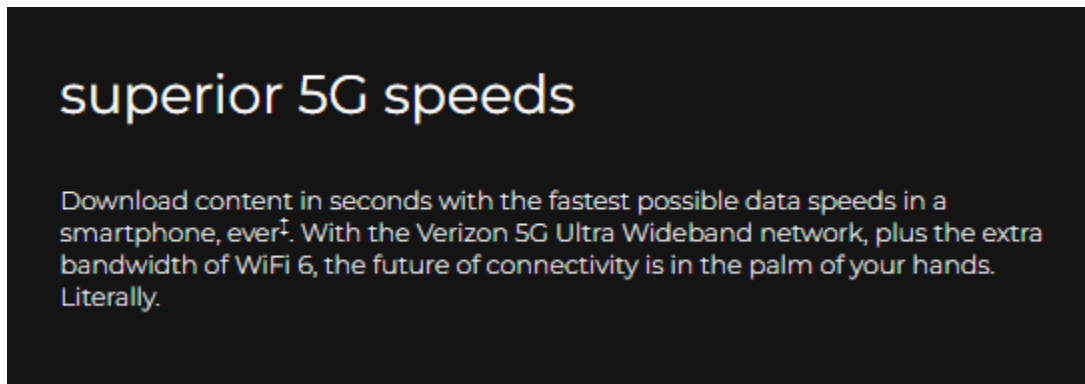
Downlink: Up to 10 Gbps

Uplink: Up to 3.5 Gbps

Multimode support: 5G NR, NR-DC, EN-DC, LTE, CBRS, WCDMA, HSPA, TD-SCDMA, CDMA 1x, EV-DO, GSM/EDGE

<https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/Snapdragon-8-Gen-2-Product-Brief.pdf>

127. Lenovo instructs and encourages users to use the Accused Products in a manner that infringes the asserted claims of the '342 Patent, including by advertising “superior 5G speeds” for its Accused Products.



<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

128. Lenovo knowingly and intentionally induces users of its Accused Products to directly infringe one or more claims of the '342 Patent by encouraging, instructing, and aiding one or more persons in the United States to make, use (including through testing), sell, import, or offer to sell one or more of the Accused Products in a manner that infringes the '342 Patent.

129. For example, as seen in the exemplary advertisement above, Lenovo advertises the Moto Edge+ so that consumers will purchase and use the products, thus inducing those customers to infringe the '342 Patent. On information and belief, Lenovo advertises all of the Accused Products and thus induces infringement of the '342 Patent.

130. On information and belief, Lenovo was aware of the '342 Patent and/or acted with willful blindness as to the existence of the '342 Patent at least as a result of the filing of this Complaint. On April 5, 2022, Ericsson also sent 4G, 5G, and HEVC patent lists, notifying Lenovo of patents that cover equipment such as Lenovo's mobile phones, laptop computers, PCs, and

tablets. Ericsson disclosed the pending application that was issued as the '342 Patent, U.S. Application No. 15/036,283, and notified Lenovo that it was a member of a patent family covering Lenovo's equipment "such as Lenovo's mobile phones, laptop computers, PCs & tablets."

131. On information and belief, Lenovo contributes to the infringement of one or more claims of the '342 Patent by offering to sell or selling and/or importing a patented component or material and/or apparatus used to practice a patented process, constituting a material part of the inventions, knowing the same to be especially made or especially adapted for use in an infringement and not a staple article or commodity of commerce suitable for substantial non-infringing use.

132. A claim chart that applies Claim 1 of the '342 Patent to the Accused Products is attached as Exhibit 6.

D. The '893 Patent

133. United States Patent No. 11,515,893 is entitled "Shift Values of Quasi-Cyclic LDPC Codes," and issued on November 29, 2022. The '893 Patent expires on June 26, 2038, is based on U.S. Application No. 16/834,624 filed on March 30, 2020, and claims priority to Provisional Application No. 62/525,453 filed on June 27, 2017. A true and correct copy of the '893 Patent is attached as Exhibit 7.

134. Telefonaktiebolaget LM Ericsson owns, by assignment, all right, title, and interest in and to the '893 Patent. The inventors of the '893 Patent, Sara Sandberg, Mattias Andersson, and Yufei Blankenship, assigned their rights in the '893 Patent to Telefonaktiebolaget LM Ericsson.

135. The asserted '893 Patent, filed as Provisional Application No. 62/525,453, was declared to ETSI at least on December 8, 2017.

136. The '893 Patent describes, among other things, an apparatus and method for use in a wireless transmitter of a wireless communication network to encode and transmit encoded

information bits using a parity check matrix (PCM). The '893 Patent describes existing ACE (approximate cycle extrinsic message degree) constraints of the PCM that are high and, when paired with a low code rate, allow harmful cycles in the high-rate part of a rate compatible LDPC. Thus, there is a need to generate different ACE constraints for different code rates. The claims of the '893 Patent are directed to an apparatus and method for generating different, optimized ACE constraints for different code rates that correspond to a parity-check matrix using a lifting or shift method. The inventions of the '893 Patent further relate to user equipment (*e.g.*, a smartphone), including radio frequency front end circuitry, the transceiver, the modem, and the baseband processing circuitry.

137. On information and belief, Lenovo directly infringes at least Claims 1, 4, 7, and 10 of the '893 Patent through its manufacture, sale for importation, importation, use (including testing), and sale after importation of the Accused Products.

138. As just one example of Lenovo's infringement, Lenovo manufactures and sells mobile phones that practice the 5G Standard. An example of a Lenovo Accused Product is the Moto Edge+, which Lenovo advertises as supporting "5G."



Fast, Faster, Fastest

Blazing 5G speed²

Download shows in seconds, stream with less buffering, and accelerate your experience with the Snapdragon[®] 8 Gen 2 mobile platform.

connectivity

Networks + Bands

5G: n1/2/3/5/7/12/14/20/25/26/28/29/30/38/41/41
HPUe/48/66/70/71/77/77 HPUe/78
4G:
B1/2/3/4/5/7/8/12/13/14/17/18/20/25/26/28/29/30/38/39/40/41/41
HPUe/46/48/66/71
3G: B1/2/4/5/8
2G: B2/3/5/8

Bluetooth Technology

Bluetooth[®] 5.3

NFC

Yes

Wi-Fi

Wi-Fi 802.11 a/b/g/n/ac/ax/kv/r 2.4 GHz | 5 GHz | 6GHz Wi-Fi 6E, Wi-Fi 7 ready³ Wi-Fi hotspot

Location Services

GPS A-GPS LTEPP SUPL Glonass Galileo

SIM Card

Dual SIM (eSIM+pSIM)

<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

139. For example, the Moto Edge+ includes a Snapdragon 8 Gen 2 Mobile Platform with an X70 5G Modem that supports 5G modes of operation.

performance	Operating System Android™ 13	Internal Storage 512GB	Sensors Proximity, Ambient light, Accelerometer, Gyroscope, SAR sensor, Magnetometer (compass), Barometer
	Processor Snapdragon [®] 8 Gen 2 Mobile Platform	Memory (RAM) 8GB LPDDR5X	Security On-screen fingerprint reader, Face unlock, ThinkShield [®] , Moto Secure
	Certifications HDR10+, Amazon HDR playback, YouTube HDR playback, SGS Low Blue Light, SGS Low Motion Blur, Dolby Vision [®]		

<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

Unparalleled connectivity

Featuring the Snapdragon X70 5G Modem RF System, Snapdragon 8 Gen 2 is the world's first and only mobile platform with a dedicated 5G AI processor. Plus, gaming, streaming, and communication from home soar via Wi-Fi 7 (the industry's lowest latency offering), all brought to you by the Qualcomm® FastConnect™ 7800 Mobile Connectivity System.

- 5G Dual-SIM Dual-Active (DSDA) enables the simultaneous use of two 5G+5G or 5G+4G SIM cards for ultimate user flexibility
- Blazing Wi-Fi speeds of up to 5.8 Gbps—more than double Wi-Fi 6
- World's first commercial Wi-Fi 7 SoC, with advanced High Band Simultaneous Multi-Link

5G Modem-RF System

Snapdragon® X70 5G Modem-RF System

- 5G mmWave and sub-6 GHz, standalone (SA) and non-standalone (NSA) modes, standalone mmWave and mmWave-sub6 dual connectivity, FDD, TDD
- mmWave: 8 carriers, 2x2 MIMO
- Sub-6 GHz: 4x4 MIMO
- Qualcomm® 5G AI Suite
- Qualcomm® AI-Enhanced Signal Boost
- Qualcomm® 5G PowerSave Gen 3
- Qualcomm® Smart Transmit™ 3.0 technology
- Qualcomm® Wideband Envelope Tracking
- Qualcomm® 5G Ultra-Low Latency Suite
- Global 5G multi-SIM, including 5G-5G/4G Dual-SIM Dual-Active (DSDA)

Downlink: Up to 10 Gbps

Uplink: Up to 3.5 Gbps

Multimode support: 5G NR, NR-DC, EN-DC, LTE, CBRS, WCDMA, HSPA, TD-SCDMA, CDMA 1x, EV-DO, GSM/EDGE

<https://www.qualcomm.com/content/dam/qcomm-martech/dm-assets/documents/Snapdragon-8-Gen-2-Product-Brief.pdf>

140. Lenovo instructs and encourages users to use the Accused Products in a manner that infringes the asserted claims of the '893 Patent, including by advertising “superior 5G speeds” for its Accused Products.

superior 5G speeds

Download content in seconds with the fastest possible data speeds in a smartphone, ever[†]. With the Verizon 5G Ultra Wideband network, plus the extra bandwidth of WiFi 6, the future of connectivity is in the palm of your hands. Literally.

<https://www.motorola.com/us/smartphones-motorola-edge-plus-gen-3/p?skuId=893>

141. Lenovo knowingly and intentionally induces users of its Accused Products to directly infringe one or more claims of the '893 Patent by encouraging, instructing, and aiding one or more persons in the United States to make, use (including through testing), sell, import, or offer to sell one or more of the Accused Products in a manner that infringes the '893 Patent.

142. For example, as seen in the exemplary advertisement above, Lenovo advertises the Moto Edge+ so that consumers will purchase and use the products, thus inducing those customers to infringe the '893 Patent. On information and belief, Lenovo advertises all of the Accused Products and thus induces infringement of the '893 Patent.

143. On information and belief, Lenovo was aware of the '893 Patent and/or acted with willful blindness as to the existence of the '893 Patent at least as a result of the filing of this Complaint. On April 5, 2022, Ericsson also sent 4G, 5G, and HEVC patent lists, notifying Lenovo of patents that cover equipment such as Lenovo's mobile phones, laptop computers, PCs, and tablets. Ericsson disclosed the pending application that was issued as the '893 Patent, U.S. Application No. 62/525,453, and notified Lenovo that it was a member of a patent family covering Lenovo's equipment "such as Lenovo's mobile phones, laptop computers, PCs & tablets."

144. On information and belief, Lenovo contributes to the infringement of one or more claims of the '893 Patent by offering to sell or selling and/or importing a patented component or

material and/or apparatus used to practice a patented process, constituting a material part of the inventions, knowing the same to be especially made or especially adapted for use in an infringement and not a staple article or commodity of commerce suitable for substantial non-infringing use.

145. A claim chart that applies Claim 1 of the '893 Patent to the Accused Products is attached as Exhibit 8.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 10,425,817

146. Ericsson incorporates by reference the preceding paragraphs as though fully set forth herein.

147. Lenovo infringes, contributes to the infringement of, and/or induces infringement of the '817 Patent by making, using, selling, offering for sale, and/or importing into the United States products and/or methods covered by claims of the '817 Patent.

148. Lenovo has been and is directly infringing and/or indirectly infringing the claims of the '817 Patent by way of inducement and/or contributory infringement, literally and/or under the Doctrine of Equivalents, in violation of 35 U.S.C. § 271, including by making, using, testing, selling, consigning, importing into the United States, distributing within the United States, and/or exporting the Accused Products.

149. Lenovo makes, uses, sells, offers for sale, and/or imports the Accused Products in this District and elsewhere in the United States, and thus directly infringes the '817 Patent.

150. Lenovo has knowledge and notice of the '817 Patent at least as of April 5, 2022 and/or the filing of this Complaint. As explained above, Ericsson notified Lenovo on April 5, 2022, that the '817 Patent was relevant to 5G and covered Lenovo's equipment "such as Lenovo's mobile phones, laptop computers, PCs & tablets."

151. Lenovo indirectly infringes the '817 Patent, as provided in 35 U.S.C. § 271(b), by inducing infringement by others, such as customers and end-users, in this District and elsewhere in the United States. For example, Lenovo's customers and end-users directly infringe through their use of the inventions claimed in the '817 Patent. Lenovo induces this direct infringement through its affirmative acts of manufacturing, selling, distributing, and/or otherwise making available the Accused Products, and providing instructions, documentation, and other information to customers and end-users suggesting they use the Accused Products in an infringing manner, including in-store technical support, online technical support, marketing, product manuals, advertisements, and online documentation. As a result of Lenovo's inducement, Lenovo's customers and end-users use the Accused Products in the way Lenovo intends and directly infringe the '817 Patent. Lenovo has performed and continues to perform these affirmative acts with knowledge of the '817 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '817 Patent.

152. Lenovo also indirectly infringes the '817 Patent, as provided by 35 U.S.C. § 271(c), by contributing to direct infringement committed by others, such as customers and end-users, in this District and elsewhere in the United States. Lenovo's affirmative acts of selling and offering to sell, in this District and elsewhere in the United States, the Accused Products and causing the Accused Products to be manufactured, used, sold, and offered for sale contribute to customers' and end-users' use of the Accused Products, such that the '817 Patent is directly infringed. The accused components within the Accused Products are material to the invention of the '817 Patent, are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by Lenovo to be especially made or especially adapted for use in infringement of the '817 Patent. Lenovo has performed and continues to perform these affirmative

acts with knowledge of the '817 Patent and with intent, or willful blindness, that they cause the direct infringement of the '817 Patent.

153. Lenovo has known of the existence of the '817 Patent, and its acts of infringement have been willful and in disregard for the '817 Patent, without any reasonable basis for believing that it had a right to engage in the infringing conduct. Lenovo was aware of the '817 Patent at least as a result of Ericsson's April 5, 2022, email.

154. On information and belief, Lenovo derives revenue, directly and indirectly, from the activities relating to the Accused Products, including their importation, testing, manufacture, use, sale, and offer for sale.

155. Lenovo's infringement of the '817 Patent has damaged and will continue to damage Ericsson.

156. Ericsson is entitled to damages in an amount that will fully compensate Ericsson for Lenovo's infringement of the '817 Patent, such damages not to be limited by FRAND due to Lenovo's conduct as an unwilling licensee and Lenovo's failure to reciprocate.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 10,306,669

157. Ericsson incorporates by reference the preceding paragraphs as though fully set forth herein.

158. Lenovo infringes, contributes to the infringement of, and/or induces infringement of the '669 Patent by making, using, selling, offering for sale, and/or importing into the United States products and/or methods covered by claims of the '669 Patent.

159. Lenovo has been and is directly infringing and/or indirectly infringing the claims of the '669 Patent by way of inducement and/or contributory infringement, literally and/or under the Doctrine of Equivalents, in violation of 35 U.S.C. § 271, including by making, using, testing,

selling, consigning, importing into the United States, distributing within the United States, and/or exporting the Accused Products.

160. Lenovo makes, uses, sells, offers for sale, and/or imports the Accused Products in this District and elsewhere in the United States, and thus directly infringes the '669 Patent.

161. Lenovo has knowledge and notice of the '669 Patent at least as of April 5, 2022 and/or the filing of this Complaint. As explained above, Ericsson notified Lenovo on April 5, 2022, that the '669 Patent was relevant to 5G and covered Lenovo's equipment "such as Lenovo's mobile phones, laptop computers, PCs & tablets."

162. Lenovo indirectly infringes the '669 Patent, as provided in 35 U.S.C. § 271(b), by inducing infringement by others, such as customers and end-users, in this District and elsewhere in the United States. For example, Lenovo's customers and end-users directly infringe through their use of the inventions claimed in the '669 Patent. Lenovo induces this direct infringement through its affirmative acts of manufacturing, selling, distributing, and/or otherwise making available the Accused Products, and providing instructions, documentation, and other information to customers and end-users suggesting they use the Accused Products in an infringing manner, including in-store technical support, online technical support, marketing, product manuals, advertisements, and online documentation. As a result of Lenovo's inducement, Lenovo's customers and end-users use the Accused Products in the way Lenovo intends and directly infringe the '669 Patent. Lenovo has performed and continues to perform these affirmative acts with knowledge of the '669 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '669 Patent.

163. Lenovo also indirectly infringes the '669 Patent, as provided by 35 U.S.C. § 271(c), by contributing to direct infringement committed by others, such as customers and end-

users, in this District and elsewhere in the United States. Lenovo's affirmative acts of selling and offering to sell, in this District and elsewhere in the United States, the Accused Products and causing the Accused Products to be manufactured, used, sold, and offered for sale contribute to customers' and end-users' use of the Accused Products, such that the '669 Patent is directly infringed. The accused components within the Accused Products are material to the invention of the '669 Patent, are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by Lenovo to be especially made or especially adapted for use in infringement of the '669 Patent. Lenovo has performed and continues to perform these affirmative acts with knowledge of the '669 Patent and with intent, or willful blindness, that they cause the direct infringement of the '669 Patent.

164. Lenovo has known of the existence of the '669 Patent, and its acts of infringement have been willful and in disregard for the '669 Patent, without any reasonable basis for believing that it had a right to engage in the infringing conduct. Lenovo was aware of the '669 Patent at least as a result of Ericsson's April 5, 2022, email.

165. On information and belief, Lenovo derives revenue, directly and indirectly, from the activities relating to the Accused Products, including their importation, testing, manufacture, use, sale, and offer for sale.

166. Lenovo's infringement of the '669 Patent has damaged and will continue to damage Ericsson.

167. Ericsson is entitled to damages in an amount that will fully compensate Ericsson for Lenovo's infringement of the '669 Patent, such damages not to be limited by FRAND due to Lenovo's conduct as an unwilling licensee and Lenovo's failure to reciprocate.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 11,317,342

168. Ericsson incorporates by reference the preceding paragraphs as though fully set forth herein.

169. Lenovo infringes, contributes to the infringement of, and/or induces infringement of the '342 Patent by making, using, selling, offering for sale, and/or importing into the United States products and/or methods covered by claims of the '342 Patent.

170. Lenovo has been and is directly infringing and/or indirectly infringing the claims of the '342 Patent by way of inducement and/or contributory infringement, literally and/or under the Doctrine of Equivalents, in violation of 35 U.S.C. § 271, including by making, using, testing, selling, consigning, importing into the United States, distributing within the United States, and/or exporting the Accused Products.

171. Lenovo makes, uses, sells, offers for sale, and/or imports the Accused Products in this District and elsewhere in the United States, and thus directly infringes the '342 Patent.

172. Lenovo has knowledge and notice of the '342 Patent at least as of April 5, 2022 and/or the filing of this Complaint. As explained above, Ericsson notified Lenovo on April 5, 2022, that the patent family containing the '342 Patent was relevant to 5G and covered Lenovo's equipment "such as Lenovo's mobile phones, laptop computers, PCs & tablets." Because the '342 Patent had not issued as of Ericsson's April 5, 2022, email, it notified Lenovo of the pending application number.

173. Lenovo indirectly infringes the '342 Patent, as provided in 35 U.S.C. § 271(b), by inducing infringement by others, such as customers and end-users, in this District and elsewhere in the United States. For example, Lenovo's customers and end-users directly infringe through their use of the inventions claimed in the '342 Patent. Lenovo induces this direct infringement through its affirmative acts of manufacturing, selling, distributing, and/or otherwise making

available the Accused Products, and providing instructions, documentation, and other information to customers and end-users suggesting they use the Accused Products in an infringing manner, including in-store technical support, online technical support, marketing, product manuals, advertisements, and online documentation. As a result of Lenovo's inducement, Lenovo's customers and end-users use the Accused Products in the way Lenovo intends and directly infringe the '342 Patent. Lenovo has performed and continues to perform these affirmative acts with knowledge of the '342 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '342 Patent.

174. Lenovo also indirectly infringes the '342 Patent, as provided by 35 U.S.C. § 271(c), by contributing to direct infringement committed by others, such as customers and end-users, in this District and elsewhere in the United States. Lenovo's affirmative acts of selling and offering to sell, in this District and elsewhere in the United States, the Accused Products and causing the Accused Products to be manufactured, used, sold, and offered for sale contribute to customers' and end-users' use of the Accused Products, such that the '342 Patent is directly infringed. The accused components within the Accused Products are material to the invention of the '342 Patent, are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by Lenovo to be especially made or especially adapted for use in infringement of the '342 Patent. Lenovo has performed and continues to perform these affirmative acts with knowledge of the '342 Patent and with intent, or willful blindness, that they cause the direct infringement of the '342 Patent.

175. Lenovo has known of the existence of the '342 Patent, and its acts of infringement have been willful and in disregard for the '342 Patent, without any reasonable

basis for believing that it had a right to engage in the infringing conduct. Lenovo was aware of the '342 Patent at least as a result of Ericsson's April 5 email.

176. On information and belief, Lenovo derives revenue, directly and indirectly, from the activities relating to the Accused Products, including their importation, testing, manufacture, use, sale, and offer for sale.

177. Lenovo's infringement of the '342 Patent has damaged and will continue to damage Ericsson.

178. Ericsson is entitled to damages in an amount that will fully compensate Ericsson for Lenovo's infringement of the '342 Patent, such damages not to be limited by FRAND due to Lenovo's conduct as an unwilling licensee and Lenovo's failure to reciprocate.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 11,515,893

179. Ericsson incorporates by reference the preceding paragraphs as though fully set forth herein.

180. Lenovo infringes, contributes to the infringement of, and/or induces infringement of the '893 Patent by making, using, selling, offering for sale, and/or importing into the United States products and/or methods covered by claims of the '893 Patent.

181. Lenovo has been and is directly infringing and/or indirectly infringing the claims of the '893 Patent by way of inducement and/or contributory infringement, literally and/or under the Doctrine of Equivalents, in violation of 35 U.S.C. § 271, including by making, using, testing, selling, consigning, importing into the United States, distributing within the United States, and/or exporting the Accused Products.

182. Lenovo makes, uses, sells, offers for sale, and/or imports the Accused Products in this District and elsewhere in the United States, and thus directly infringes the '893 Patent.

183. Lenovo has knowledge and notice of the '893 Patent at least as of April 5, 2022 and/or the filing of this Complaint. As explained above, Ericsson notified Lenovo on April 5, 2022, that the patent family containing the '893 Patent was relevant to 5G and covered Lenovo's equipment "such as Lenovo's mobile phones, laptop computers, PCs & tablets." Because the '893 Patent had not issued as of Ericsson's April 5, 2022, email, it notified Lenovo of the pending application number.

184. Lenovo indirectly infringes the '893 Patent, as provided in 35 U.S.C. § 271(b), by inducing infringement by others, such as customers and end-users, in this District and elsewhere in the United States. For example, Lenovo's customers and end-users directly infringe through their use of the inventions claimed in the '893 Patent. Lenovo induces this direct infringement through its affirmative acts of manufacturing, selling, distributing, and/or otherwise making available the Accused Products, and providing instructions, documentation, and other information to customers and end-users suggesting they use the Accused Products in an infringing manner, including in-store technical support, online technical support, marketing, product manuals, advertisements, and online documentation. As a result of Lenovo's inducement, Lenovo's customers and end-users use the Accused Products in the way Lenovo intends and directly infringe the '893 Patent. Lenovo has performed and continues to perform these affirmative acts with knowledge of the '893 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '893 Patent.

185. Lenovo also indirectly infringes the '893 Patent, as provided by 35 U.S.C. § 271(c), by contributing to direct infringement committed by others, such as customers and end-users, in this District and elsewhere in the United States. Lenovo's affirmative acts of selling and offering to sell, in this District and elsewhere in the United States, the Accused Products and

causing the Accused Products to be manufactured, used, sold, and offered for sale contribute to customers' and end-users' use of the Accused Products, such that the '893 Patent is directly infringed. The accused components within the Accused Products are material to the invention of the '893 Patent, are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by Lenovo to be especially made or especially adapted for use in infringement of the '893 Patent. Lenovo has performed and continues to perform these affirmative acts with knowledge of the '893 Patent and with intent, or willful blindness, that they cause the direct infringement of the '893 Patent.

186. Lenovo has known of the existence of the '893 Patent, and its acts of infringement have been willful and in disregard for the '893 Patent, without any reasonable basis for believing that it had a right to engage in the infringing conduct. Lenovo was aware of the '893 Patent at least as a result of Ericsson's April 5, 2022, email.

187. On information and belief, Lenovo derives revenue, directly and indirectly, from the activities relating to the Accused Products, including their importation, testing, manufacture, use, sale, and offer for sale.

188. Lenovo's infringement of the '893 Patent has damaged and will continue to damage Ericsson.

189. Ericsson is entitled to damages in an amount that will fully compensate Ericsson for Lenovo's infringement of the '893 Patent, such damages not to be limited by FRAND due to Lenovo's conduct as an unwilling licensee and Lenovo's failure to reciprocate.

COUNT V: BREACH OF OBLIGATION TO NEGOTIATE IN GOOD FAITH

190. Ericsson incorporates by reference the preceding paragraphs as though fully set forth herein.

191. French law governs the ETSI FRAND commitment, and under French law, once Lenovo USA commenced negotiations with Ericsson for a cross-license on behalf of itself and its affiliated companies, it was obligated to negotiate in good faith. Lenovo USA was also obligated to negotiate in good faith with respect to any patents that would be cross-licensed to Ericsson and its affiliated companies. Lenovo USA has failed to negotiate in good faith with Ericsson and thus breached its obligation.

192. For example, and as detailed above, Lenovo USA and Ericsson have been negotiating since at least 2010. Despite Lenovo USA starting negotiations by acknowledging “the size of [Ericsson’s] portfolio,” noting that “Lenovo sees little value in providing a technical response at this time,” and expressing a preference to “move forward in discussing business terms,” in over a decade of licensing negotiations, Lenovo USA has never signed a license with Ericsson or secured a license for any of its affiliated companies, and Lenovo USA has failed to accept Ericsson’s FRAND-compliant offers.

193. Lenovo USA chose to delay instead of seriously engaging with Ericsson in good faith with the aim of concluding an agreement. Some examples of Lenovo USA’s delay tactics detailed above include frequently canceling and rescheduling calls; not responding to emails or offers for months; rejecting Ericsson’s offer of binding arbitration; unreasonably prolonging negotiations over a basic NDA for more than two years; and making unreasonably low cross-license offers. Lenovo USA’s conduct effectively deprived Ericsson and its affiliated companies of a license to Lenovo’s Essential Patents.

194. Lenovo USA’s failure to negotiate in good faith constitutes a breach of its obligations to Ericsson.

195. As a result of Lenovo USA's breach of its duty to negotiate in good faith, Ericsson has been injured in its business or property, including Ericsson's cost and expenses in pursuing futile negotiations with Lenovo USA in an amount to be determined at trial.

196. In addition to other forms of relief, there is a dispute between Ericsson and Lenovo USA concerning whether Lenovo USA has complied with its obligation to negotiate in good faith, and this controversy is of sufficient immediacy and reality to warrant the issuance of a declaratory judgment that Lenovo USA has not complied with its obligation to act in good faith during its negotiations with Ericsson in regard to FRAND terms for a cross-license to the parties' and their affiliated companies' Essential Patents.

COUNT VI: BREACH OF CONTRACT

197. Ericsson incorporates by reference the preceding paragraphs as though fully set forth herein.

198. Lenovo USA contends it owns Essential Patents, and/or that it is the negotiating party responsible for negotiating a cross-license agreement for Essential Patents owned by its affiliated companies, which have been declared to ETSI.

199. Ericsson and/or its affiliates designs, manufactures, and markets products that comply with the 2G, 3G, 4G, and 5G standards. Ericsson owns Essential Patents.

200. Lenovo USA, as the negotiating party responsible for granting a cross-license related to all its affiliated companies' patents that it contends are essential, and remain essential, to ETSI standards, has contractually committed to ETSI to be prepared to grant licenses to any such patents on FRAND terms and conditions to third parties, such as Ericsson and/or its affiliates, who implement equipment compliant with the standards.

201. Ericsson, as the owner of patents that are essential, and remain essential, to ETSI standards, has likewise contractually committed to ETSI to be prepared to grant licenses to any

such patents on FRAND terms and conditions to third parties, such as Lenovo USA and its affiliated companies, who implement equipment compliant with the standards, subject to reciprocity.

202. Ericsson is an intended third-party beneficiary of Lenovo USA's contract with ETSI. Likewise, Lenovo USA is an intended third-party beneficiary of Ericsson's contract with ETSI.

203. Lenovo USA, as the negotiating party responsible for securing a cross-license related to all its affiliated companies' patents that it contends are essential, is obligated to be prepared to grant licenses to those essential patents, consistent with the ETSI IPR Policy and its contractual declarations, including that such license be on FRAND terms and conditions. Lenovo USA has breached its contractual commitment as set forth in Lenovo's IPR licensing declarations to ETSI and the ETSI IPR Policy.

204. Representatives from Ericsson and Lenovo USA have been engaged in negotiations regarding a cross-license to their and their affiliated companies' Essential Patents for over a decade. Yet, as the negotiating party responsible for securing a cross-license related to all its affiliated companies' patents that it contends are essential, Lenovo USA has failed to offer Ericsson a license unless Ericsson agrees to license its Essential Patents to Lenovo USA and its affiliated companies for a rate far less than a FRAND-compliant rate of Ericsson's Essential Patents.

205. Ericsson made at least one offer to license its Essential Patents to Lenovo USA and its affiliated companies on FRAND-compliant terms and conditions. Consistent with the parties' FRAND commitments, Ericsson's offer was for a global cross-license that considered both parties'

Essential Patents and standard-compliant products and required Lenovo USA to make a FRAND-compliant balancing royalty payment to Ericsson.

206. Lenovo USA rejected, and has continued to reject, Ericsson's FRAND-compliant offers for a cross-license and instead insisted on an unreasonably low, non-FRAND-compliant rate for a cross-license. Most recently, Lenovo USA has refused to enter into an industry-standard NDA, preferring to continue delaying negotiations rather than engaging with Ericsson in good faith. In doing so, Lenovo USA violated its FRAND commitment by effectively depriving Ericsson of its right as a third-party beneficiary to a license to Lenovo USA's, and its affiliated companies', Essential Patents on F/RAND terms.

207. Ericsson has expressly conditioned its FRAND commitment on receiving a reciprocal license from Lenovo USA and its affiliated companies, and Lenovo USA has insisted that Ericsson accept an unreasonably low rate for Ericsson's patents as a condition to obtaining a cross license under Lenovo USA's, and its affiliated companies,' Essential Patents. Lenovo USA's insistence that Ericsson accept an unreasonably low royalty rate, as well as Lenovo USA's strategy of delaying substantive negotiations, violates the condition of reciprocity. Due to this failure, Lenovo USA has not satisfied all conditions precedent to enforcing Ericsson's FRAND commitment, and it has also forfeited Lenovo's right to claim third-party beneficiary status as to Ericsson's FRAND commitment.

208. Lenovo USA's positions and conduct are inconsistent with Lenovo's contractual commitment to ETSI, as set forth in Lenovo's IPR licensing declarations to ETSI and the ETSI IPR Policy. Ericsson is a third-party beneficiary of that contract, which Lenovo USA breached in its negotiations with Ericsson.

209. Lenovo USA's breach has harmed Ericsson. Lenovo USA's refusal to offer a cross-license on F/RAND terms and conditions has caused Ericsson to expend resources in futile negotiations, deprived Ericsson of a F/RAND cross-license, and threatens Ericsson with a gap in license coverage.

210. Lenovo USA's breach has caused Ericsson to suffer actual damages, such as Ericsson's costs and expenses in pursuing futile negotiations with Lenovo USA in an amount to be determined at trial.

211. In addition to other forms of relief, a dispute of sufficient immediacy, reality, and ripeness exists between Ericsson and Lenovo USA concerning whether Lenovo USA, as the negotiating party responsible for securing a cross-license related to all its affiliated companies' patents that it contends are essential, has complied with its commitment to be prepared to grant licenses to their Essential Patents, on terms and conditions consistent with Lenovo's IPR licensing declarations to ETSI and ETSI's IPR Policy. This dispute warrants the issuance of a declaratory judgment that Lenovo USA has failed to reciprocate and has breached its own FRAND commitment, as set forth in its and its affiliated companies' IPR licensing declarations to ETSI, as well as ETSI's IPR Policy and any applicable laws.

COUNT VII: DECLARATION THAT ERICSSON HAS COMPLIED WITH ITS F/RAND COMMITMENT AND THE ETSI IPR POLICY WITH RESPECT TO ITS OFFER TO LENOVO USA

212. Ericsson incorporates by reference the preceding paragraphs as though fully set forth herein.

213. Lenovo, through its own activities and the activities of its wholly owned subsidiary, Motorola, designs, manufactures, and markets products that utilize and comply with the Cellular Standards.

214. Ericsson, as the owner of patents it contends are essential, and remain essential, to ETSI standards, has contractually committed to ETSI that it is prepared to grant licenses under its Essential Patents on F/RAND terms and conditions, subject to reciprocity, to third parties, such as Lenovo USA, who, along with its affiliated companies that it negotiates on behalf of, provides equipment fully conforming to the ETSI standards.

215. Lenovo USA is the negotiating entity responsible for negotiating with Ericsson and securing a global cross-license for its affiliated companies.

216. Lenovo USA has asserted a right to a license for its affiliated companies on FRAND terms and conditions under Ericsson's Essential Patents as an intended third-party beneficiary.

217. The construction, validity, and performance of Ericsson's ETSI FRAND commitment is governed by French law.

218. Ericsson has publicly announced its 5G multimode royalty rates that are available to be accepted by handset manufacturers, including by Lenovo USA. After Ericsson's announcement, Ericsson and Lenovo USA exchanged offers and counteroffers that addressed Ericsson's patent portfolio and Lenovo's 5G products. Lenovo USA has also been on notice of Ericsson's 5G patents covering Lenovo's products for over a year, but it did not engage or substantively respond to this disclosure.

219. After more than ten years of negotiations between Ericsson and Lenovo USA over the terms of a cross-license on behalf of the parties and their affiliated companies, Lenovo USA has simply stalled negotiations by rejecting countless offers, disputing whether Ericsson's licensing practices and royalty rates comply with its F/RAND commitment, rejecting offers of binding arbitration, providing counteroffers devaluing Ericsson's patents, and—most recently—continuing to drag out negotiations over what should have been an industry-standard NDA in an

attempt to further delay reengaging in substantive negotiations. Lenovo USA has not retreated from its prior negotiation statements regarding the value of Ericsson's portfolio detailed above, including statements like the only way to value Ericsson's patent portfolio is through an SSPPU theory where the chipset is the royalty base—something that runs directly contrary to the express terms of the F/RAND commitment and that courts have rejected.

220. Lenovo USA has disputed Ericsson's compliance with the ETSI IPR Policy, in addition to asserting that Ericsson is not prepared to grant licenses on F/RAND terms and conditions.

221. Ericsson has negotiated with Lenovo USA in good faith. During negotiations, Lenovo USA has raised a justiciable dispute regarding whether Ericsson is prepared to grant licenses on F/RAND terms and conditions. There is a case or controversy of sufficient immediacy, reality, and ripeness to warrant the issuance of a declaratory judgment.

222. Ericsson requests a declaratory judgment that it is prepared to grant licenses on F/RAND terms and conditions, has negotiated in good faith, and has fully complied with its F/RAND Commitment, the terms of its IPR Declaration and Licensing Statement, the ETSI IPR Policy, and all other applicable laws, including U.S. antitrust laws.

DEMAND FOR JURY TRIAL

223. Ericsson demands a jury trial for all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Ericsson respectfully requests that this Court enter judgment in its favor as follows and award Ericsson the following relief:

(a) An entry of judgment holding Defendants infringed and are infringing the '817, '669, '342, and '893 patents;

(b) An award to Ericsson of such damages as it shall prove at trial against Defendants

that are adequate to fully compensate Ericsson for Defendants' infringement of the '817, '669, '342, and '893 Patents, such damages not to be limited by F/RAND due to Defendants' status as unwilling licensees and Defendants' failure to reciprocate;

(c) Awarding enhanced damages pursuant to 35 U.S.C. § 284;

(d) A finding that this case is "exceptional," and an award to Ericsson of its costs and reasonable attorneys' fees, as provided by 35 U.S.C. § 285;

(e) An accounting of all infringing sales and revenues, together with post-judgment interest and pre-judgment interest from the first date of infringement of the '817, '669, '342, and '893 Patents;

(f) An award to Ericsson of damages resulting from Lenovo USA's breach of contract;

(g) An award to Ericsson of damages resulting from Lenovo USA's failure to negotiate in good faith;

(h) Adjudge and declare that Defendants owe F/RAND royalties on all past, unlicensed sales;

(i) Adjudge and declare that Defendants have lost their rights to enforce Ericsson's F/RAND contracts as third-party beneficiaries due to Defendants' breach of contract, failure to negotiate in good faith, failure to satisfy a condition precedent, and/or failure to reciprocate;

(j) Adjudge and declare that Ericsson has complied with its F/RAND commitments and all applicable laws;

(k) Adjudge and declare that Ericsson has complied with the ETSI IPR Policy and all other applicable laws that would affect Ericsson's prospective license to Defendants;

(l) If Ericsson's offer is determined not to be consistent with its F/RAND commitments, adjudge and declare a F/RAND rate for a global cross-license between Ericsson and

Defendants covering Essential Patents;

- (m) An award to Ericsson of its costs;
- (n) Such further and other relief, in law or equity, to which Ericsson is entitled.

Dated: October 11, 2023.

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Respectfully submitted,

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****Local Civil Rule 83.1(e) Notices of
Special Appearance Forthcoming**

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