

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

**TELEFONAKTIEBOLAGET LM ERICSSON
AND ERICSSON AB,**

PLAINTIFFS,

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-570

JURY TRIAL DEMANDED

ORIGINAL COMPLAINT

Plaintiffs Telefonaktiebolaget LM Ericsson (“LME”) and Ericsson AB (collectively, “Ericsson”) file 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. For more than four decades, Ericsson has pioneered the development of the modern cellular network. Ericsson develops and sells infrastructure equipment that makes up the backbone of modern networks; that is, the base stations and cell tower equipment that mobile phones communicate with. Major mobile network operators all over the world buy equipment and/or services from Ericsson. Ericsson manages networks that serve more than one billion subscribers globally, and Ericsson’s equipment is found in more than one hundred and eighty countries.

2. Ericsson is widely viewed as one of the leading innovators in the field of cellular communications. Due to the work of more than twenty-six thousand Ericsson research and development employees, Ericsson's inventions are a valuable part of the fundamental technology used in phones and cellular networks worldwide, providing improved performance and new features for the benefit of consumers. Worldwide, more than forty percent of all mobile phone calls are made through Ericsson networks. Ericsson employs approximately ten thousand people in North America, including a substantial number of employees in the United States.

3. Ericsson has a long history of innovative technical contributions, including the Asserted Patents. In addition, some of Ericsson's other accomplishments include:

- 1878: Ericsson sold its first telephone;
- 1977: Ericsson introduced the world's first digital telephone exchange;
- 1981: Ericsson introduced its first mobile telephone system, NMT;
- 1991: Ericsson launched 2G mobile phones and the world's first 2G network;
- 1994: Ericsson invented Bluetooth wireless technology;
- 2001: Ericsson made the world's first 3G wireless call for Vodafone UK;
- 2009: Ericsson started the world's first 4G network and made the first 4G call;
- 2010: Ericsson equipment serving over two billion mobile subscribers;
- 2013: Ericsson serving 500+ cellular operators in 180+ countries;
- 2014: European Patent Office selected Ericsson inventors as finalists for the European Inventor Award, based on contributions to 4G/LTE;
- 2015: Former Ericsson engineer Jaap Haartsen was inducted into the National Inventors Hall of Fame for Bluetooth Wireless Technology;
- 2018: Ericsson had submitted over 10,000 technical contributions to 5G standards; and
- 2021 Ericsson USA 5G "Smart Factory" recognized as "Global Lighthouse" by the World Economic Forum.

As a result of its extensive research and development efforts, Ericsson has been awarded more than sixty thousand patents worldwide.

PARTIES

4. Plaintiff Telefonaktiebolaget LM Ericsson ("LME") 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.

5. Plaintiff Ericsson AB is a corporation under the laws of the Kingdom of Sweden with its principal place of business at Torshamnsgatan 23, Kista, 16480, Stockholm, Sweden.

6. Ericsson is the sole owner by assignment of all right, title, and interest in U.S. Patent Nos. 7,151,430; 9,313,178; 9,509,273; 10,972,654; and 11,122,313.

7. 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.

8. 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.

9. 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. According to Lenovo Group’s 2021/22 Annual Report, Defendant Lenovo (Shanghai) Electronics Technology Co. Ltd.¹ is a wholly-owned subsidiary of Lenovo Group, with a “principal activity” of “Distribution of IT products” and “provision of IT services” for Lenovo Group.

¹ The 2021/22 Annual Report identifies this entity as “Lenovo (Shanghai) Co., Ltd.” As this entity is the only “Lenovo (Shanghai)” subsidiary identified in Lenovo’s 2021/22 Annual Report, on information and belief, Defendant Lenovo (Shanghai) Electronics Technology Co. Ltd. is also known as “(Lenovo (Shanghai) Co., Ltd.” The name and address identified in this paragraph are the same as those provided by Lenovo (Shanghai) Electronics Technology Co. Ltd. in association with FCC reports for Accused Products. *See, e.g.*, <https://fcc.report/FCC-ID/O57DUET3CB7C/> (last accessed October 11, 2023).

10. 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.

11. 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.

12. 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.

13. Defendants design, manufacture, use, import into the United States, sell, and/or offer for sale in the United States phones, tablets, laptop computers (including Chromebooks), and similar products and services (the "Accused Products") that infringe the Asserted Patents.

JURISDICTION AND VENUE

14. This is an action arising under the patent laws of the United States, 35 U.S.C. § 271. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338.

15. Venue is proper in this judicial district under 28 U.S.C. § 1400. Lenovo USA and Motorola both maintain offices in North Carolina and this District, have employees in North

Carolina, including senior executives,² 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.³

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

² *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).

³ *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.”)

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.

THE ERICSSON ASSERTED PATENTS

19. U.S. Patent No. 7,151,430 (the "'430 Patent"), entitled "Method of and Inductor Layout for Reduced VCO Coupling," was duly and legally issued to inventor Thomas Mattson on December 19, 2006. Ericsson owns by assignment the entire right, title, and interest in the '430 patent and is entitled to sue for past and future infringement.

20. U.S. Patent No. 9,509,273 (the "'273 Patent"), entitled "Transformer Filter Arrangement," was duly and legally issued to inventors Stefan Andersson, Fenghao Mu, and Johan Wernehag on November 29, 2016. Ericsson owns by assignment the entire right, title, and interest in the '273 Patent and is entitled to sue for past and future infringement.

21. U.S. Patent No. 9,313,178 (the "'178 Patent"), entitled "Method and System for Secure Over-the-top Live Video Delivery," was duly and legally issued to inventors Kevin J. Ma, Robert Hickey, and Paul Tweedale on April 12, 2016. Ericsson owns by assignment the entire right, title, and interest in the '178 patent and is entitled to sue for past and future infringement.

22. U.S. Patent No. 11,122,313 (the "'313 Patent"), entitled "Method and System for Secure Over-the-Top Live Video Delivery," was duly and legally issued to inventors Kevin J. Ma,

Robert Hickey, and Paul Tweedale on September 14, 2021. Ericsson owns by assignment the entire right, title, and interest in the '313 patent and is entitled to sue for past and future infringement.

23. U.S. Patent No. 10,972,654 (the "'654 Patent"), entitled "Controlling Image Capturing Setting of Camera Based On Direction Objected Is Dragged Along Touch Screen," was duly and legally issued to inventors Woo Chang Chun, Jin Sang Yun, and Ja Won Koo on April 6, 2021. Ericsson owns by assignment the entire right, title, and interest in the '654 patent and is entitled to sue for past and future infringement.

COUNT I: CLAIM FOR INFRINGEMENT OF THE '430 PATENT

24. Ericsson repeats and realleges the allegations in the forgoing paragraphs as if fully set forth herein.

25. A copy of the '430 Patent is attached as Exhibit 1.

26. Defendants have infringed and continue to infringe the '430 Patent by making, using, selling, offering for sale, or importing into the United States products covered by one or more claims of the '430 Patent including, but not limited to, mobile phones, tablet computers, laptops, and Chromebooks, including, but not limited to the Motorola Edge XT2205-1 (referred to herein as the "'430 Accused Products").

27. Defendants have infringed and continue to infringe the '430 Patent by importing into the United States products that are made by a process covered by one or more claims of the '430 Patent including, but not limited to, mobile phones, tablet computers, laptops, and Chromebooks, including, but not limited to the Motorola Edge XT2205-1 (referred to herein as the "'430 Accused Products").

28. By way of example only, Defendants' Motorola Edge XT2205-1 infringes claim 11 of the '430 Patent as set forth in the claim chart attached as Exhibit 2.

COUNT II: CLAIM FOR INFRINGEMENT OF THE '273 PATENT

29. Ericsson repeats and realleges the allegations in the forgoing paragraphs as if fully set forth herein.

30. A copy of the '273 Patent is attached as Exhibit 3.

31. Defendants have infringed and continue to infringe the '273 Patent by making, using, selling, offering for sale, or importing into the United States products covered by one or more claims of the '273 Patent including, but not limited to, mobile telephones, including, but not limited to the Motorola Edge Plus XT2201-3 (referred to herein as the "'273 Accused Products").

32. By way of example only, the Motorola Edge Plus XT2201-3 infringes claim 7 of the '273 Patent as set forth in the claim chart attached as Exhibit 4.

COUNT III: CLAIM FOR INFRINGEMENT OF THE '178 PATENT

33. Ericsson repeats and realleges the allegations in the forgoing paragraphs as if fully set forth herein.

34. A copy of the '178 Patent is attached as Exhibit 5.

35. Defendants have infringed and continue to infringe the '178 Patent by making, using, selling, offering for sale, or importing into the United States products and/or methods covered by one or more claims of the '178 Patent including, but not limited to, mobile telephones, tablet computers, and laptop computers, including, but not limited to the Motorola Edge (2022) (referred to herein as the "'178 Accused Products").

36. By way of example only, Defendants' Motorola Edge (2022) infringes claim 1 of the '178 Patent as set forth in the claim chart attached as Exhibit 6.

COUNT IV: CLAIM FOR INFRINGEMENT OF THE '313 PATENT

37. Ericsson repeats and realleges the allegations in the forgoing paragraphs as if fully set forth herein.

38. A copy of the '313 Patent is attached as Exhibit 7.

39. Defendants have infringed and continue to infringe the '313 Patent by making, using, selling, offering for sale, or importing into the United States products and/or methods covered by one or more claims of the '313 Patent including, but not limited to, mobile telephones, tablet computers, and laptop computers, including, but not limited to Motorola Edge (2022) (referred to herein as the "'313 Accused Products").

40. By way of example only, Defendants' Motorola Edge (2022) infringes claim 1 of the '313 Patent as set forth in the claim chart attached as Exhibit 8.

COUNT V: CLAIM FOR INFRINGEMENT OF THE '654 PATENT

41. Ericsson repeats and realleges the allegations in the forgoing paragraphs as if fully set forth herein.

42. A copy of the '654 Patent is attached as Exhibit 9.

43. Defendants have infringed and continue to infringe the '654 Patent by making, using, selling, offering for sale, or importing into the United States products and/or methods covered by one or more claims of the '654 Patent including, but not limited to, mobile telephones and tablet computers, including, but not limited to the Motorola moto g STYLUS 5G (referred to herein as the "'654 Accused Products").

44. By way of example only, Defendants' Motorola moto g STYLUS 5G infringes claim 1 of the '654 Patent as set forth in the claim chart attached as Exhibit 10.

DEMAND FOR JURY TRIAL

45. 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 adjudication that Lenovo has infringed each of the Asserted Patents;
- (b) An award of damages in an amount adequate to compensate Ericsson for Lenovo's past infringement and any continuing or future infringement, but in no event less than a reasonable royalty under 35 U.S.C. § 284;
- (c) An award of pre-judgment and post-judgment interest, costs, expenses, and accounting to the full extent allowed under the law;
- (d) A declaration that this case is exceptional under 35 U.S.C. § 285 and an award of Ericsson's reasonable attorneys' fees pursuant to 35 U.S.C. § 285;
- (e) An award of an injunction against Lenovo from making, using, selling, offering to sell, or importing any products that infringe; and
- (f) An award of such other relief as the Court may deem appropriate and just under the circumstances.

Dated: October 11, 2023.

Respectfully submitted,

/s/ Matthew P. McGuire

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

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