

**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

In the Matter of:

**CERTAIN ELECTRONIC DEVICES,
INCLUDING SMARTPHONES,
COMPUTERS, TABLET COMPUTERS,
AND COMPONENTS THEREOF**

Investigation No. 337-TA-_____

**VERIFIED COMPLAINT UNDER SECTION 337
OF THE TARIFF ACT OF 1930, AS AMENDED**

Complainants:

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Proposed Respondents:

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3	Certified Copy of U.S. Patent No. 9,674,556
4	Certified Copy of U.S. Patent No. 8,737,933
5	Certified Copy of U.S. Patent No. 9,173,054
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APPENDICES

Appendix No.	Description
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B	Certified File History and Cited References of U.S. Patent No. 8,674,859
C	Certified File History and Cited References of U.S. Patent No. 9,674,556
D	Certified File History and Cited References of U.S. Patent No. 8,737,933
E	Certified File History and Cited References of U.S. Patent No. 9,173,054

I. INTRODUCTION

1. This Complaint is filed by InterDigital, Inc., InterDigital VC Holdings, Inc., InterDigital Patent Holdings, Inc., and InterDigital Madison Patent Holdings SAS (collectively, “InterDigital” or “Complainants”) pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“Section 337”) to remedy the unlawful and unauthorized importation, sale for importation, and/or sale within the United States after importation into the United States, of certain electronic devices, including smartphones, computers, tablet computers, and components thereof (the “Accused Products”) that directly infringe, contribute to, and/or induce the infringement of certain claims of United States Patent Nos. 10,250,877 (the “’877 Patent”), 8,674,859 (the “’859 Patent”), 9,674,556 (the “’556 Patent”), 9,173,054 (the “’054 Patent”), and 8,737,933 (the “’933 Patent”) (collectively, the “Asserted Patents”), either literally and/or under the doctrine of equivalents:

Asserted Patent	Asserted Claims (Independent Claims Bolded)
U.S. Patent No. 10,250,877 (AV1/VP9)	1, 4, 7, 8
U.S. Patent No. 8,674,859 (AV1/VP9)	10, 15
U.S. Patent No. 9,674,556 (AV1)	1, 3, 4, 5, 7, 8
U.S. Patent No. 8,737,933 (Wireless File-Sharing)	1, 23
U.S. Patent No. 9,173,054 (Wireless File-sharing)	1, 23

2. The Proposed Respondent(s) are Lenovo Group Limited, Lenovo (United States) Inc., and Motorola Mobility, LLC, collectively (“Lenovo”). The Accused Products are manufactured by or on behalf of Lenovo. On information and belief, those products use wireless file-sharing, AOMedia Video 1 (“AV1”), and/or VP9 (“VP9”) technology.

3. The Accused Products include Lenovo's smartphones, computers, and tablet computers. The Accused Products include exemplary products, the Lenovo ThinkPad X1 Carbon Gen 10 (laptop computer), the Lenovo IdeaCentre AIO 3i (desktop computer), the Lenovo Tab P11 Pro Gen 2 (tablet computer), and the Motorola Edge+ (2023) (smartphone), each of which infringes one or more claims of one or more Asserted Patents. These products are discussed in detail herein.

4. On information and belief, the Accused Products are manufactured and assembled outside of the United States by or on behalf of Lenovo. The Accused Products are then sold for importation into the United States, imported into the United States, or sold within the United States after importation, by or on behalf of Lenovo.

5. Pursuant to 19 U.S.C. § 1337(d)(2), InterDigital seeks a limited exclusion order against Lenovo and its subsidiaries, predecessors, affiliates, agents, successors, and assigns, barring from entry into the United States all of Lenovo's products that infringe, directly or indirectly, one or more claims of the Asserted Patents.

6. InterDigital also seeks cease and desist orders pursuant to 19 U.S.C. § 1337(f), prohibiting Lenovo from importing, selling, offering for sale (including *via* the Internet or electronic mail) marketing, advertising (including *via* the Internet or electronic mail), distributing, transferring (except for exportation), soliciting United States agents or distributors, and aiding or abetting other entities in the importation, sale for importation, sale after importation, transfer (except for exportation), or distribution of, Accused Products that infringe either directly or indirectly, one or more claims of the Asserted Patents in violation of Section 337 of the Tariff Act of 1930, as amended. 19 U.S.C. § 1337).

7. Further, InterDigital requests that the Commission impose a bond upon Lenovo's importation of infringing Accused Products during the 60-day Presidential review period pursuant

to 19 U.S.C. § 1337(j) to prevent further injury to InterDigital and its licensees' domestic industry relating to each of the Asserted Patents.

8. The Asserted Patents are directed toward novel improvements in the video coding space and in wireless file-sharing.

9. As required by 19 U.S.C. § 1337(a)(2) and (3), an industry in the United States relating to articles protected by the Asserted Patents exists.

II. THE PARTIES

A. The Complainants

10. Complainant InterDigital, Inc. is a Pennsylvania corporation with its principal place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809.

11. Complainant InterDigital VC Holdings, Inc. is a Delaware corporation with its principal place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809. InterDigital VC Holdings, Inc. owns, by assignment, all right, title, and interest in and to the U.S. Patent No. 9,674,556. InterDigital VC Holdings, Inc. is the sole owner of the '556 Patent and has owned it at all relevant times. Ex. 8 (Certified Assignment Records).

12. Complainant InterDigital Patent Holdings, Inc. is a Delaware corporation with its principal place of business at 200 Bellevue Parkway, Suite 300, Wilmington, DE 19809. InterDigital Patent Holdings, Inc. owns, by assignment, all right, title, and interest in and to the U.S. Patent Nos. 9,173,054 and 8,737,933 (collectively, the "File-sharing Patents"). InterDigital Patent Holdings, Inc. is the sole owner of the File-sharing Patents and has owned them at all relevant times. Exs. 9, 10 (Certified Assignment Records).

13. Complainant InterDigital Madison Patent Holdings, SAS is a French corporation with its principal place of business at 3 Rue du Colonel Moll, Paris, France 75017. InterDigital Madison Patent Holdings SAS owns, by assignment, all right, title, and interest in and to the U.S. Patent

Nos. 10,250,877 and 8,674,859. InterDigital Madison Patent Holdings SAS is the sole owner of the '877 and '859 Patents and has owned them at all relevant times. Exs. 6, 7 (Certified Assignment Records).

14. InterDigital is one of the most successful and innovative research and development companies of the last half century: it has contributed untold foundational technical advancements to wireless telecommunications, video coding, and other industries. InterDigital was founded by Sherwin Seligsohn in 1972 as International Mobile Machines Corporation (IMM). Led by a young innovator with a keen desire to stay connected, the company's first product line was a portable analog radio system, including a wireless handheld analog telephone capable of connecting to a public network. IMM demonstrated its wireless telephone during the bicentennial celebrations in Philadelphia's Fairmount Park, the same place that Alexander Graham Bell first demonstrated his telephone 100 years earlier. Above all else, InterDigital is an engineering company. InterDigital has been at the forefront of developing innovative wireless communication, video coding, and other digital technologies for more than 50 years. In fact, InterDigital has developed and implemented a wide variety of wireless technologies, systems, and products, many of which form the backbone of modern-day digital wireless communication. InterDigital has helped develop and shape technologies in every aspect of the network – from handsets to base stations and mobile edge computing; from IoT sensors to streaming video and beyond.

15. Every year, InterDigital pours roughly 20% of its total revenues into continued research and development and has invested a total of more than one billion dollars in research and development, alone. At its facilities in Delaware and throughout the United States, InterDigital researches, develops, engineers, and licenses technology for advanced video coding technologies as well as other cutting-edge technology. InterDigital's world-class Research and Innovation

Lab—with locations in Indiana, New Jersey, and Washington, D.C.—has designed and developed a range of key technologies instrumental to video coding. *See* Ex. 107. As a result, InterDigital has made more than 10,000 contributions to global standards. *Id.*

16. InterDigital and its employees’ technical contributions have been recognized the world over. Its employees have held or currently hold more than 100 significant leadership positions on standard setting bodies. InterDigital has also won many awards for its technical discoveries. In just the last seven years, InterDigital has won more than 25 industry awards, including several awards and awards from entities such as IEEE, IBC, and CSI, among others. From mobile technologies that underpin smartphones, networks and services to video technologies that are the foundation for today’s most popular products and services, InterDigital’s research and development teams help improve every product they work on, from the most basic to the most advanced. Today, InterDigital still follows in the footsteps of its founder, developing an even more connected world.

B. Proposed Respondents

17. The proposed Respondents are Lenovo Group Limited, Lenovo (United States) Inc., and Motorola Mobility, LLC (collectively, “Lenovo”).

18. On information and belief, Lenovo Group Limited is a corporation operating under the laws of Hong Kong with its principal place of business at 23rd Floor, Lincoln House, Taikoo Place, 979 King’s Road, Quarry Bay, Hong Kong SAR. On information and belief, Lenovo Group Ltd. is the corporate parent of a multinational conglomerate that operates under the name “Lenovo” and refers to itself and its subsidiaries as the “Group.” On information and belief, some of these subsidiaries are engaged in the design, manufacture, importation, and/or sale within the United

States after importation of the Accused products, and/or contributing and/or inducing third parties to infringe the Asserted Patents.

19. On information and belief, Lenovo (United States) Inc. (“Lenovo USA”) is a corporation organized under the laws of the state of Delaware with its principal place of business at 8001 Development Dr., Morrisville, North Carolina 27560. Upon information and belief, Lenovo USA is a wholly owned subsidiary of (or is otherwise controlled by) Lenovo Group Ltd. and is part of the Lenovo Group. On information and belief, Lenovo USA is engaged in the design, manufacture, importation, and/or sale within the United States after importation of the Accused products, and/or contributing and/or inducing third parties to infringe the Asserted Patents.

20. On information and belief, Motorola Mobility LLC (“Motorola”) is a limited liability company organized and existing under the laws of the state of Delaware, with its principal place of business located at 222 W. Merchandise Mart Plaza, Suite 1800, Chicago, Illinois 60654. Upon information and belief, Motorola is a wholly owned subsidiary of (or is otherwise controlled by) Lenovo Group Ltd. and is part of the Lenovo Group. On information and belief, Motorola is engaged in the design, manufacture, importation, and/or sale within the United States after importation of the Accused products, and/or contributing and/or inducing third parties to infringe the Asserted Patents.

21. On information and belief, Lenovo and its affiliates design, develop, manufacture, import, and sell after importation the Accused Products, which include, *inter alia*, the Accused Products (laptops, computers, tablet computers and smartphones). *See, e.g.*, Exs. 13–19, 46, 108–112, 134, 136, 141. Lenovo sells the Accused Products directly to consumers located in the United States. *See id.* (Lenovo websites offering products for sale).

22. On information and belief, Lenovo also sells the Accused Products within the United States through major retail outlets such as Best Buy, Target, Wal Mart, Verizon, AT&T, T-Mobile, Amazon, and numerous other online stores and resellers. *See, e.g.*, Exs. 20–26 (third party websites advertising Accused Products for sale).

23. On information and belief, Lenovo also performs several services to support the importation and sale of the Accused Products into and within the United States, including marketing the Accused Products, developing and distributing software, repairing the Accused Products, and other after-sale services, such as supporting and configuring the Accused Products, as well as providing technical support to U.S.-based customers and distributors to conform the Accused Products to purchaser requests. *See, e.g.*, Ex. 13 at 6 (Lenovo offering repair and IT support for Lenovo ThinkPad X1 Carbon Gen 10); Ex. 27 (Description of Lenovo Premium Care services).

III. THE ACCUSED PRODUCTS

24. Pursuant to Commission Rules 210.10(b)(1) and 210.12(a)(12), the Accused Products are smartphones, computers, tablet computers, and components thereof. *See, e.g.*, Exs. 13–19, 46, 108–112, 134, 136, 141 (exemplary technical specifications for Accused Products).

IV. RELATED LITIGATION

25. The patents asserted in this Complaint are not otherwise presently subject to any litigation.

26. InterDigital and Lenovo are presently involved in the following litigation: *InterDigital Technology Corporation et al v. Lenovo Holding Company, Inc. et al*, 1-19-cv-01590 (D. Del.), which is currently pending before the District Court of Delaware. InterDigital Communications, Inc., InterDigital Holdings, Inc., InterDigital, Inc., InterDigital Technology Corporation, and IPR Licensing, Inc. filed a complaint against defendants Lenovo Holding Company, Inc., Lenovo (United States) Inc., and Motorola Mobility LLC on August 28, 2019, alleging infringement of

U.S. Patent Nos. 8,085,665; 8,199,726; 8,427,954; 8,619,747; 8,675,612; 8,797,873; 9,203,580; and 9,456,449. These patents pertain to cellular technology and are unrelated to the Asserted Patents.

27. In addition, a parallel U.S. District Court proceeding was filed on September 1, 2023, in the U.S. District Court for the Eastern District of North Carolina alleging infringement of the Asserted Patents by Lenovo.

V. THE PATENTS

A. The Asserted '877 Patent

1. Identification of the Patent and Ownership

28. United States Patent No. 10,250,877 is entitled “METHOD AND DEVICE FOR CODING AN IMAGE BLOCK, CORRESPONDING DECODING METHOD AND DECODING DEVICE” and issued on April 2, 2019. The '877 Patent expires on May 22, 2035, is based on U.S. Application No. 14/372,021, filed as Application No. PCT/EP2013/050399 on January 10, 2013, and claims priority to FR1250334A, filed on January 13, 2012.

29. InterDigital Madison Patent Holdings SAS owns, by assignment, all right, title, and interest in and to the '877 Patent. The inventors of the '877 Patent, Philippe Bordes, Pierre Andrivon, and Philippe Salmon, assigned their rights in the '877 Patent to Thomson Licensing in 2013. Thomson Licensing assigned its rights in the '877 Patent to Thomson Licensing DTV in 2017. Thomson licensing DTV assigned its rights to the '877 Patent to InterDigital Madison Patent Holdings in 2018. Certified copies of the assignments are attached as Exhibit 6.

30. A certified copy of the '877 Patent is submitted as Exhibit 1. A certified copy of the U.S. Patent and Trademark Office file history for the '877 Patent and copies of each technical reference mentioned in the file history are submitted as Appendix A.

2. Non-Technical Description of the Patent

31. The '877 Patent describes, among other things, a device and method for reconstructing a current block of a current image from at least one block of a reconstructed reference image that is at a different size from the size of the current image. At a high level, in order to compress a video file, redundant information is removed from the video sequence to reduce the size of the video file. A decoder can reconstruct a compressed video frame using information from a previously reconstructed reference image. When the target bitrate is low, an image to be coded can be subsampled prior to encoding in a process called adaptive resolution that results in a reduced image size. Then, the decoder can upsample the decoded image to restore its size before display. However, when this process results in a reference image and a current image to be reconstructed having different sizes, the reference image is resized by resampling to match the size of the current image before being motion compensated. This may include storing the reconstructed reference images and resized reference images of various sizes in the decoded picture buffer (DPB) memory, which may require greater memory space.

32. The method of the '877 Patent advantageously groups horizontal motion compensation and resampling filters into a single filter applied to the lines of a pixel block; and vertical motion compensation and resampling filters are applied jointly as a single vertical filter on the columns of a pixel block. Thus, unlike previous methods for reconstructing image blocks, the method of the '877 Patent does not require the storage of resized, i.e., upsampled and/or subsampled, versions of the reference image in the DPB memory.

B. The Asserted '859 Patent

1. Identification of the Patent and Ownership

33. United States Patent No. 8,674,859 is entitled "METHODS FOR ARITHMETIC CODING AND DECODING AND CORRESPONDING DEVICES" and issued on March 18, 2014.

The '859 Patent expires on June 22, 2030, is based on U.S. Application No. 13/381,911, filed as PCT Application No. PCT/EP2010/058770 on June 22, 2010, and claims priority to FR0954483 filed on July 1, 2009.

34. InterDigital Madison Patent Holdings SAS owns, by assignment, all right, title, and interest in and to the '859 Patent. The inventors of the '859 Patent, Philippe Bordes, Dominique Thoreau, Jerome Vieron, and Edouard Francois, assigned their rights in the '859 Patent to Thomson Licensing in May/June 2012. Thomson Licensing assigned its rights in the '859 Patent to Thomson Licensing DTV in 2017. Thomson Licensing DTV assigned its rights to the '859 Patent to InterDigital Madison Patent Holdings in 2018. Certified copies of the assignments are attached as Exhibit 7.

35. A certified copy of the '859 Patent is submitted as Exhibit 2. A certified copy of the U.S. Patent and Trademark Office file history for the '859 Patent and copies of each technical reference mentioned in the file history are submitted as Appendix B.

2. Non-Technical Description of the Patent

36. The '859 Patent generally describes a device and method for arithmetic coding of symbols in a stream. Entropy coding is the final step of the video encoding process and is used to transform symbols representative of a video or audio signal and syntax elements into binary code by associating short binary words with the most frequent (i.e., highest probability) symbol value. Known entropy coding methods such as Variable Length Coding (VLC) and Arithmetic Coding (AC) have a shared disadvantage: the probability that a symbol takes a given value is intrinsically linked to the characteristics of the source signal, which is not known beforehand. The arithmetic coding method of the '859 Patent, however, enables symbols to be coded more efficiently and at a lower cost by allowing the real probability to be approached more rapidly than other coding methods.

37. Specifically, the '859 Patent describes a method applied at switching points in a stream to decode a current symbol involving the steps of decoding a probability model identifier; selecting using the probability model identifier a probability model from among a set comprising a current probability model defined from previously-coded symbols and a subset of other probability models; adding in the current probability model to the subset with the selected probability model becoming the current probability model; decoding the current symbol with the current probability model; and updating the current probability model according to the decoding of the current symbol.

C. The Asserted '556 Patent

1. Identification of the Patent and Ownership

38. United States Patent No. 9,674,556 is entitled “METHODS AND APPARATUS FOR IN-LOOP DE-ARTIFACT FILTERING” and issued on June 6, 2017. The '556 Patent expires on October 25, 2027, is based on U.S. Application No. 14/981,345, filed on December 28, 2015, and claims priority to U.S. Patent Application No. 12/312,386 (now U.S. Patent No. 9,277,243), which claims priority to U.S. Provisional Patent Application No. 60/864,917, filed on November 8, 2006.

39. InterDigital VC Holdings, Inc. owns, by assignment, all right, title, and interest in and to the '556 Patent. The inventors of the '556 Patent, Meng-Ping Kao, Peng Yin, and Divorra Escoda, assigned their rights in the '556 Patent to Thomson Licensing in 2016, which in turn assigned its rights in the '556 Patent to InterDigital VC Holdings, Inc. in 2018. Certified copies of the assignments are attached as Exhibit 8.

40. A certified copy of the '556 Patent is submitted as Exhibit 3. A certified copy of the U.S. Patent and Trademark Office file history for the '556 Patent and copies of each technical reference mentioned in the file history are submitted as Appendix C.

2. Non-Technical Description of the Patent

41. The '556 Patent describes, among other things, a method and apparatus for decoding an image region using at least two in-loop filters in succession. In block-based video coding frameworks such as those described in the AV1 specification, visual distortions or artifacts may result from the lossy nature of video compression. The '556 Patent describes a two-pass method to help reduce the amount of coding artifacts by using a succession of filters on coded pictures. The filters are placed in the coding loop (in-loop) so that the filtered frames are used as referenced frames for motion compensation of subsequent coded frames. In the first pass, an adaptive deblocking filter is applied to remove blocking artifacts (e.g., discontinuities at the boundaries of coding blocks). In the second pass, an adaptive sparse de-noising filter is applied to reduce quantization noise due to the scaling of the output (i.e., the change in the number of possible output values for a given set of input values after performing transform on the residue values). The method and apparatus of the '556 Patent results in enhanced decoded video quality because different types of artifacts and quantization errors are handled by different filters and successively applied.

D. The Asserted '933 Patent

1. Identification of the Patent and Ownership

42. United States Patent No. 8,737,933 is entitled "DATA TRANSFER BETWEEN WIRELESS DEVICES" and issued on May 27, 2014. The '933 Patent expires on December 22, 2029, is based on U.S. Application No. 13/930,743, filed on June 28, 2013, and claims priority to U.S. Application No. 13/493,650, filed on June 11, 2012, which claims priority to U.S. Application No. 12/644,948, filed on December 22, 2009. U.S. Application No. 12/644,948 claims priority to Provisional Patent Application No. 61/140,126, filed December 23, 2008.

43. InterDigital Patent Holdings, Inc. owns, by assignment, all right, title, and interest in and to the '933 Patent. The inventors of the '933 Patent, Alan G. Carlton and Alexander Reznik, assigned their rights in the '933 Patent to InterDigital Patent Holdings, Inc. in 2013. Copies of the assignments are attached as Exhibit 9.

44. A certified copy of the '933 Patent is submitted as Exhibit 4. A certified copy of the U.S. Patent and Trademark Office file history for the '933 Patent and copies of each technical reference mentioned in the file history are submitted as Appendix D.

2. Non-Technical Description of the Patent

45. The '933 Patent describes, among other things, a device and method for wirelessly transferring data from a touchscreen device. According to the method of the patent, a user may select a file to transfer from a touchscreen device. The processor of the touchscreen device uses Bluetooth to detect nearby devices, from which the user can select a target device. After sending a message to the target device to transfer the selected file, and receiving an acceptance, the touchscreen device transfers the file to the target device using Wi-Fi.

E. The Asserted '054 Patent

1. Identification of the Patent and Ownership

46. United States Patent No. 9,173,054 is entitled "DATA TRANSFER BETWEEN WIRELESS DEVICES" and issued on October 27, 2015. The '054 Patent expires on December 22, 2029, is based on U.S. Application No. 14/251,383, filed on April 11, 2014, and claims priority to U.S. Application No. 13/930,743, filed on June 28, 2013, which claims priority to U.S. Application No. 13/493,650, filed on June 11, 2012, which claims priority to U.S. Application No. 12/644,948, filed on December 22, 2009, which claims priority to Provisional Patent Application No. 61/140,126, filed on December 23, 2008.

47. InterDigital Patent Holdings, Inc. owns, by assignment, all right, title, and interest in and to the '054 Patent. The inventors of the '054 Patent, Alan G. Carlton and Alexander Reznik, assigned their rights in the '054 Patent to InterDigital Patent Holdings, Inc. in 2014. Copies of the assignments are attached as Exhibit 10.

48. A certified copy of the '054 Patent is submitted as Exhibit 5. A certified copy of the U.S. Patent and Trademark Office file history for the '054 Patent and copies of each technical reference mentioned in the file history are submitted as Appendix E.

2. Non-Technical Description of the Patent

49. Like the '054 Patent, the '933 Patent describes, among other things, a device and method for wirelessly transferring data from a touchscreen device. According to the method of the patent, a user may select a file to transfer from a touchscreen device. The circuitry of the touchscreen device uses Bluetooth to detect nearby devices, from which the user can select a target device. After sending a message to the target device to transfer the selected file, and receiving an acceptance, the touchscreen device transfers the file to the target device using Wi-Fi. Specifically, the type of Wi-Fi used in the method and device of the '054 Patent may include peer-to-peer communication.

F. Licenses Relating to the Asserted Patents

50. As required under Commission Rule 210.12(a)(9)(iii), a list of the known currently licensed entities is attached to this Complaint. *See* Ex. 28C (List of Licensees to Asserted Patents). In addition, contemporaneous with the filing of this Complaint, InterDigital has or will seek consent, to identify additional license(s), the existence of which may be subject to non-disclosure requirements.

G. Foreign Counterparts to the Asserted Patents

51. A chart identifying the foreign patents and applications corresponding to the Asserted Patents is attached as Exhibit 29.

VI. UNLAWFUL AND UNFAIR ACTS OF RESPONDENT — PATENT INFRINGEMENT

52. Lenovo has engaged in unfair trade practices, including the sale for importation, importation, and/or sale after importation of certain Electronic Devices, Including Smartphones, Computers, Tablet Computers, and Components Thereof that infringe the asserted claims of the Asserted Patents. These activities by the Lenovo constitute a violation of Section 337.

53. InterDigital asserts that Lenovo directly infringes, literally or under the doctrine of equivalents and/or actively contributes to and/or induces the infringement of one or more asserted claims of the Asserted Patents. This complaint includes charts comparing claims of the Asserted Patents to exemplary products and photographs of the exemplary infringing devices and services. InterDigital asserts that the Accused Products infringe the claims set forth in Exhibits 30–36, 113–133. Discovery may reveal that the Accused Products and/or Proposed Respondents infringe additional claims of the Asserted Patents.

54. The infringement allegations contained in this Complaint include the Proposed Respondents' (i) direct infringement of the asserted claims (literally and/or under the doctrine of equivalents) and/or (ii) infringement by inducement by exhibiting an affirmative intent to cause direct infringement of the asserted claims and/or (iii) infringement by contributing to the direct infringement of the asserted claims.

55. Lenovo has been given notice of their infringement by, among other things, the filing and service of this Complaint.

56. Lenovo has induced, and continues to induce, others to infringe the asserted claims. Lenovo has taken active steps to encourage and facilitate direct infringement by others, such as sellers, distributors, and users of the Accused Products, with knowledge that infringement, such as by contracting for the distribution of the Accused Products, by marketing the Accused Products, and by creating and/or distributing user manuals, white papers, datasheets, marketing materials, and/or similar materials with instructions on using the Accused Products in an infringing manner. *See* Exs. 37 and 13-19, 41-43, 46, 108-112, 134, 136, 141 (Lenovo website marketing Accused Products; Lenovo documents encouraging users to stream video and use nearby sharing). The use of the Accused Products in their ordinary and customary fashion results in infringement of the asserted claims. *Id.*

A. Infringement of the '877 Patent

57. On information and belief, the Accused Products that are sold for importation, imported, and/or sold within the United States after importation by Lenovo infringe at least claims 1, 4, 7 and 8 of the '877 Patent, either literally or under the doctrine of equivalents.

58. On information and belief, Lenovo directly infringes one or more claims of the '877 Patent through its manufacture, sale for importation, importation, use, and sale after importation of one or more Accused Products. The Accused Products include exemplary products, the Lenovo ThinkPad X1 Carbon Gen 10 (laptop computer), the Lenovo IdeaCentre AIO 3i (desktop computer), the Lenovo Tab P11 Pro Gen 2 (tablet computer), and the Motorola Edge+ (2023) (smartphone), each of which infringes the Asserted Claims of the '877 Patent. These products are examples of the Accused Products, and other Lenovo products infringe one or more claims of the '877 Patent in a similar manner. For example, other laptop computers (such as the Lenovo ThinkPad E16 Gen 1, Lenovo ThinkPad P16 Gen2, and Lenovo Yoga 7i), desktop computers (such

as the Lenovo IdeaCentre AIO 5i, Lenovo ThinkCentre M90a, Lenovo ThinkCentre M70a), tablet computers (such as the Lenovo Tab M7 Gen 3, IdeaPad Windows Duet 5i), and smartphones (such as the Motorola Edge 40 Pro, Motorola Edge 40) infringe one or more claims of the '877 Patent.

59. On information and belief, Lenovo knowingly and intentionally induces users of one or more of the Accused Products to directly infringe one or more claims of the '877 Patent by encouraging, instructing, and aiding one or more persons in the United States, including Lenovo employees who test and operate Accused Products at the direction of Lenovo, to make, use (including testing those devices and methods), sell, or offer to sell one or more of the Accused Products, during or after such article's importation into the United States, in a manner that infringes the '877 Patent. *See, e.g.*, Exs. 13–19, 46, 108–112, 134, 136, 141 (Lenovo advertising products for sale and their capabilities); Exs. 41–42 (Lenovo advertising use of its products for video streaming). On information and belief, Lenovo was aware of the '877 Patent or acted with willful blindness as to its existence at least as a result of the filing of the parallel district court case discussed above and as a result of the filing and service of this this complaint.

60. Claim charts that apply each of the asserted independent claims of the '877 Patent to the Accused Products are attached as Exhibits 30, 31, 113, 114, 120, 121, 127, and 128. *See also* Exs. 13–19, 46, 108–112, 134, 136, 141 (Technical specifications identifying processors and capabilities of Accused Products); Exs. 44, 45, 47, 49, 135, 137 (Processors used by the Accused Products supporting Video Coding Specifications VP9 and AV1). The Video Coding specifications referenced in these claim charts can be found in Exhibits 39 and 40.

B. Infringement of the '859 Patent

61. On information and belief, the Accused Products that are sold for importation, imported, and/or sold within the United States after importation by Lenovo infringe at least claims 10 and 15 of the '859 Patent, either literally or under the doctrine of equivalents.

62. On information and belief, Lenovo directly infringes one or more claims of the '859 Patent through its manufacture, sale for importation, importation, use, and sale after importation of one or more Accused Products. The Accused Products include exemplary products, the Lenovo ThinkPad X1 Carbon Gen 10 (laptop computer), the Lenovo IdeaCentre AIO 3i (desktop computer), the Lenovo Tab P11 Pro Gen 2 (tablet computer), and the Motorola Edge+ (2023) (smartphone), each of which infringes the Asserted Claims of the '859 Patent. These products are examples of the Accused Products, and other Lenovo products infringe one or more claims of the '859 Patent in a similar manner. For example, other laptop computers (such as the Lenovo ThinkPad E16 Gen 1, Lenovo ThinkPad P16 Gen2, and Lenovo Yoga 7i), desktop computers (such as the Lenovo IdeaCentre AIO 5i, Lenovo ThinkCentre M90a, Lenovo ThinkCentre M70a), tablet computers (such as the Lenovo Tab M7 Gen 3, IdeaPad Windows Duet 5i), and smartphones (such as the Motorola Edge 40 Pro, Motorola Edge 40) infringe one or more claims of the '859 Patent.

63. On information and belief, Lenovo knowingly and intentionally induces users of one or more of the Accused Products to directly infringe one or more claims of the '859 Patent by encouraging, instructing, and aiding one or more persons in the United States, including Lenovo employees who test and operate Accused Products at the direction of Lenovo, to make, use (including testing those devices and methods), sell, or offer to sell one or more of the Accused Products, during or after such article's importation into the United States, in a manner that infringes the '859 Patent. *See, e.g.*, Exs. 13–19, 46, 108–112, 134, 136, 141 (Lenovo advertising products

for sale and their capabilities); Exs. 41–42 (Lenovo advertising use of its products for video streaming). On information and belief, Lenovo was aware of the '859 Patent or acted with willful blindness as to its existence at least as a result of the filing of the parallel district court case discussed above and as a result of the filing and service of this this complaint.

64. Claim charts that apply each of the asserted independent claims of the '859 Patent to the Accused Products are attached as Exhibits 32, 33, 115, 116, 122, 123, 129, 130. *See also* Exs. 13–19, 46, 108–112, 134, 136, 141 (Technical specifications identifying processors and capabilities of Accused Products);. Exs. 44, 45, 47, 49, 135, 137 (Processors used by the Accused Products supporting Video Coding Specifications VP9 and AV1). The Video Coding specifications referenced in these claim charts can be found in Exhibits 39 and 40.

C. Infringement of the '556 Patent

65. On information and belief, the Accused Products that are sold for importation, imported, and/or sold within the United States after importation by Lenovo infringe at least claims 1, 3, 4, 5, 7, and 8 of the '556 Patent, either literally or under the doctrine of equivalents.

66. On information and belief, Lenovo directly infringes one or more claims of the '556 Patent through its manufacture, sale for importation, importation, use, and sale after importation of one or more Accused Products. The Accused Products include exemplary products, the Lenovo ThinkPad X1 Carbon Gen 10 (laptop computer), the Lenovo IdeaCentre AIO 3i (desktop computer), the Lenovo Tab P11 Pro Gen 2 (tablet computer), and the Motorola Edge+ (2023) (smartphone), each of which infringes the Asserted Claims of the '556 Patent. These products are examples of the Accused Products, and other Lenovo products infringe one or more claims of the '556 Patent in a similar manner. For example, other laptop computers (such as the Lenovo ThinkPad E16 Gen 1, Lenovo ThinkPad P16 Gen2, and Lenovo Yoga 7i), desktop computers (such

as the Lenovo IdeaCentre AIO 5i, Lenovo ThinkCentre M90a, Lenovo ThinkCentre M70a), tablet computers (such as the Lenovo Tab M7 Gen 3, IdeaPad Windows Duet 5i), and smartphones (such as the Motorola Edge 40 Pro, Motorola Edge 40) infringe one or more claims of the '556 Patent.

67. On information and belief, Lenovo knowingly and intentionally induces users of one or more of the Accused Products to directly infringe one or more claims of the '556 Patent by encouraging, instructing, and aiding one or more persons in the United States, including Lenovo employees who test and operate Accused Products at the direction of Lenovo, to make, use (including testing those devices and methods), sell, or offer to sell one or more of the Accused Products, during or after such article's importation into the United States, in a manner that infringes the '556 Patent. *See, e.g.*, Exs. 13–19, 46, 108–112, 134, 136, 141 (Lenovo advertising products for sale and their capabilities); Exs. 41–42 (Lenovo advertising use of its products for video streaming). On information and belief, Lenovo was aware of the '556 Patent or acted with willful blindness as to its existence at least as a result of the filing of the parallel district court case discussed above and as a result of the filing and service of this this complaint.

68. Claim charts that apply each of the asserted independent claims of the '556 Patent to the Accused Products are attached as Exhibits 34, 117, 124, and 131. *See also* Exs. 13–19, 46, 108–112, 134, 136, 141 (Technical specifications identifying processors and capabilities of Accused Products); Exs. 44, 45, 47, 49, 135, 137 (Processors used by the Accused Products supporting Video Coding Specification AV1). The AV1 Specification referenced in these claim charts can be found in Exhibit 40.

D. Infringement of the '933 Patent

69. On information and belief, the Accused Products that are sold for importation, imported, and/or sold within the United States after importation by Lenovo infringe at least claims 1 and 23 of the '933 Patent, either literally or under the doctrine of equivalents.

70. On information and belief, Lenovo directly infringes one or more claims of the '933 Patent through its manufacture, sale for importation, importation, use, and sale after importation of one or more Accused Products. The Accused Products include exemplary products, the Lenovo ThinkPad X1 Carbon Gen 10 (laptop computer), the Lenovo IdeaCentre AIO 3i (desktop computer), the Lenovo Tab P11 Pro Gen 2 (tablet computer), and the Motorola Edge+ (2023) (smartphone), each of which infringes the Asserted Claims of the '933 Patent. These products are examples of the Accused Products, and other Lenovo products infringe one or more claims of the '933 Patent in a similar manner. For example, other laptop computers (such as the Lenovo ThinkPad E16 Gen 1, Lenovo ThinkPad P16 Gen2, and Lenovo Yoga 7i), desktop computers (such as the Lenovo IdeaCentre AIO 5i, Lenovo ThinkCentre M90a, Lenovo ThinkCentre M70a), tablet computers (such as the Lenovo Tab M7 Gen 3, IdeaPad Windows Duet 5i), and smartphones (such as the Motorola Edge 40 Pro, Motorola Edge 40) infringe one or more claims of the '933 Patent.

71. On information and belief, Lenovo knowingly and intentionally induces users of one or more of the Accused Products to directly infringe one or more claims of the '933 Patent by encouraging, instructing, and aiding one or more persons in the United States, including Lenovo employees who test and operate Accused Products at the direction of Lenovo, to make, use (including testing those devices and methods), sell, or offer to sell one or more of the Accused Products, during or after such article's importation into the United States, in a manner that infringes the '933 Patent. *See, e.g.*, Exs. 13–19, 46, 108–112, 134, 136, 141 (Lenovo advertising products

for sale and their capabilities); Exs. 43, 134-1 (Lenovo instructions on using Nearby Share); Exs. 52–54, 146, 147 (Websites describing Nearby Share feature). On information and belief, Lenovo was aware of the '933 Patent or acted with willful blindness as to its existence at least as a result of the filing of the parallel district court case discussed above and as a result of the filing and service of this this complaint.

72. Claim charts that apply each of the asserted independent claims of the '933 Patent to the Accused Products are attached as Exhibits 35, 118, 125, and 132.

E. Infringement of the '054 Patent

73. On information and belief, the Accused Products that are sold for importation, imported, and/or sold within the United States after importation by Lenovo infringe at least claims 1 and 23 of the '054 Patent, either literally or under the doctrine of equivalents.

74. On information and belief, Lenovo directly infringes one or more claims of the '054 Patent through its manufacture, sale for importation, importation, use, and sale after importation of one or more Accused Products. The Accused Products include exemplary products, the Lenovo ThinkPad X1 Carbon Gen 10 (laptop computer), the Lenovo IdeaCentre AIO 3i (desktop computer), the Lenovo Tab P11 Pro Gen 2 (tablet computer), and the Motorola Edge+ (2023) (smartphone), each of which infringes the Asserted Claims of the '054 Patent. These products are examples of the Accused Products, and other Lenovo products infringe one or more claims of the '054 Patent in a similar manner. For example, other laptop computers (such as the Lenovo ThinkPad E16 Gen 1, Lenovo ThinkPad P16 Gen2, and Lenovo Yoga 7i), desktop computers (such as the Lenovo IdeaCentre AIO 5i, Lenovo ThinkCentre M90a, Lenovo ThinkCentre M70a), tablet computers (such as the Lenovo Tab M7 Gen 3, IdeaPad Windows Duet 5i), and smartphones (such as the Motorola Edge 40 Pro, Motorola Edge 40) infringe one or more claims of the '054 Patent.

75. On information and belief, Lenovo knowingly and intentionally induces users of one or more of the Accused Products to directly infringe one or more claims of the '054 Patent by encouraging, instructing, and aiding one or more persons in the United States, including Lenovo employees who test and operate Accused Products at the direction of Lenovo, to make, use (including testing those devices and methods), sell, or offer to sell one or more of the Accused Products, during or after such article's importation into the United States, in a manner that infringes the '054 Patent. *See, e.g.*, Exs. 13–19, 46, 108–112, 134, 136, 141 (Lenovo advertising products for sale and their capabilities); Exs. 43, 134-1 (Lenovo instructions on using Nearby Share); Exs. 52-54, 146, 147 (Websites describing Nearby Share feature). On information and belief, Lenovo was aware of the '054 Patent or acted with willful blindness as to its existence at least as a result of the filing of the parallel district court case discussed above and as a result of the filing and service of this this complaint.

76. Claim charts that apply each of the asserted independent claims of the '054 Patent to the Accused Products are attached as Exhibits 36, 119, 126, and 133.

VII. SPECIFIC INSTANCES OF UNFAIR IMPORTATION AND SALE

77. Lenovo's Accused Products are manufactured and assembled at foreign facilities. For example, each Lenovo product includes statements made indicating a foreign country of origin, such as "MADE IN CHINA." *See* Ex. 38. Further, it is well reported that Lenovo produces its devices abroad, including in China and India. Ex. 55 (Lenovo Website listing manufacturing facilities); Ex. 57 (Article describing Motorola's use of manufacturing abroad).

78. The Accused Products are then sold for importation into the United States, imported into the United States, sold within the United States after importation by Lenovo, and/or offered for sale after importation. A large number of models of Lenovo's Accused Products are available for purchase in the United States. *See, e.g.*, Exs. 13–19, 46, 108–112, 134, 136, 141 (Lenovo products

for sale on Lenovo website). In addition, numerous third-party websites and stores in the United States sell the Accused Products. *See, e.g.*, Exs. 20–26 (third party sellers advertising sale of Lenovo products). Lenovo’s devices are available to purchase at these same locations.

79. Pursuant to Commission Rule 210.12(a)(3), Exhibit 37 (receipt of sale within U.S.) contains the receipt showing a sale of a first exemplary article (i.e., the ThinkPad X1 Carbon Gen 10 Model No. # 21CB000JUS), within the United States after importation into the United States. A ThinkPad X1 Carbon was purchased online in the United States on April 18, 2023, for shipment to its office in Atlanta, GA. *See* Ex. 37 (receipt of sale within U.S.). The shipping label of this product shows that Lenovo shipped the ThinkPad X1 Carbon from its warehouse in Whitsett, NC and the product arrived in Atlanta, GA on April 19, 2023. *See* Ex. 38 at 2 (photo of shipping label). The ThinkPad X1 Carbon was made in China. *Id.* at 5 (identifying China as product’s country of origin). Therefore, the exemplary ThinkPad X1 Carbon was imported.

80. Exhibits 140 and 141 show specific instances of importation of a second exemplary article, the Lenovo IdeaCentre AIO 3i, Model # F0G000GWUS. Exhibit 140 contains images of the packaging for an IdeaCentre AIO 3i, showing that the IdeaCentre AIO 3i was “Made in Vietnam.” Ex. 140 at 1. Exhibit 141 contains screenshots of the Lenovo Website, showing the same article, IdeaCentre AIO 3i, Model # F0G000GWUS, is available at a Best Buy in Atlanta, GA as of July 14, 2023. Ex. 141 at 4 (showing product is available for pickup at “BEST BUY Edgewood”); Ex. 142 (showing that Best Buy Edgewood is located in Atlanta, GA). On information and belief, the IdeaCentre AIO 3i articles at Best Buy in Atlanta, GA were imported into the U.S. from Vietnam, given that the IdeaCentre AIO 3i is made in Vietnam. *See* Exs. 140–142.

81. Exhibits 134 and 143 show specific instances of importation of a third exemplary article, the Lenovo Tab P11 Pro (2nd Gen), Model # ZAB50101US. Exhibit 143 contains images of the

packaging for the third exemplary article, showing that the Lenovo Tab P11 Pro (2nd Gen) was “Made in China.” Ex. 143 at 1. Exhibit 134 contains screenshots of the Lenovo Website, showing the same article, Lenovo Tab P11 Pro (2nd Gen), Model # ZAB50101US, is available for 3-business-day “Standard Delivery” to zip code 30309 (Atlanta, GA) as of July 15, 2023. Ex. 134 at 1. On information and belief, the Lenovo Tab P11 Pro (2nd Gen) articles available from the Lenovo website were imported into the U.S. from China, given that the Lenovo Tab P11 Pro (2nd Gen) is made in China but is available for U.S. consumer delivery within only three business days via “Standard Delivery.” *See* Exs. 134, 143.

82. Exhibits 144 and 145 show specific instances of importation of a fourth exemplary article, Motorola Edge+ (2023). Exhibit 144 contains images of the packaging for the third exemplary article, showing that the Motorola Edge+ was “Made in China.” Ex. 144 at 1. Exhibit 145 contains screenshots of the Motorola Website, showing the same article, Motorola Edge+ (2023), is available for next-day delivery to zip code 30309 (Atlanta, GA) as of July 17, 2023. Ex. 145 at 1. On information and belief, the Motorola Edge+ (2023) articles available from the Motorola website were imported into the U.S. from China, given that the Motorola Edge+ (2023) is made in China but is available for U.S. consumer delivery within a single day. *See* Exs. 144, 145.

VIII. HARMONIZED TARIFF SCHEDULE INFORMATION

83. On information and belief, the Accused Products are believed to fall within at least the following Harmonized Tariff Schedule of the United States item number(s): 8517.12.00 and 8517.70.00 (smartphones); 8471.30.01, 8471.41.01, 8471.49.00, 8471.50.01, 8517.62.00, 8543.70.96, or 8471.60.90 (laptop computers, desktop computers, and tablet computers). These classifications are exemplary in nature and not intended to restrict the scope of any exclusion order or other remedy ordered by the Investigation.

IX. THE DOMESTIC INDUSTRY

84. In accordance with Section 337(a)(2) and (a)(3), a domestic industry exists within the United States in connection with each of the Asserted Patents. Further, a domestic industry is in the process of being established for the '877, '859, and '556 patents to the extent the AV1 specification is not yet implemented in the Apple Domestic Industry Products.

85. The domestic activities of InterDigital's licensees independently satisfy the domestic industry requirement. For the purposes of this Complaint, Interdigital provides the following licensees of the Asserted Patents as exemplars of its domestic industry:

(1) Apple Inc. ("Apple"); and

(2) Vizio, Inc. ("Vizio").

86. Pursuant to Commission Rule 210.12(a)(9)(iv), Complainants have attached to the Complaint the following agreements authorizing the Domestic Industry Licensees to practice one or more of the Asserted Patents:

Ex. 105C, a copy of the Patent License Agreement between InterDigital and Apple;

Ex. 106C, a copy of the Patent License Agreement between InterDigital and Vizio.

A. Technical Prong

1. Summary of the Domestic Industry Products

87. Each of the Domestic Industry Products¹⁸ produced by Domestic Industry Licensees Apple and Vizio incorporates the accused functionality of some or all of the Asserted AV1, VP9, and Wireless File-Sharing Patents.¹⁹

¹⁸ "Domestic Industry Products" collectively refers to the Apple Domestic Industry Products and the Vizio Domestic Industry Products.

¹⁹ The Vizio Domestic Industry Products do not incorporate Wireless File-Sharing Functionality. Accordingly, Vizio's investments in the domestic industry products are limited to the '877, '859, and '556 Patents.

88. As demonstrated in the attached claim charts, the practicing of the AV1 and VP9 specifications²⁰ necessarily practices the claims of the Asserted Patents. Exs. 91–98. The Apple Domestic Industry Products and Vizio Domestic Industry Products (each defined below) practice at least claims 1, 4, 7 and 8 of the '877 Patent and claims 10 and 15 of the '859 Patent.

89. The Apple and Vizio Domestic Industry Products additionally practice at least claims 1, 3, 4, 5, 7, and 8 of the '556 Patent. Exs. 99–100.

90. The Apple Domestic Industry Products additionally practice at least Claims 1 and 23 of the '933 Patent and at least Claims 1 and 23 of the '054 Patent.²¹ Exs. 101–102.

91. Summarized, InterDigital's domestic industry investments with respect to the Accused Patents consists of the following:

Asserted Patent	Domestic Industry Licensees		
	File-Sharing	AV1	VP9
U.S Patent No. 10,250,877	N/A	Apple, Vizio	Apple, Vizio
U.S. Patent No. 8,674,859	N/A	Apple, Vizio	Apple, Vizio
U.S. Patent No. 9,674,556	N/A	Apple, Vizio	N/A
U.S. Patent No. 9,173,054	Apple	N/A	N/A
U.S. Patent No. 8,737,933	Apple	N/A	N/A

2. Apple and Vizio's Domestic Industry Products

92. Apple's domestic industry products include at least the following products (the "Apple Domestic Industry Products"):

iPhone	14 Pro
iPhone	14 Pro Max
iPhone	14
iPhone	14 Plus
iPhone	SE 3 rd Gen.
iPhone	SE 2 nd Gen.
iPhone	13 Pro

²⁰ There are no F/RAND requirements relevant to this Investigation.

²¹ The Domestic Industry for the '933 and '054 Patents is limited to investments in the iPhone and iPad and does not include any Apple Mac, MacBook, or Apple TV products.

iPhone	13 Pro Max
iPhone	13
iPhone	13 mini
iPhone	12 Pro
iPhone	12 Pro Max
iPhone	12
iPhone	12 mini
iPad	Pro 12.9" 6th Gen.
iPad	Pro 12.9" 5th Gen.
iPad	Pro 12.9" 4 th Gen.
iPad	Pro 11" 4th Gen.
iPad	Pro 11" 3rd Gen.
iPad	Pro 11" 2 nd Gen.
iPad	10 th Gen.
iPad	9th Gen.
iPad	8 th Gen.
iPad	Air 5th Gen.
iPad	Air 4 th Gen.
iPad	mini 6th Gen.
iPad	mini 5 th Gen.
Mac	Mac Pro Rack (release year 2019 or later)
Mac	Mac Pro Tower (release year 2019 or later)
Mac	Mac Studio
MacBook	MacBook Air 15" with M2 Processor
MacBook	MacBook Air 13" with M2 Processor
MacBook	MacBook Air 13" with M1 Processor
MacBook	MacBook Air 13" with M2 Processor
MacBook	MacBook Pro 16" with AMD 5300M Processor
MacBook	MacBook Pro 16" with AMD 5500M Processor
MacBook	MacBook Pro 16" with AMD 5600M Processor
MacBook	MacBook Pro 13" with M2 Processor
MacBook	MacBook Pro 14" with M2 Pro Processor
MacBook	MacBook Pro 14" with M2 Max Processor
MacBook	MacBook Pro 16" with M2 Pro Processor
MacBook	MacBook Pro 16" with M2 Max Processor
Apple TV	Apple TV 4K

93. For purposes of the complaint, InterDigital submits that the iPad Pro (6th Gen) is exemplary of the Apple Domestic Industry Products. *See* Exs. 58–60, 61, 64–67 (Articles and Apple’s own materials advertising the Apple Domestic Industry Products possess video coding and AirDrop functionality). Exhibits 91, 93, 95, 97, 99, 101–102 are charts that apply an exemplary claim of each Asserted Patent to an exemplary Apple Domestic Industry Product.

94. Vizio’s domestic industry products include at least Vizio’s Digital Television (“DTV”) product line, which consists of five series: the D-Series, the V-Series, the M-Series, the P-Series, and OLEDs.²² (the “Vizio Domestic Industry Products”). Specifically, this includes at least²³ the following products:

D-Series	D24FM-K01
D-Series	D32FM-K01
D-Series	D40FM-K09
D-Series	D43FM-K04
V-Series	V435M-K04
V-Series	V505M-K09
V-Series	V555M-K01
V-Series	V585M-K01
V-Series	V655M-K03
V-Series	V655M-K04
V-Series	V705M-K03
V-Series	V755M-K03
M-Series	M43Q6M-K04
M-Series	M50QXM-K01
M-Series	M55Q6M-K01
M-Series	M65Q6M-K04
M-Series	M65QXM-K03
M-Series	M70Q6M-K03
M-Series	M75Q6M-K03
M-Series	M75QXM-K03
P-Series	P65Q9-J01
P-Series	P75Q9-J01
OLED	OLED55-H1

²² Vizio Corporate Website: TV Overview, <https://www.vizio.com/en/tv/overview>

²³ Although the Vizio Domestic Industry Products listed are limited to the Vizio television models currently advertised on the Vizio website, the Vizio Domestic Industry products do not exclude earlier models which practice the Asserted Patents.

OLED	OLED65-H1
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See Vizio Corporate Website: <https://www.vizio.com/en/tv/>.

95. For purposes of the complaint, InterDigital submits that the Vizio M50QXM-K01 is exemplary of the Vizio Domestic Industry Products. See Ex. 62 (Vizio M50QXM-K01 specification). Exhibits 92, 94, 96, 98, and 100 are charts that apply an exemplary claim of each Asserted Patent to an exemplary Vizio Domestic Industry Product.

a. Domestic Industry: *In the Process of Being Established*

96. At the time of filing of this Complaint, some Apple Domestic Industry Products may not yet incorporate AV1 functionality in their commercial releases. However, as described in further detail below, Apple has demonstrated it has taken the necessary steps to incorporate AV1 functionality into its full U.S. product line, including the iPhone and iPad, in 2023 or very shortly thereafter. See, e.g., Ex. 67 (Apple is Preparing to use AV1).

Apple is preparing for the video codec of the future and it's not too soon

By Jacob Philip - 20/02/2023 © 2 Mins Read



Deployed gradually on our devices and on major streaming platforms, the AV1 codec is now coming to Safari, but first via a beta. Apple would thus begin to catch up on this ground.

Through a new Safari beta, Apple would begin to catch up with the AV1 codec // Source: Nathan Le Gohlisse - Frandroid



97. Apple’s necessary steps to establish an industry include the creation of a beta version of its Safari Web Browser that includes AV1, which was released earlier this year.²⁴ On information and belief, Apple is planning on providing AV1 compatibility to more of its mobile and tablet devices through these beta versions of Safari web browser. *See* Exs. 59–60, 67. This is not surprising as Apple is a founding member of the AV foundation alliance. *See* Ex. 138.

98. Because of this, Apple has already, upon information and belief, constructed and used working prototypes of Apple Domestic Industry Products, which practice the ’877, ’859, and ’556 patents through their AV1 functionality. This evidences a domestic industry that exists at the time of the Complaint.

99. But additionally, given Apple’s impending commercial release of AV1-compatible products in 2023 or shortly thereafter, this will result in additional domestic industry commencing after the filing of the complaint. Accordingly, given that Apple will likely demonstrate an increase in its domestic investments after the filing of this Complaint, InterDigital respectfully requests that the Commission consider these activities as well and allow for the investigation to consider Apple’s domestic industry “in the process of being established” per 19 U.S.C. § 1337(a)(2).

B. Economic Prong

100. Pursuant to Commission Rule 210.12(a)(6), a domestic industry exists under subsections (A), (B) and (C) of Section 337(a)(3) by virtue of InterDigital’s selected licensees’ activities and investments within the United States.

101. The significant and substantial domestic investment of each of the licensees taken separately and individually satisfies the economic domestic industry requirement in this

²⁴ There exists a domestic industry based on the beta versions of Safari implemented.

Investigation.²⁵ By extension, taking any one or more of these entities in any combination, and certainly in the aggregate, also satisfies the domestic industry requirement.

1. Domestic Licensee Apple's Domestic Activities and Investments

102. InterDigital licensed Apple to practice the Asserted Patents and design, develop, manufacture, sell and distribute the Apple Domestic Industry Products. Ex. 105C.

103. Apple has made, and continues to make, significant and substantial domestic investments within the United States in connection with the protected articles that practice the Asserted Patents. Exhibits 91, 93, 95, 97, 99, and 101–102 are claim charts demonstrating that each of the Asserted Patents is practiced by at least one of the Apple Domestic Industry Products.

104. As a result of these investments, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(A) and (B) exists in the United States with respect to the Apple Domestic Industry Products by virtue of Apple's significant investment in plant and equipment and significant employment of labor and/or capital within the United States. A domestic industry defined by 19 U.S.C. § 1337(a)(3)(C) exists as well by virtue of Apple's substantial investment in research and development and engineering related to the Apple's Domestic Industry Products.

105. Apple is a publicly traded company founded in 1976. Ex. 69 (Vox Article). Apple is a corporation organized under the laws of California and has a principal place of business at One Apple Park Way, Cupertino, CA 95014. Ex. 70 (Apple Website, Contact Us); Ex. 71 (Restated Articles of Incorporation).

106. Apple has expended, and continues to expend, considerable resources on plant and equipment, labor or capital, and engineering and research and development to support the Apple Domestic Industry Products in the United States. Apple has invested in facilities across the United

²⁵ As shown in Ex. 28C, there are many more licensees of the Asserted Patents and Complainant may rely on one or more licensees during the investigation.

States, including at least its offices in Cupertino, California (Silicon Valley); Boulder, Colorado; Culver City, California; New York City, New York; Pittsburgh, Pennsylvania; San Diego, California; Portland, Oregon; Boston, Massachusetts; and Seattle, Washington. Ex. 72 (Apple Website – Corporate Offices). Apple announced in 2021 that it would invest \$430 billion in its US operations over the next five years. Ex. 73 (Apple Commits \$430B).

107. Apple’s physical footprint in the United States is growing, demonstrated by investments including, among other things, establishing a North Carolina research campus with plans to invest over \$1 billion in the state, and its construction of an Austin, Texas campus which will also cost \$1 billion. Ex. 74 (Apple plans \$19.3 M renovation of temporary offices in North Carolina, <https://appleinsider.com/articles/22/04/26/apple-plans-193m-renovation-of-temporary-offices-in-north-carolina>); Ex. 75 (Apple’s Northwest campus continues growth plans with \$279M in additional structures, <https://austonia.com/northwest-apple-campus>).²⁶ In 2021, Apple also reported \$15.3 Billion in fixed lease payment obligations, with \$2.0 Billion payable within 12 months. Ex. 76 at 27 (Apple 10-K).

108. Currently Apple employs around 90,000 people in the U.S. Ex. 77 at 2 (Apple’s U.S. job footprint). Apple reported over \$26 Billion worth of operating expenses with respect to research and development in 2022. *See* Ex. 76 at 26 (Apple Form 10-K (2022)). Apple uses U.S. facilities and labor to develop and test the Apple Domestic Industry Products which incorporate—or will incorporate—AV1/VP9 video decoding and AirDrop technology. Ex. 78 (Independent Article regarding iPhone testing in California); Ex. 67; Exs. 59–60. In 2022, Apple’s more than \$26 billion investment in R&D (Ex. 76 at 26) is growing, increasing 19.79% from 2021 and 16.86% from

²⁶ *See also* <https://appleinsider.com/articles/23/01/11/apple-spending-240m-to-expand-its-austin-texas-campus>.

2020. Ex. 80 (MacroTrends Article). Apple's investments are directly related to the Apple Domestic Industry products, including the exemplary iPad Pro (6th Gen.). Exs. 58–66.

109. On information and belief, significant portions of these U.S. R&D investments are directly related to improving use of video coding technology in its own devices. Ex. 61 (Apple Article Describing Apple iPadOS 14's compatibility with VP9); Exs. 59-60; Ex. 67.

110. Similarly, on information and belief significant portions of these U.S. R&D investments are likely directly related to improving use of wireless file-sharing technology in its own devices, which are incorporated into many Apple devices, including the exemplary iPad Pro (6th Gen.). Ex. 81 (Use Airdrop on iPhone and iPad to Send items); Ex. 82 (AirDrop Transfer Files to Send items to nearby devices).

111. Significant portions of Apple's investments in plant and equipment, labor or capital, engineering, and research and development in the United States relate to the iPhone given that the iPhone is designed by Apple in the United States and given that more than \$200 Billion in 2022 iPhone sales represents approximately 50% of Apple's revenue. *See* Ex. 83 at 1 (Apple FY22 Consolidated Statement); Ex. 84 at 6–7 (Business of Apps, *Apple Statistics*). Thus, upon information and belief, over half of Apple's investments in the United States in recent years are properly attributable to the Apple Domestic Industry products.

112. Moreover, Apple's domestic investments in labor and capital related to the Apple Domestic Industry Products include significant expenditures for the personnel engaged in Apple's repair and warranty support efforts within the United States, and the personnel staffing Apple's call center support for the iPhones it sells within the United States. On information and belief, personnel working for or on behalf of Apple engage in extensive repair and warranty support activities,

including, *e.g.*, for U.S. customers of Apple products on-site at Apple Stores located throughout the United States.

113. Based on at least the foregoing, Apple’s domestic investments in the Apple Domestic Industry Products are significant and substantial within the meaning of Section 337 by any reasonable metric, whether viewed quantitatively, qualitatively, or both. A domestic industry therefore exists within the United States based on the activities and investments of InterDigital’s domestic licensee, Apple.

2. Domestic Licensee Vizio’s Domestic Activities and Investments are Significant

114. InterDigital licensed Vizio, Inc. (“Vizio”) to practice the Video Coding Patents and design, develop, manufacture, and sell the Vizio Domestic Industry Products. *See* Ex. 106C.

115. Vizio has made, and continues to make, significant and substantial domestic investments in connection with the protected articles that practice the Video Coding Patents. Exhibits 92, 94, 96, 98, and 100 are claim charts demonstrating that each of the Video Coding Patents is practiced by at least one of the Vizio Domestic Industry Products.

116. As a result of these investments, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(A) and (B) exists in the United States with respect to the Vizio Domestic Industry Products by virtue of Vizio’s significant investment in plant and equipment and significant employment of labor and/or capital within the United States. A domestic industry defined by 19 U.S.C. § 1337(a)(3)(C) exists as well by virtue of Vizio’s substantial investment in research and development and the exploitation of the Vizio Domestic Industry Products.

117. Vizio is a corporation having its principal place of business at 39 Tesla, Irvine, CA 92618. *See* Ex. 85 (Vizio Form 10-K (2022)) at 1. Vizio was founded in 2002, originally named V Inc., before changing its name to Vizio, Inc. in 2004. *See* Ex. 86. Today, Vizio operates two “fully

integrated businesses: Devices and Platform+.” See Ex. 85 (Vizio Form 10-K (2022)) at 5. Vizio’s *Devices* business includes a portfolio of “high-performance Smart TVs [DTVs] designed to address specific customer preferences, as well as a portfolio of sound bars that deliver immersive audio experiences.” See Ex. 85 (Vizio Form 10-K (2022) at 5). Vizio’s DTV product line consists of five series: the D-Series, the V-Series, the M-Series, the P-Series, and OLEDs. See Ex. 87. On information and belief, every model and every variant of these products manufactured since at least 2020²⁷ incorporates AV1 and VP9 functionality, at least through the Vizio products’ ability to decode video signals via the accused functionality of the Asserted Patents.

118. A substantial portion of Vizio’s total net revenue is derived from the sale of DTVs, which accounted for 66% and 76% of Vizio’s net revenue for the years 2022 and 2021, respectively. See Ex. 85 (Vizio Form 10-K (2022)) at 13. Vizio’s ***total*** net revenues were \$1.862, \$2.124 Billion, \$2.042.5 Billion in 2022, 2021, and 2020, respectively. See Ex. 85 (Vizio Form 10-K (2022)) at 71. Vizio’s net revenues for ***devices*** were \$1.384, \$1.815.3 Billion, and \$1.895.3 Billion in 2022, 2021, and 2020, respectively. See Ex. 85 (Vizio Form 10-K (2022) at 71). Accordingly, approximately between \$0.913 and \$1.440 Billion in revenue is attributable to Vizio’s DTVs for each year during the period 2020-2022.

119. Given that 66% and 76% of Vizio’s net revenue for the years 2022 and 2021, respectively, are generated from sales of the domestic industry products, a sizeable portion of Vizio’s investments demonstrated in sections (a)-(c) below can reasonably and properly be attributed to these domestic industry products. See Ex. 85 (Vizio Form 10-K (2022)) at 13.

²⁷ The 2020 date is an estimate based on publicly available information. InterDigital reserves all rights to identify additional Domestic Industry products before that date.

120. On information and belief, Vizio has made significant investments in plant and equipment to support its research and development, technical support, and other necessary business activities within the United States. Vizio has expended, and continues to expend, considerable resources in this manner within the United States.

121. On information and belief, as of 2022, Vizio wholly owns one of the buildings comprising its corporate headquarters, located at 35 Tesla, Irvine, CA 92618 and possesses a minority ownership in another building located at 39 Tesla. *See* Ex. 85 (Vizio Form 10-K (2022)) at 50.

122. On information and belief, as of 2022, Vizio has “various non-cancelable operating leases for ... corporate and satellite offices primarily in the United States” which expire at various times through 2027 and have total annual payments of “less than \$5.0 million each year.” *See* Ex. 85 (Vizio Form 10-K (2022) at 64). Specifically, Vizio leases a portion of the office building located at 39 Tesla in addition to a building at 43 Tesla that includes office and warehouse space, and maintains additional leases for facilities in Atlanta, Georgia; Chicago, Illinois; Fremont, California; Los Angeles, California; Park City, Utah; Bloomington, Minnesota; Dakota Dunes, South Dakota; Dallas, Texas; New York, New York; San Francisco, California; Denver, Colorado, and Seattle, Washington.²⁸ *See* Ex. 85 (Vizio Form 10-K (2022) at 50).

123. On information and belief, Vizio performs research and development and provides technical support services domestically. Vizio has expended, and continues to expend, considerable resources on these activities in the United States.

124. Vizio’s research and development costs consist “primarily of employee-related costs, including salaries and bonuses ... third-party contractor costs, and related allocated overhead costs.”

²⁸ Vizio’s Form 10-K additionally lists a rental property in Shanghai, China, which is not included for purposes of domestic industry. *See* Ex. 85 (Vizio Form 10-K (2022) at 50).

See Ex. 85 (Vizio Form 10-K (2022) at 59). Vizio spent \$40.8 Million on research and development in 2022—a significant increase over the \$34.2 Million spent on research and development in 2021, the \$15.1 Million spent in 2020, and the \$10.3 Million spent in 2019 and represents that Vizio “design[s] products in-house and perform[s] high-value research and development in-house.” *See* Ex. 85 (Vizio Form 10-K (2022)) at 6, 60.

125. On information and belief, Vizio maintains customer support capabilities in the United States in at least Dakota Dunes, South Dakota. As of January 16, 2023, Vizio’s corporate website maintained multiple job listings for “Technical Support Representative(s)” located in Dakota Dunes, South Dakota. *See* Ex. 88 (Vizio Careers – Technical Support); *see also* Ex. 85 (Vizio Form 10-K (2022) at 50) (listing an interest in a Dakota Dunes, South Dakota location).

126. A domestic industry also exists with respect to prong C by virtue of all of the expenditures provided in Section IX.B.2 herein, in addition to Vizio’s investments in sales, general and administrative²⁹, and marketing of its products.

127. On information and belief, Vizio spent \$41.4 Million, \$32.8 Million, and \$31.3 Million, on marketing its products in 2022, 2021, and 2020, respectively. *See* Ex. 85 (Vizio Form 10-K (2022) at 60). These investments consist primarily of “advertising and marketing promotions of our brand and products, including media advertisement costs, merchandising and display costs, trade show and event costs, and sponsorship costs” and contribute directly to the exploitation of the Asserted Patents. *See* Ex. 85 (Vizio Form 10-K (2022) at 59).

²⁹ Vizio categorizes these expenses together on its form 10-K as “Selling, general and administrative.” *See* Ex. 85 (Vizio Form 10-K (2022) at 60).

128. In addition, on information and belief, Vizio spent \$220.7 Million, \$286.1 Million, and \$115.8 Million on selling, general and administrative operating expenses in 2022, 2021, and 2020, respectively. *See* Ex. 85 (Vizio Form 10-K (2022) at 60).

129. In addition to the foregoing, Vizio has previously filed two Section 337 complaints asserting that a domestic industry exists by virtue of Vizio’s domestics investments in its digital televisions business. *See Certain Digital Televisions and Components Thereof*, Inv. No. 337-TA-789, Complaint (Pub. Version) (June 16, 2011) at 22–23 (alleging the economic prong of domestic industry was met under Prongs B and C via investment in customer service and technical support operations as well as licensing activities);³⁰ *Certain Flat Panel Digital Televisions and Components Thereof*, Inv. No. 337-TA-733, Complaint (Pub. Version) (July 16, 2010) at 19 (alleging the economic prong of domestic industry was met under Prongs B and C via investment in customer service and technical support operations as well as licensing activities);³¹ *see also Certain Digital Televisions and Components Thereof*, Inv. No. 337-TA-789, Complaint, Ex. No. 58C (Pub. Version) (June 16, 2011) at 1–2 (Declaration regarding domestic industry investments detailing two Vizio facilities which provide “after-market customer service and technical support for its digital televisions” in Irvine, California and Dakota Dunes, South Dakota in addition to its use of third-party Alorica, Inc., to provide additional technical support for Vizio’s digital televisions through, *inter alia*, locations in Magna, Utah and Fort Myers, Florida).

³⁰ In the 789 Investigation, the final three remaining parties of the nine originally named settled prior to the evidentiary hearing. *See Certain Digital Televisions and Components Thereof*, Inv. No. 337-TA-789, Comm’n Notice (July 25, 2012).

³¹ In the 733 Investigation, the Investigation was terminated by way of settlement approximately six weeks prior to the close of fact discovery. *See Certain Flat Panel Digital Televisions and Components Thereof*, Inv. No. 337-TA-733, Comm’n Notice (Feb. 11, 2011).

130. Based on at least the foregoing, Vizio's domestic investments in the Vizio Domestic Industry Products are significant and substantial within the meaning of Section 337 by any reasonable metric, whether viewed quantitatively, qualitatively, or both. A domestic industry therefore exists within the United States based on the activities and investments of InterDigital's domestic licensee Vizio.

X. RELIEF REQUESTED

131. WHEREFORE, by reason of the foregoing, Complainants requests that the United States International Trade Commission:

- a) Institute an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to the Respondents' violations of Section 337 based on the unlawful and unauthorized importation, sale for importation, and/or sale within the United States after importation, and instruction of purchasers on the infringing use of the Accused Products;
- b) Schedule and conduct an evidentiary hearing on permanent relief pursuant to 19 U.S.C. § 1337(d) and (f) of the Tariff Act of 1930, as amended;
- c) Issue a limited exclusion order specifically directed to each named Respondent and its subsidiaries, predecessors, affiliates, agents, successors, and assigns, pursuant to 19 U.S.C. § 1337(d)(2), barring from entry into the United States all of Respondents' products that infringe, or are manufactured using processes that infringe, directly or indirectly, one or more claims of the '877, '859, '556, '933 and/or '054 Patents;
- d) Issue permanent cease and desist orders pursuant to 19 U.S.C. § 1337(f) prohibiting each Respondent from, among other things, importing, selling, offering for sale (including *via* the Internet or electronic mail), advertising (including *via* the Internet

or electronic mail), distributing, transferring (except for exportation), soliciting United States agents or distributors, and aiding or abetting other entities in the importation, sale for importation, sale after importation, transfer (except for exportation), or distribution of the Accused Products that infringe the '877, '859, '556, '933 and/or '054 Patents; and

- e) Impose a bond upon Lenovo's importation of infringing Accused Products during the 60-day Presidential review period pursuant to 19 U.S.C. § 1337(e), (j) to prevent further injury to InterDigital and its licensees' domestic industry relating to each of the Asserted Patents;
- f) And issue such other and further relief as the Commission deems just and proper under the law, based upon the facts determined by the investigation and the authority of the Commission.

Dated: September 1, 2023

Respectfully submitted,

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