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September 18, 2020

VIA EDIS

The Honorable Lisa R. Barton
Secretary to the Commission
U.S. International Trade Commission
500 E Street SW
Washington, D.C. 20436

Re: *Certain Digital Video-Capable Devices and Components Thereof*,
Inv. No. 337-TA-_____.

Dear Secretary Barton:

With this letter, I file on behalf of Koninklijke Philips N.V. and Philips North America LLC (collectively, “Philips” or “Complainants”) the following documents in support of Philips’ request that the Commission commence an investigation pursuant to the provisions of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. §1337.

Please note that Confidential Exhibits 25, 93, 98, 109, and 112 to the Complaint contain Confidential Business Information and, pursuant to the Commission’s Rules of Practice and Procedure, a request for confidential treatment of the information in those exhibits accompanies this filing.

Philips makes this filing under the U.S. International Trade Commission’s Temporary Change to Filing Procedures dated March 16, 2020, and includes the following:

1. One (1) electronic copy of Complainant’s Verified Complaint and the Public Interest Statement (Commission Rules 210.8 (a)(1)(i) and 210.8(b));
2. One (1) electronic copy of the non-confidential exhibits and public versions of the confidential exhibits (Commission Rule 210.8(a)(1)(i));
3. One (1) electronic copy of the confidential exhibits (Commission Rules 210.8(a)(1)(ii) and 201.6(c));
4. One (1) electronic copy of the certified versions of the asserted United States Patents, U.S. Patent Nos. 9,436,809; 9,590,977; 10,091,186; and 10,298,564 (collectively “the Asserted Patents”), cited in the Complaint as Exhibits 1-4 (Commission Rule 210.12(a)(9)(i));
5. One (1) electronic copy of the certified versions of the prosecution histories for each of the Asserted Patents included as Appendices A, C, E, and G to the Complaint (Commission Rule 210.12(c)(1));

MINTZ

Honorable Lisa R. Barton
September 18, 2020
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6. One (1) electronic copy of the assignment records for the Asserted Patents cited in the Complaint as Exhibits 22-24¹ (Commission Rule 210.12(a)(9)(ii));
7. One (1) electronic copy of the patent and technical reference documents identified in the prosecution histories of the Asserted Patents, included in the Complaint as Appendices B, D, F, and H (Commission Rule 210.12(c)(2)); and
8. One (1) electronic copy of Philips' letter and certification requesting confidential treatment of information appearing in Confidential Exhibits 25, 93, 98, 109, and 112 to the Complaint (Commission Rules 210.5(d) and 201.6(b)).

Respectfully submitted,



Michael T. Renaud
*Counsel for Complainants
Koninklijke Philips N.V. and
Philips North America LLC*

¹ As noted in the Complaint, Complainants recently recorded the assignments of each of the Asserted Patents. As a result, they have not yet received certified copies of these assignment records even though they ordered such copies from the Patent and Trademark Office as soon as practicable. Complainants will supplement the Complaint with the certified versions of the assignment records as soon as they are received.

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500 E Street SW
Washington, D.C. 20436

Re: *Certain Digital Video-Capable Devices and Components Thereof*,
Inv. No. 337-TA-_____.

Dear Secretary Barton:

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. represents Complainants Koninklijke Philips N.V. and Philips North America LLC (together, "Philips") in the matter of the above referenced Complaint, which is filed contemporaneously with this letter pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U. S. C. § 1337.

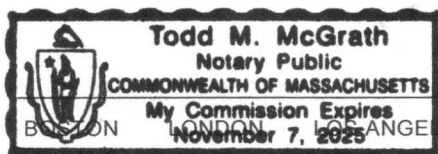
Pursuant to Commission Rules 201.6(b) and 210.5(d), Philips respectfully requests confidential treatment of the information contained in Confidential Exhibits 25, 93, 98, 109, and 112. The information contained in Confidential Exhibits 25, 93, 98, 109, and 112, redacted in their public equivalents, qualifies as confidential information pursuant to 19 C.F.R. § 201.6. In particular, this information discloses proprietary commercial information, proprietary commercial relationships, and/or proprietary business information that is not otherwise publicly available. The disclosure of such information would cause substantial harm to Philips, and would also impair the Commission's ability in the future to obtain such types of information in performance of its statutory function.

I certify that the proprietary confidential commercial information, proprietary commercial relationships, and/or proprietary business information present in each exhibit filed confidentially is not reasonably available to the public, and thus warrants confidential treatment.

Respectfully submitted,

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Counsel for Complainants
Koninklijke Philips N.V. and
Philips North America LLC

SUBSCRIBED AND SWORN BEFORE ME



**U.S. INTERNATIONAL TRADE COMMISSION
WASHINGTON, DC**

In the Matter of

**CERTAIN DIGITAL VIDEO-CAPABLE
DEVICES AND COMPONENTS
THEREOF**

Investigation No. 337-TA-

COMPLAINANTS' PUBLIC INTEREST STATEMENT

Complainants Koninklijke Philips N.V. and Philips North America LLC (together, “Philips” or “Complainants”) submit this public-interest statement, as required by 19 C.F.R. § 210.8(b). As discussed below, the limited exclusion orders sought against the proposed Respondents¹ will not have an adverse effect on public health or welfare, competitive conditions in the domestic economy, production of like or directly competitive articles within the United States, or American consumers. The requested remedies in this Investigation are limited to Respondents’ infringing digital video-capable devices, including computers and display devices, and components thereof, including digital video capable integrated circuits, printed circuit board assemblies containing such integrated circuits, and associated firmware/software.

The requested remedy is therefore directed only at those specific products that are manufactured by or on behalf of Respondents, and sold for importation, imported, and/or sold after importation into the United States. Notably, a majority of companies in the highly competitive, and arguably saturated, computer and display markets are either licensed, or are not among Respondents, and will therefore be unaffected by any remedial orders that might issue in this Investigation. Consequently, the only potentially

¹ The proposed Respondents include: (1) Dell Technologies Inc.; and Dell. Inc. (together, “Dell”); (2) Hisense Co., Ltd.; Hisense Visual Technology Co., Ltd. (f/k/a Qingdao Hisense Electric Co., Ltd.); Hisense Electronics Manufacturing Company of America Corporation; Hisense USA Corporation; Hisense Import & Export Co. Ltd.; Hisense International Co., Ltd.; Hisense International (HK) Co., Ltd.; and Hisense International (Hong Kong) America Investment Co., Ltd. (collectively, “Hisense”); (3) HP, Inc. (f/k/a Hewlett-Packard, Inc.); (4) Lenovo Group Ltd.; and Lenovo (United States), Inc. (together, “Lenovo”); (5) LG Electronics, Inc.; and LG Electronics USA, Inc. (together, “LG”); (6) TCL Industries Holdings Co., Ltd.; TCL Electronics Holdings Ltd. (f/k/a TCL Multimedia Technology Holdings Ltd.); TCL King Electrical Appliances (Huizhou) Co. Ltd.; TTE Technology, Inc.; TCL Moka International Ltd.; and TCL Moka Manufacturing, S.A. de C.V. (collectively, “TCL”); (7) Intel Corporation (“Intel”); (8) MediaTek Inc.; and MediaTek USA Inc., (collectively, “MediaTek”); and (9) Realtek Semiconductor Corp. (“Realtek”). Together, these entities are referred to herein as the “Respondents.”

relevant public-interest inquiry is whether denying Section 337 relief against this subset of Respondents' electronic consumer goods could possibly be justified based on the statutory public-interest factors. There exists no such justification in this case, for at least three reasons.

First, the requested limited exclusion order would not exclude articles that implicate any acute national security risk or public health issue of the kind that has previously supported the extraordinary step of precluding or reducing relief.² Second, Respondents' Accused Products are a minority of the U.S. market for displays and computers—there are ample alternate sources for such goods in the United States. Finally, any demand gap created by the exclusion order could be made up by Complainants' licensees, or by Respondents' many vigorous competitors in the crowded marketplaces. Consequently, for the reasons set forth in more detail below, the Commission should not delegate the public interest inquiry to the presiding Administrative Law Judge if and when this Investigation is instituted.

A. The Requested Remedial Orders Will Serve, Not Harm, the Public Interest

It is long-settled a strong public interest exists in protecting intellectual property rights.³ As such, that protection can be denied only in very limited situations in which competing public interests are of so great a significance with regard to the Accused Products that the strong public policy of protecting intellectual property rights must give way.⁴ Here, in addition to the strong general public interest in protecting Philips' intellectual property rights, there is an additional specific public interest in protecting Digital Rights Management (DRM) like the kind claimed by the Asserted Patents. Such DRM technology protects the rights, investments, and employees of producers and distributors of digital video content, and

² *Certain Fluidized Supporting Apparatus*, Inv. Nos. 337-TA-182/188, Comm'n Op. (Oct. 5, 1984); *Certain Inclined-Field Acceleration Tubes*, Inv. No. 337-TA-67, Comm'n Op. (Dec. 29, 1980); *Certain Automatic Crankpin Grinders*, Inv. No. 337-TA-60, Comm'n Op. (Dec. 17, 1979); see also *Personal Data & Mobile Communication Devices*, Inv. No. 337-TA-710, Comm'n Op., at 81 n.56 (Dec. 29, 2011) (stating that the ITC "does not believe that the mere fact that a technological field has been determined to provide benefits to the economy is sufficient to excuse infringement of a patent in that field").

³ *Certain Digital Television Prods. & Certain Prods. Containing Same & Methods of Using Same*, Inv. No. 337-TA-617, Comm'n Op., at 9 (Aug. 23, 2009); *Certain Baseband Processor Chips and Chipsets, Transmitter and Receiver (Radio) Chips, and Power Control Chips*, Inv. No. 337-TA-543, Comm'n Op. (June 19, 2007).

⁴ See *Certain Baseband Processor Chips & Chipsets, Transmitter & Receiver (Radio) Chips, Power Control Chips, & Prods. Containing Same, Including Cellular Tel. Handsets*, Inv. No. 337-TA-543, Comm'n Op., at 153 (June 19, 2007) ("[T]he statute requires relief for an aggrieved patent holder, except in those limited circumstances in which the statutory public interest concerns are so great as to trump the public interest in enforcement of intellectual property rights.") (emphasis added).

enables the public to benefit from continued advancements in live and pre-recorded video quality and its secure distribution. Any public interest concerns presented by the requested remedies in this Investigation, if any exist, therefore pale in comparison to these countervailing interests.

B. Exclusion of the Accused Products Would Not Implicate Public Health, Safety, or Welfare Concerns

The Accused Products plainly do not invoke any specific public health, safety, or welfare concerns. Indeed, the Accused Products are typically used for entertainment, web-browsing, streaming video, gaming, and so on. Moreover, the general availability of computers and displays will not be affected, to say nothing of the fact that current customers will be free to continue using their existing devices. The computer and display markets are very mature in the United States, if not saturated—the “installed” product base for consumers who already own one or more of such devices is massive.⁵

C. Demand for Excluded Products Will Easily Be Satisfied By Licensed or Un-Accused Alternatives

Setting aside the fact that the technologies embodied in the relevant infringed patents do not implicate the public health or welfare, they will continue to be available in the event the requested exclusion orders issue. Any U.S. consumer with a desire for those technologies will have ample access to substitutes containing those features from Complainants’ many licensees, to say nothing of non-Respondents. As shown in Confidential Exhibit 25 to the Complaint, Complainants have multiple licensees to the Asserted Patents that are active participants in video-enabled device markets. This alone will ensure both ample supply and ongoing competition in the U.S. for such devices. In addition, these markets are very mature in the United States, if not saturated, so it is questionable at best whether any demand gap would be felt in the event the requested remedies go into effect.

With respect to display devices, the accused televisions, for example, are a small portion of the U.S. market. In fact, non-Respondent (and Philips licensee) Samsung comprised over 43% of the North

⁵ For example, “[t]he North America and Europe [laptop] markets are mature, with most product categories at or near saturation.” <https://www.grandviewresearch.com/industry-analysis/laptop-market> (last accessed Sept. 17, 2020). As to displays, Nielsen estimates that there are over 307 million Americans, or nearly 94% of the population, living in a household with a least one television. See <https://www.nielsen.com/us/en/insights/article/2019/nielsen-estimates-120-6-million-tv-homes-in-the-u-s-for-the-2019-202-tv-season/> (last accessed Sept. 17, 2020).

American television market in 2019.⁶ And Samsung has dominated both the North American television market and the global television market for well over a decade.⁷ Other non-accused television producers include Hitachi, Insignia, JVC, Magnavox, Mitsubishi, Panasonic, Quasar, RCA, Sanyo, Sceptre, Sharp, Sony, Sylvania, and Toshiba. In short, competitors of Respondents, and/or Complainants' licensees, would easily be able to fill any demand gap felt by the requested remedies—if any were to exist.

The same is true regarding computers. Although the Accused Products represent approximately two-thirds of the U.S. market for such products, the remaining third of the market comprises Complainants' licensees, or the proposed Respondents' vigorous competitors, such as Acer, Apple, ASUS, Fujitsu, Google, Microsoft, Panasonic, Sharp, Tongfang, VAIO, and others. These unaffected third parties would easily be able to fill the demand gap felt by the requested remedies, if any. As with most consumer electronics segments, the computer market is extremely competitive, with nimble and well-resourced firms readily able to fill supply vacuums, whether partial or full. For example, only several original design manufacturers manufacture the vast majority of the world's laptop supply—and simultaneously make products for numerous competitors in the product segment. As a result, production capacity in this market is effectively fungible.

The availability of computers and displays from Complainants' licensees, or Respondents' competitors, will ensure that, even after the requested remedy is issued, consumers in the U.S. will still have plenty of choices with respect to such products. Thus, issuance of the requested remedy will not result in any shortage of digital video-enabled devices in the United States. *See, e.g., Certain Agric. Tractors Under 50 Power Take-off Horsepower*, Inv. No. 337-TA-380, Comm'n Op., at 34 (Mar. 1997) (concluding that remedial orders at issue had limited economic impact due to considerable competition).

//

⁶ *Samsung and LG Dominating North American TV Market* available at <http://www.businesskorea.co.kr/news/articleView.html?idxno=38301> (last accessed Sept. 17, 2020).

⁷ *Id.*; *see also Samsung tops global TV market for 14th year* available at <http://www.koreaherald.com/view.php?ud=20200226000917> (last accessed Sept. 17, 2020).

D. Sufficient Capacity Exists to Replace Excluded Accused Products

For the same reasons, Complainants’ licensees, along with other large market players, unquestionably have the capacity to replace the volume of Accused Products subject to the requested remedial orders, and do so within a commercially reasonable time. Thus, there is no indication that excluding the Accused Products might harm the public interest via unmet demand. *See Certain Optical Disk Controller Chips*, Inv. No. 337-TA-506, Comm’n Op., at 61 (Sept. 28, 2005) (issuing remedy where “there is no evidence that the U.S. demand for the covered products cannot be met by other entities”).

D. The Requested Remedy Can Have No Relevant Public-Interest Impact on Consumers Within the United States

As discussed above, even after the requested remedy is issued, customers in these saturated markets will still have access to digital video-enabled devices from numerous sources. Consequently, the issuance of such relief will have no relevant—to say nothing of detrimental—public interest impact on consumers within the United States. *See Digital TV Prods.*, Comm’n Op., at 15-16 (finding that any adverse effect on domestic consumers resulting from remedy would be minimal given the range of other available products, and would not outweigh the benefit of protecting complainant’s intellectual property rights).

E. Conclusion

For the foregoing reasons, no public interest concerns exist that could preclude the issuance of the requested remedies against the proposed Respondents in this matter. As a result, there is no need for the Commission to delegate the public interest factors to the Administrative Law Judge. In fact, under these circumstances delegating the public interest would result in an unnecessary waste of Commission, ALJ, OUII Staff, and private party resources, and the Commission should decline to do so.

Dated: September 18, 2020

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UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.

In the Matter of

**CERTAIN DIGITAL VIDEO-CAPABLE
DEVICES AND COMPONENTS
THEREOF**

Investigation No. 337-TA-_____

**COMPLAINT OF
KONINKLIJKE PHILIPS N.V. AND PHILIPS NORTH AMERICA LLC
UNDER SECTION 337 OF THE TARIFF ACT OF 1930, AS AMENDED**

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EXHIBIT LIST

1. U.S. Patent No. 9,436,809
2. U.S. Patent No. 9,590,977
3. U.S. Patent No. 10,091,186
4. U.S. Patent No. 10,298,564
5. Philips IP&S Setting the Standards – <https://www.ip.philips.com/standardization>
6. Impacts of Digital Video Piracy on the U.S. Economy - <https://www.theglobalipcenter.com/wp-content/uploads/2019/06/Digital-Video-Piracy.pdf>
7. Hisense Home Appliances Group Co., Ltd. 2018 Annual Report
8. Hisense Co., Ltd.’s Motion to Dismiss – Lone Star Technological Innovation, LLC v. Qingdao Hisense Electronics, et al., Case No. 6:19-cv-00294, EDTX
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40. Claim Chart - U.S. 10091186 LG-Intel HDMI HDCP 2.2
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65. Purchase Receipt and Photographs of Lenovo IdeaPad Flex 5 14 laptop computer, Model No. 81X1000QUS
66. Purchase Receipt and Photographs of Lenovo ThinkVision P32p-20 31.5-inch 16_9 UHD Monitor, Model 62A2GAR2US
67. Purchase Receipt and Photographs of Lenovo IdeaPad Flex 5 14 laptop computer, Model No. 81X1000QUS - China
68. Purchase Receipt and Photographs of Lenovo ThinkVision P32p-20 31.5-inch 16_9 UHD Monitor, Model 62A2GAR2US - China.
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71. Purchase Receipt and Photographs of LG UN7300 Series LED 4K UHD Smart webOS TV, Model No. 43UN7300PUF - Mexico
72. Purchase Receipt and Photographs of LG gram 15" Ultra-Lightweight Laptop, Model No. 15Z90N-U.ARS5U1 - China
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APPENDICES

- A. Certified Prosecution History of U.S. Patent No. 9,436,809
- B. Technical References Cited in the Prosecution History of U.S. Patent No. 9,436,809
- C. Certified Prosecution History of U.S. Patent No. 9,590,977
- D. Technical References Cited in the Prosecution History of U.S. Patent No. 9,590,977
- E. Certified Prosecution History of U.S. Patent No. 10,091,186
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- G. Certified Prosecution History of U.S. Patent No. 10,298,564
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I. INTRODUCTION

1. Complainants Koninklijke Philips N.V. (“Philips N.V.”) and Philips North America LLC (“Philips North America”) (collectively, “Philips”) request that the U.S. International Trade Commission institute an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 (“Section 337”), to remedy the unlawful importation, sale for importation, and/or sale after importation by the proposed Respondents of certain digital video-capable devices, and components thereof. Pursuant to Commission Rule 210.12(a)(9)(i), these products infringe at least the following claims of U.S. Patent Nos. 9,436,809 (the “’809 Patent”); 9,590,977 (the “’977 Patent”); 10,091,186 (the “’186 Patent”); and 10,298,564 (the “’564 Patent”) (collectively “the Asserted Patents”).

Respondents	Patent	Asserted Claims¹
Dell, HP, Lenovo, LG, Intel	9,436,809	1 , 2-6, 9, 11, 12, 14, 15, 17 , 22, 23, 26, 49 , 50, 52-54
Dell, Hisense, HP, Lenovo, LG, TCL, MediaTek, Realtek	9,590,977	1 , 2, 3, 8-10, 11 , 12, 14-20
Dell, HP, Lenovo, LG, Intel	10,091,186	1 , 2-7, 9-16
Dell, Hisense, HP, Lenovo, LG, TCL, MediaTek, Realtek	10,298,564	1 , 2-11, 14-23, 25, 28

2. Pursuant to Commission Rule 210.12(a)(9)(i), certified copies of the ’809 Patent, the ’977 Patent, the ’186 Patent, and the ’564 Patent are included as Exhibit 1, Exhibit 2, Exhibit 3, and Exhibit 4, respectively. Pursuant to Commission Rule 210.12(a)(9)(ii), and 210.12(a)(7), Philips owns all rights, title, and interest in and to each of the Asserted Patents.

A. Philips’ Storied History as a Leading Innovator

3. Pursuant to Commission Rule 210.12(a)(7), Philips is a world leader in technology and innovation across many technological fields. After its founding in 1891, for well over 100

¹ Independent claims in the chart are identified in **bold**.

years Philips has dedicated significant time, effort, and resources to research and development for the advancement of technology used around the world. Philips' innovations and products serve both consumers and professionals with the goal of improving the lives of billions of people. Philips also shares its innovation with others through, for example, its pioneering role in offering access to its technology through licensing.

4. Through its extensive production-driving licensing efforts, Philips has been able to share its innovations with many other companies and product manufacturers to increase authorized public access to Philips' inventive efforts. Philips has also been able to use licensing revenue to fund further research and development. In particular, Philips' Portable Feature patent portfolio and its TV/Set-Top Box (or STB) patent portfolio, which include the Asserted Patents as vanguard intellectual property assets, are prime examples of Philips' innovation leading to successful licensing efforts.

1. With Decades of Research and Development in the Digital Audio and Video Space, Philips Has Led the Digital Entertainment Revolution

5. Without Philips, the way in which digital audio and video is recorded, transmitted, and consumed by the public would be fundamentally different. For decades Philips has been a cornerstone technology leader in the digital audio and video space. Philips pioneered the Laserdisc in 1969 and, later, partnered with Sony to create the original "Red Book" standard from which the ubiquitous audio Compact Disc (CD) format was developed and implemented. Philips and Sony released the CD Red Book in 1980, and the Digital Audio Disc Committee later adopted it as a global standard.

6. In addition, Philips has also participated heavily in the development of, and contributed foundational technology to, numerous other global and widely adopted audio and video standards. These include, for example, AAC, MPEG-2 video, MPEG-4 video, AVC, MVC,

HEVC, VC-1, VP8, VP9, AV1, MP3, MPEG surround, MPEG-H, EVS, MPEG-2 system layer, MPEG-4 system layer, MPEG-4 Visual, ATSC video, HDR10, HDR10+, Dolby, Vision, HLG, Advanced HDR, H.264, GSM, UMTS/LTE, and standards directed to 3D depth perception.² See, e.g., <https://www.ip.philips.com/standardization/>. Exhibit 5. In connection with this standards-related work, Philips has a long history of success in licensing its patents to implementers, either through patent pools or bilaterally, to enable these fundamental technologies to be made available to American consumers.

2. Philips' Extensive Efforts to Reduce Digital Piracy by Innovating in Digital Rights Management Technologies Has Advanced the Field and Protected American Jobs and Investment

7. Just as important as Philips' focus on developing and implementing the technologies necessary for the recording, transmission, and consumption of digital audio and video, Philips is recognized by the content industry within the United States, such as the film and music industries, as a leading innovator in the development and advancement of valuable Digital Rights Management ("DRM") technologies. At a high level, these DRM technologies protect content from unauthorized copying, also known as content piracy. Content firms expend considerable monetary and human capital to create digital audio and video content—but without DRM protections modern technology can allow this content to be illegally misappropriated with a few clicks. Content protection technology creates roadblocks to dissuade this behavior, allowing content creators to recoup their investment, support their employees, and reinvest in new content.

² Philips notes that although it has historically been heavily involved with standards-setting organizations, the patents asserted in this Investigation are not committed to any such standard and therefore no issues peculiar to standard-essential patents, such as RAND licensing obligations, are implicated in this matter.

8. Unfortunately, digital piracy is a major detriment to the U.S. economy. Conservatively, it causes lost domestic revenues of at least \$29 billion per year. See Exhibit 6 (<https://www.theglobalipcenter.com/wp-content/uploads/2019/06/Digital-Video-Piracy.pdf>). Reducing this piracy provides a clear benefit both to the content industry and to the broader economy. Philips' content-protection and piracy reduction technologies have been pivotal in helping to protect the massive investment the domestic content industry makes in its products, which drives enormous annual revenues and supports hundreds of thousands of U.S. jobs.³

9. For example, Philips was a leader in the effort to develop and implement the next evolutionary step in digital video after DVD, the Blu-Ray standard. In fact, Philips was a founding member of the Blu-ray Disc Association, and was instrumental in helping Blu-Ray prevail in the format "war" against HD-DVD, which was a competing format at the time. Philips was also instrumental in developing the "BD-ROM Mark" (the "Watermark") content-protection method, which was designed to preclude playback of any Blu-Ray disc unless it included the requisite Watermark, thereby protecting the content encoded on the disc. The content industry recognized Philips' significant contribution to the space in connection with its Blu-Ray innovations. For example, Philips received a prestigious Technology and Engineering Emmy Award from the National Academy of Television Arts & Sciences.

10. The technology claimed and protected by the Asserted Patents is the next, evolutionary step in Philips' long history of digital audio and video innovations, including its novel approaches to DRM content protection. As described in further detail below, and in keeping with

³ The U.S. movie and television production and distribution industry enjoyed revenues in 2017 of about \$229 billion total, and is a major job creator, directly supporting approximately 927,000 jobs. See Ex. 6 (<https://www.theglobalipcenter.com/wp-content/uploads/2019/06/Digital-Video-Piracy.pdf>).

Philips' long investment in technology to protect U.S. investment in content by audio-visual content firms within the United States—and the hundreds of thousands of directly related jobs—the Asserted Patents are directed to cutting-edge anti-piracy technology implemented, for example, in certain 4K Ultra-High Definition video-enabled systems.

11. Pursuant to Commission Rule 210.12(a)(6), and further reflecting the value and importance of Philips' patented technology, multiple domestic industries as required by 19 U.S.C. § 1337(a)(2) and (3) exist in the United States. First, Philips' licensees Microsoft, Samsung, and Roku have made, and continue to make, significant and substantial investments in articles protected by the Asserted Patents. Second, Philips' own extensive licensing efforts in connection with the Asserted Patents constitute a domestic industry under 19 U.S.C. § 1337(a)(3)(C), as Philips continues its substantial domestic investments in exploiting the intellectual property rights protected by the Asserted Patents.

B. The Proposed Respondents Engage in Widespread Infringement of Philips' Foundational Piracy Prevention Technology Claimed by the Asserted Patents

12. The proposed Respondents each utilize the innovations claimed by Philips in the Asserted Patents: they develop, manufacture, import, sell for importation, and sell after importation into the U.S. certain digital video-capable devices and components thereof (collectively, the "Accused Products"), that practice the Asserted Patents.

13. But while Respondents enjoy robust sales of devices and components in the U.S. market that make use of Philips' innovations, they have failed and/or refused to secure necessary licenses to Philips' foundational U.S. intellectual property rights. Instead, they exploit Philips' patented inventions without authorization or justification. As set forth in more detail below, the Accused Products are manufactured abroad and incorporate—without any license or other permission—Philips' foundational technologies in the digital video space. These technologies are

protected by patents owned, and extensively licensed across the industry, by Philips. Respondents' importation of infringing articles into the United States from abroad directly harms Philips and its licensees—and their collectively massive domestic investment. Philips therefore respectfully seeks relief from the Commission for Respondents' infringement and unfair acts of importation.

14. The proposed Respondents include: (1) Dell Technologies Inc.; and Dell. Inc. (together, the "Dell Respondents"); (2) Hisense Co., Ltd.; Hisense Visual Technology Co., Ltd. (f/k/a Qingdao Hisense Electric Co., Ltd.); Hisense Electronics Manufacturing Company of America Corporation; Hisense USA Corporation; Hisense Import & Export Co. Ltd.; Hisense International Co., Ltd.; Hisense International (HK) Co., Ltd.; and Hisense International (Hong Kong) America Investment Co., Ltd. (collectively, the "Hisense Respondents"); (3) HP, Inc. (f/k/a Hewlett-Packard, Inc.); (4) Lenovo Group Ltd.; and Lenovo (United States), Inc. (together, the "Lenovo Respondents"); (5) LG Electronics, Inc.; and LG Electronics USA, Inc. (together, the "LG Respondents"); (6) TCL Industries Holdings Co., Ltd.; TCL Electronics Holdings Ltd. (f/k/a TCL Multimedia Technology Holdings Ltd.); TCL King Electrical Appliances (Huizhou) Co. Ltd.; TTE Technology, Inc.; TCL Moka International Ltd.; and TCL Moka Manufacturing, S.A. de C.V. (collectively, the "TCL Respondents"); (7) Intel Corporation ("Intel"); (8) MediaTek Inc.; and MediaTek USA Inc., (collectively, "MediaTek"); and (9) Realtek Semiconductor Corp. ("Realtek"). All of these entities are referred to collectively as the "Respondents."

15. On information and belief, each of the proposed Respondents currently designs, uses, tests, manufactures, imports into the United States, sells for importation into the United States, sells in the United States after importation, and/or instructs other proposed Respondents regarding the use, manufacture, sale, and/or importation of certain digital video capable devices,

and components thereof, that directly infringe, contributorily infringe, and/or induce the infringement of, the Asserted Patents.

16. Pursuant to Commission Rule 210.12(a)(11), Philips seeks, as relief, a limited exclusion order barring from entry into the U.S. digital video capable devices that infringe the Asserted Patents and components thereof, manufactured by or on behalf of, or imported by or on behalf of, the proposed Respondents and their subsidiaries, predecessors, affiliates, agents, successors, and assigns.

17. Philips also seeks a cease-and-desist order prohibiting the sale for importation, importation, sale after importation, distribution, offering for sale, promoting, marketing, advertising, testing, demonstrating, warehousing inventory for distribution, solicitation of sales, programming, repairing, maintaining, transferring, and other commercial activity relating to digital video capable devices that infringe the Asserted Patents and components thereof.

18. Further, Philips requests that the Commission impose a bond upon Respondents' importation of Accused Products during the 60-day Presidential review period pursuant to 19 U.S.C. § 1337(j) to prevent further injury to the significant and substantial domestic industry relating to each of the Asserted Patents.

II. COMPLAINANTS

19. Complainant **Koninklijke Philips N.V.** (formerly known as Koninklijke Philips Electronics N.V.) ("Philips N.V.") is a corporation duly organized and existing under the laws of The Netherlands, with its principal place of business at High Tech Campus 5, 5656 AE Eindhoven, The Netherlands.

20. Complainant **Philips North America LLC** (formerly known as Philips Electronics North America Corporation) ("Philips North America") is a limited liability company duly

organized and existing under the laws of Delaware, with a principal place of business at 222 Jacobs Street, Cambridge, Massachusetts.

21. Philips N.V. is the parent of Philips North America. The epicenter of Philips' licensing activities related to the Asserted Patents is in the United States, although personnel from both entities are heavily involved in such formal licensing programs.

III. PROPOSED RESPONDENTS

A. Dell Respondents

22. Pursuant to Commission Rule 210.12(a)(4) and on information and belief, proposed Respondent **Dell Technologies Inc.** ("Dell Tech.") is a corporation organized and existing under the laws of the State of Delaware with a principal place of business located at One Dell Way, Round Rock, Texas, 78682. On information and belief, proposed Respondent **Dell Inc.** is a corporation organized and existing under the laws of the State of Delaware with a principal place of business located at One Dell Way, Round Rock, Texas, 78682.

23. Proposed Respondents Dell Tech. and Dell Inc. (together, "Dell") are in the business of designing, manufacturing, importing into the United States, selling for importation into the United States, and/or selling within the United States after importation, certain digital video-capable devices, and components thereof. Such devices may include, but are not limited to, computers, displays, and their components. On information and belief, the Dell Client Solutions Group of the company produces such products under the Dell brand name.

B. HP Respondent

24. Pursuant to Commission Rule 210.12(a)(4) and on information and belief, proposed Respondent **HP, Inc.** (f/k/a Hewlett-Packard Corporation) ("HP") is a corporation organized and existing under the laws of California, with a principal place of business located at 1501 Page Mill Road, Palo Alto, California 94304. Proposed Respondent HP is in the business of designing,

manufacturing, importing into the United States, selling for importation into the United States, and/or selling within the United States after importation, certain video-capable computing and display devices, and components thereof. Such devices may include, but are not limited to, computers, displays, and their components.

C. Hisense Respondents

25. Pursuant to Commission Rule 210.12(a)(4) and on information and belief, proposed Respondent **Hisense Co., Ltd.** is a corporation duly organized and existing under the laws of the People’s Republic of China, with a principal place of business at Hisense Tower No. 17, Donghaixi Road, Qingdao, Shandong Province, 266071, P.R. China. On information and belief, **Hisense USA Corporation** is a corporation duly organized and existing under the laws of the State of Georgia with a principal place of business at 7310 McGinnis Ferry Road, Suwanee, Georgia, 20024. On information and belief, **Hisense Electronics Manufacturing Company of America Corporation** is a corporation duly organized and existing under the laws of the State of Georgia with a principal place of business at 7310 McGinnis Ferry Road, Suwanee, Georgia 20024. On information and belief, proposed Respondent **Hisense Visual Technology Co., Ltd.** (f/k/a Qingdao Hisense Electric Co., Ltd.) (“Hisense Visual”) is a corporation duly organized and existing under the laws of the People’s Republic of China with a principal place of business located at 218 Qianwangang Road, Qingdao Economic & Tech Dev Zone, Qingdao, Shandong Province, P.R. China, 266555. On information and belief, proposed Respondent **Hisense International Co., Ltd.** is a corporation duly organized and existing under the laws of the People’s Republic of China, with a principal place of business at Hisense Tower, No. 17, Floor 22, Donghaixi Road, Qingdao, Shandong Province, 266071, P.R. China. On information and belief, **Hisense Import & Export Co. Ltd.**, is a corporation duly organized and existing under the laws of the People’s Republic of China, with a principal place of business at Hisense Tower No. 17, Donghaixi Road, Qingdao, Shandong

Province, 266071, P.R. China. On information and belief, **Hisense International (HK) Co., Ltd.**, is a corporation duly organized and existing under the laws of Hong Kong, with a principal place of business at Room 3101-3105, Singga Commercial Centre, No. 148 Connaught Road West, Hong Kong (SAR). On information and belief, **Hisense International (Hong Kong) America Investments** (“Hisense HK America”) is a corporation duly organized and existing under the laws of Hong Kong with a principal place of business at Room 3101-3105, Singga Commercial Centre, No. 148 Connaught Road West, Hong Kong (SAR).

26. Together, Hisense Co., Ltd., Hisense USA Corporation, Hisense Electronics Manufacturing Company of America Corporation, Hisense Visual Technology Co., Ltd. (f/k/a Qingdao Hisense Electric Co., Ltd.), Hisense International Co., Ltd., Hisense Import & Export Co. Ltd., Hisense International (HK) Co., Ltd., and Hisense HK America are collectively referred to herein as the “Hisense Respondents.”

27. On information and belief, the Hisense Respondents are related companies which, individually, together, and/or in coordination, participate in the design, development, manufacture, sale for importation into the United States, importation into the United States, and sale within the United States after importation, of certain digital video-capable devices, and components thereof, that infringe the Asserted Patents. Such devices may include, but are not limited to, digital video capable displays and their components.

1. Hisense Co., Ltd.

28. On information and belief, Hisense Co. Ltd is engaged in the manufacturing, research, development, testing, marketing, distribution, shipping, importation, sale for importation, and/or sale within the United States after importation of, and/or contributing to (or instructing others regarding) the use, manufacture, sale, and/or importation of, digital smart TVs (and components thereof) that are manufactured outside of the United States. Hisense Co. Ltd.’s

business includes “the manufacture and sales of TV sets, refrigerators, freezers, washing machines, small household appliances, disc players, audio sets, broadcasting appliances, air-conditioners, electronic computers, telephones, communication products, internet products and electronic products and the provision of related services; [and] the development of software and the provision of internet services.” Exhibit 7 at 44, ¶ 2.

2. Hisense USA Corporation

29. On information and belief, Hisense USA Corporation is engaged in the manufacturing, research, development, testing, marketing, distribution, shipping, importation, sale for importation, and/or sale within the United States after importation of, and/or contributing to (or instructing others regarding) the use, manufacture, sale, and/or importation of, digital smart TVs (and components thereof) that are manufactured outside of the United States. Hisense USA Corporation admits it purchases “televisions from Hisense International (Hong Kong) America Investments in Asia, where the title of the [] televisions passes” to Hisense USA Corp. and “then ships the [] televisions to its warehouse in California (near Los Angeles) for distribution to U.S. retailers.” Exhibit 8 at 2.

3. Hisense Electronics Manufacturing Company of America Corporation

30. On information and belief, Hisense Electronics Manufacturing Company of America Corporation is engaged in the manufacturing, research, development, testing, marketing, distribution, shipping, importation, sale for importation, and/or sale within the United States after importation of, and/or contributing to (or instructing others regarding) the use, manufacture, sale, and/or importation of, digital smart TVs (and components thereof) that are manufactured outside of the United States. Hisense Electronics Manufacturing Company of America Corporation admits it “has been involved in the importation of accused products and components thereof to be

manufactured abroad, including in Mexico” and that it “regularly imports and then sends to Mexico containers with televisions and components of televisions to be assembled in Mexico.” Exhibit 9 at ¶ 3 (allegations); Exhibit 10 at ¶ 3 (admitting allegations). Hisense Manufacturing Company of America Corporation “was the recipient of a container including Hisense televisions with display, through the Port of Long Beach in this District to be unloaded in Otay Mesa, California” on “December 5, 2018. *Id.*

4. Hisense Visual Technology Co., Ltd.

31. On information and belief, Hisense Visual Technology Co., Ltd. is engaged in the manufacturing, research, development, testing, marketing, distribution, shipping, importation, sale for importation, and/or sale within the United States after importation of, and/or contributing to (or instructing others regarding) the use, manufacture, sale, and/or importation of, digital smart TVs (and components thereof) that are manufactured outside of the United States. Hisense Visual Technology Co., Ltd. admits it “manufactures televisions” and “sells the [] televisions in China to Hisense International Co., Ltd.” for importation into the United States. Exhibit 8 at 2.

5. Hisense International Co., Ltd.

32. On information and belief, Hisense International Co., Ltd. is engaged in the manufacturing, research, development, testing, marketing, distribution, shipping, importation, sale for importation, and/or sale within the United States after importation of, and/or contributing to (or instructing others regarding) the use, manufacture, sale, and/or importation of, digital smart TVs (and components thereof) that are manufactured outside of the United States. According to Hisense International Co., Ltd., it buys “televisions in China” from Hisense Visual Technology Co., Ltd. Exhibit 8 at 2.

6. Hisense Import & Export Co. Ltd.

33. On information and belief, Hisense Import & Export Co. Ltd. is engaged in the manufacturing, research, development, testing, marketing, distribution, shipping, importation, sale for importation, and/or sale within the United States after importation of, and/or contributing to (or instructing others regarding) the use, manufacture, sale, and/or importation of, digital smart TVs (and components thereof) that are manufactured outside of the United States. Hisense Import & Export Co. Ltd. sells, offers for sale, and/or imports televisions into the United State including “50” UHD (4K) 60HZ LED TV Roku” from China to Best Buy Company, Inc. Exhibit 11.

7. Hisense International (HK) Co. Ltd.

34. On information and belief, Hisense International (HK) Co. Ltd. is engaged in the manufacturing, research, development, testing, marketing, distribution, shipping, importation, sale for importation, and/or sale within the United States after importation of, and/or contributing to (or instructing others regarding) the use, manufacture, sale, and/or importation of, digital smart TVs (and components thereof) that are manufactured outside of the United States. Hisense International (HK) Co. Ltd., admits it “sells, offers for sale, and/or imports televisions” including “55” UHD (4K) 60HZ LED TV Roku televisions to Best Buy Co., Inc. through the Port of Los Angeles....” Exhibit 9 at ¶ 9 (allegations); Exhibit 10 at ¶ 9 (admitting allegations).

8. Hisense International (Hong Kong) America Investments

35. On information and belief, Hisense International (Hong Kong) America Investments is engaged in the manufacturing, research, development, testing, marketing, distribution, shipping, importation, sale for importation, and/or sale within the United States after importation of, and/or contributing to (or instructing others regarding) the use, manufacture, sale, and/or importation of, digital smart TVs (and components thereof) that are manufactured outside

of the United States. Hisense International (Hong Kong) America Investments, sells televisions to Hisense USA Corporation “in Asia, where title of the [] television passes.” Exhibit 8 at 2.

D. Lenovo Respondents

36. Pursuant to Commission Rule 210.12(a)(4) and on information and belief, proposed respondent **Lenovo Group Ltd.** (“Lenovo Group”) is a limited liability company incorporated in Hong Kong with its headquarters and principal place of business at 23rd Floor, Lincoln House, Taikoo Place, 979 King’s Road, Quarry Bay, Hong Kong. On information and belief, proposed Respondent **Lenovo (United States), Inc.** (“Lenovo US”) is a privately held corporation organized and existing under the laws of the State of Delaware, with a principal place of business located at 8001 Development Drive, Morrisville, NC 27560. On information and belief, Lenovo US is a wholly owned subsidiary of Lenovo Group.

37. Upon information and belief, Lenovo Group and Lenovo US are engaged in the manufacturing, research, development, testing, marketing, distribution, shipping, importation, sale for importation, and/or sale within the United States after importation of certain video-capable computing and display devices, and components thereof. Such devices may include, but are not limited to, computers, displays, and their components. According to Nikkei Asian Review’s Company Profile, Lenovo Group Ltd. is described as business that “engages in the developing, manufacturing, and marketing technology products and services” whose products include “personal computers, workstations, servers, storage, displays, and mobile products such as smartphones, tablets, and applications.” Exhibit 12; *see also* Exhibit 13 (Lenovo Group Limited 2020 Annual Report at 287 (Lenovo (United States) Inc.’s “principal activit[y]” is the “[d]istribution of IT products” within the United States)). Together, proposed Respondents Lenovo Group and Lenovo US are collectively referred to herein as the “Lenovo Respondents.”

38. Upon information and belief, the Lenovo Respondents design, develop, manufacture, have manufactured, sell, import, have imported, sell for importation into the United States, and sell after importation into the United States certain video-capable computing and display devices, and components thereof, including, but not limited to, computers, displays, and their components.

E. LG Respondents

39. Pursuant to Commission Rule 210.12(a)(4) and on information and belief, proposed Respondent **LG Electronics Inc.** (“LG Electronics”) is corporation duly organized and existing under the laws of the Republic of Korea with a principal place of business at LG Twin Towers, 128 Yeoui-daero, Yeongdeungpo-gu, Seoul 07336, Republic of Korea. On information and belief, proposed Respondent **LG Electronics USA, Inc.** (“LG USA”) is a corporation duly organized and existing under the laws of the State of Delaware having a principal place of business at 1000 Sylvan Avenue, Englewood Cliffs, New Jersey 07632. On information and belief, LG USA is a wholly owned subsidiary of LG Electronics. Together, LG Electronics and LG USA are referred to herein as the “LG Respondents.”

40. Upon information and belief, the LG Respondents design, develop, manufacture, sell, import, have imported, sell for importation, and sell after importation within the United States, certain digital video-capable devices, and components thereof. Such devices may include, but are not limited to, computers, displays, televisions, and their components. On information and belief, LG USA acts as, among other things, the distribution arm of such devices on behalf of LG Electronics within the United States.

F. TCL Respondents

41. Pursuant to Commission Rule 210.12(a)(4) and on information and belief, proposed Respondent **TCL Industries Holdings Co., Ltd.** (“TCL Industries”) is a limited liability company

registered in the People’s Republic of China, and is located at 9 Floor, TCL Electronics Holdings Limited Building, TCL International E City, #1001 Zhongshan Park Road, Nanshan District, Shenzhen, Guangdong, 518067, P.R. China. On information and belief, proposed Respondent **TCL Electronics Holdings Ltd.** (f/k/a TCL Multimedia Technology Holdings Ltd.) (“TCL Electronics”) is a Cayman Islands corporation, and is located at 7th Floor, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Hong Kong. On information and belief, proposed Respondent **TTE Technology, Inc.** (“TCL USA”) is a corporation duly organized and existing under the laws of the State of Delaware, having its principal place of business at 1860 Compton Avenue, Corona, California 92881. On information and belief, proposed Respondent **TCL Moka Manufacturing, S.A. de C.V.** (“TCL Manufacturing”) is a Mexican corporation, and is located at Calle 4ta. No. 55, Cd. Industrial Otay, Tijuana 22500, Mexico. On information and belief, proposed Respondent **TCL Moka International Ltd.** (“TCL Moka”) is a corporation duly organized and existing under the laws of Hong Kong having its principal place of business at 7/F Hong Kong Science Park, Bldg. 22 E, 22 Science Park East Avenue, Sha Tin, Hong Kong. On information and belief, proposed Respondent **TCL King Electrical Appliances (Huizhou) Co. Ltd.** (“TCL King”) is a corporation duly organized and existing under the laws of the People’s Republic of China having its principal place of business at No. 78 Zhongkai Development Zone, Huizhou, 516006, P.R. China. On information and belief, proposed Respondent **TCL Smart Device (Vietnam) Company Ltd.** (“TCL Vietnam”) is a corporation duly organized and existing under the laws of the People’s Republic of China with a principal place of business at No. 26 VSIP II-A, Street 32, Vietnam Singapore Industrial Park II-A, Tan Binh Commune, Bac Tan Uyen District, Binh Duong Province, 75000, Vietnam.

42. Together, proposed Respondents TCL Industries, TCL Electronics, TCL USA, TCL Manufacturing, TCL Moka, TCL King, and TCL Vietnam are collectively referred to herein as the “TCL Respondents.”

43. On information and belief, the TCL Respondents are related companies which, individually, together, and/or in coordination, participate in the design, development, manufacture, sale for importation into the United States, importation into the United States, and sale within the United States after importation, of certain digital video-capable devices, and components thereof, that infringe the Asserted Patents. Such devices may include, but are not limited to, digital video capable displays and their components.

1. TCL Industries Holdings Co.

44. On information and belief, TCL Industries is a holding company and the ultimate parent of proposed Respondents TCL USA, TCL Electronics, and TCL Manufacturing. TCL Industries and the other proposed Respondents operate in agency with each other as a group, known as the “TCL Group.” *See, e.g.*, Exhibit 14 (“The [TCL] group has 75,000 employees, 28 Research and Development laboratories and 22 production sites.”). TCL Industries with the TCL Group engages in the manufacturing, sale for importation into the United States, importation into the United States, sale after importation within the United States, the Accused Products, such as displays and TVs.

2. TCL Electronics Holdings Ltd.

45. Upon information and belief, TCL Electronics is a holding company and a parent of TCL’s television business group, comprising subsidiaries that manufacture, market, sell for importation into the United States, import into the United States, and sell after importation within the United States, the Accused Products, including displays. TCL Electronics operates in agency as part of the TCL Group, including the other Proposed TCL Respondents. TCL Electronics

operates its subsidiaries along with itself as the TCL Group, including the other Proposed TCL Respondents. TCL Electronics with TCL Group, either itself and/or through the activities of its subsidiaries, sells for importation into the United States, imports into the United States, and sells after importation within the United States, the Accused Products, including displays. *See, e.g.*, Exhibit 15 at 134 (TCL Electronics Holding Limited 2019 Annual Report (“During the year, the Group and its subsidiaries (collectively referred to as the ‘Group’) were mainly involved in the manufacture and sale of colour [sic] televisions (‘TV’) sets, smart audio-visual (‘Smart AV’) and smart home products and providing Internet platform operating services.”)).

3. TTE Technology, Inc.

46. Upon information and belief, TCL USA provides sales, distribution, research, and development support in North America as part of the TCL Group and for its parent companies. As part of the TCL Group, TCL USA imports into the United States, and sells after importation within the United States, the Accused Products, including displays. TCL USA operates in agency as part of the TCL Group and the other Proposed TCL Respondents. TCL USA is wholly owned subsidiary of TCL Electronics Holding Limited and is registered to do business including “[t]rading of TV products and components” in the United States. Exhibit 15 at 137 (TCL Electronics Holding Limited 2019 Annual Report).

4. TCL Moka Manufacturing S.A. de C.V.

47. Upon information and belief, as part of the TCL Group, TCL Manufacturing manufactures the Accused Products, including displays, and operates in concert with other members of the TCL Group, including, for example, TCL USA, to import into the United States the Accused Products. TCL Manufacturing is registered to do business in Mexico and its principal activities include the “[m]anufacture and sale of TV products.” Exhibit 15 at 137 (TCL Electronics Holding Limited 2019 Annual Report). TCL King and TCL Moka supply TCL Manufacturing

with the “Parts for LED TV” which are unloaded at the Port of Los Angeles and transported to TCL Manufacturing for assembly in Mexico. Exhibit 16.

5. TCL Moka International Ltd.

48. Upon information and belief, as part of the TCL Group, TCL Moka imports the Accused Products, including displays and TVs, and operates in concert with other members of the TCL Group, including, for example, TCL USA, to import into the United States the Accused Products. For example, TCL Moka ships “Parts for LED TVs” to TCL Manufacturing through the Port of Los Angeles. Exhibit 16. According to Panjiva, TCL Moka’s “[t]op products” include “led television[s].” Exhibit 17 (<https://panjiva.com/Tcl-Moka-International-Ltd/26640824>, last accessed September 17, 2020).

6. TCL King Electrical Appliances (Huizhou) Co. Ltd.

49. Upon information and belief, as part of the TCL Group, TCL King imports the Accused Products, including displays and TVs, and operates in concert with other members of the TCL Group, including, for example, TCL USA, to import into the United States the Accused Products. TCL King ships “LED TV[s]” and “4K LED ROKU TV[s]” to TCL USA. Exhibit 18 (Import Genius – Recent Shipments Report).

7. TCL Smart Device (Vietnam) Co., Ltd

50. Upon information and belief, TCL Vietnam is engaged in the manufacturing, research, development, testing, marketing, distribution, shipping, importation, sale for importation, and/or sale within the United States after importation of, and/or contributing to (or instructing others regarding) the use, manufacture, sale, and/or importation of, digital smart TVs (and components thereof) that are manufactured outside of the United States. According to Panjiva, TCL Vietnam, whose “[t]op products” include “led television[s],” regularly imports led televisions, and parts of led televisions into the United States. Exhibit 19 (<https://panjiva.com/Tcl->

Smart-Device-Vietnam-Co/71214654, last accessed Sept. 17, 2020). These imports include the representative TCL product, TCL 43" CLASS 4-SERIES 4K UHD HDR SMART TV, Model No. 43S425, on May 27, 2020. *Id.* at 2. Furthermore, according to TCL's website, TCL Smart Device (Vietnam) Co., Ltd "will supply products to both the Vietnam market and other overseas markets, including . . . the U.S. . . ., to meet the growing demand for superior quality TVs." Exhibit 20 (<https://www.tcl.com/au/en/blogs/constructions-starts-on-new-tcl-integrated-manufacturing-base-in-vietnam.html>, last accessed Sept. 17, 2020).

51. Upon information and belief, TCL Smart Device (Vietnam) Co., Ltd is engaged in the instruction or encouragement of others, including customers in the United States, to use, make, sell, and/or import such digital smart TVs and components thereof in a directly infringing manner.

G. Intel Respondents

52. Pursuant to Commission Rule 210.12(a)(4) and on information and belief, proposed Respondent **Intel Corporation** ("Intel") is a corporation duly organized and existing under the laws of the State of Delaware with its principal place of business at 2200 Mission College Boulevard, Santa Clara, California.

53. On information and belief, Intel, designs, develops, manufactures, sells, imports, has imported, sells for importation, and/or sells after importation within the United States, components, such as semiconductor devices and integrated circuits, that are incorporated into the Accused Products, including digital video-capable devices. Intel's customers incorporate these products into downstream products such as displays and/or computers, that are made, used, imported into the United States, sold for importation into the United States, and/or sold after importation within the United States, as further described below.

H. MediaTek Respondents

54. Pursuant to Commission Rule 210.12(a)(4) and on information and belief, proposed Respondent **MediaTek Inc.** (“MediaTek”) is a Taiwanese company, and is located at No. 1, Dusing Road 1, Hsinchu Science Park, Hsinchu City 30078, Taiwan. On information and belief, proposed Respondent **MediaTek USA Inc.** (“MediaTek USA”) is a Delaware corporation, and has a principal place of business at 2840 Junction Avenue, San Jose, California, 95134.

55. Together, proposed Respondents MediaTek and MediaTek USA are collectively referred to herein as the “MediaTek Respondents.”

56. On information and belief, MediaTek is the parent corporation of MediaTek USA which is a wholly-owned subsidiary of MediaTek. MediaTek, either itself and/or through the activities of its subsidiaries, designs, develops, manufactures, sells, imports, has imported, sells for importation, and/or sells after importation within the United States, components, such as semiconductor devices and integrated circuits, that are incorporated into the Accused Products, including digital video-capable devices. MediaTek’s customers incorporate these products into downstream products such as displays and/or computers, that are made, used, imported into the United States, sold for importation into the United States, and/or sold after importation within the United States, as further described below.

57. On information and belief, MediaTek USA provides sales, research, and development support in North America for its ultimate parent, MediaTek. MediaTek USA makes, uses, sells, offers for sale, designs, develops, manufactures, sells, imports, has imported, sells for importation, and/or sells after importation into and within the United States, components, such as semiconductor devices and integrated circuits, that are incorporated into the Accused Products, including digital video-capable devices. MediaTek USA’s customers incorporate these products into downstream products, such as displays and/or computers, that are made, used, imported into

the United States, sold for importation into the United States, and/or sold after importation within the United States.

I. Realtek Respondent

58. Pursuant to Commission Rule 210.12(a)(4) and on information and belief, proposed Respondent **Realtek Semiconductor Corporation** (“Realtek”) is a corporation duly organized and existing under the laws of Taiwan with its principal place of business at No. 2 Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan.

59. On information and belief, Realtek, designs, develops, manufactures, sells, imports, has imported, sells for importation, and/or sells after importation within the United States, components, such as semiconductor devices and integrated circuits, that are incorporated into the Accused Products, including digital video-capable devices. Realtek’s customers incorporate these products into downstream products such as displays and/or computers, that are made, used, imported into the United States, sold for importation into the United States, and/or sold after importation within the United States, as further described below.

IV. THE TECHNOLOGY AND PRODUCTS-AT-ISSUE

60. The technologies at issue relate to digital video-capable capable devices and certain components utilized in such products.

61. Pursuant to Commission Rules 210.10(b)(1) and 210.12(a)(12), the categories of the Accused Products are: (a) digital video-capable integrated circuits supplied by Intel, LG, MediaTek, and Realtek, printed circuit board assemblies incorporating the same, and any associated hardware, software, and/or firmware enabling digital video capabilities; (b) digital video-capable displays containing such components; and (c) digital video-capable computers

containing such components.⁴ The Accused Products are imported into the United States, sold for importation into the United States, and/or sold in the United States after importation, by or on behalf of Proposed Respondents.

V. THE ASSERTED PATENTS AND NON-TECHNICAL DESCRIPTION OF THE INVENTIONS

62. Philips owns by assignment the entire rights, title, and interest in and to each of the Asserted Patents, each of which claim priority to the same ultimate predecessor patent. Pursuant to Commission Rule 210.12(a)(9)(ii), copies of the assignment records for the '809 Patent to Philips are included as Exhibit 21 (Reel-Frame No. 053775/0011). Copies of the assignment records for the '977 Patent to Philips are included as Exhibit 22 (Reel-Frame No. 053775/0011). Copies of the assignment records for the '186 Patent to Philips are included as Exhibit 23 (Reel-Frame No. 053775/0011). Copies of the assignment records for the '564 Patent to Philips are included as Exhibit 24 (Reel-Frame No. 053775/0011). Because Complainants recently recorded the assignments of each of the Asserted Patents, they have not yet received certified copies of these assignment records. Complainants will supplement this Complaint with the certified versions of the assignment records as soon as they are received from the Patent and Trademark Office.

63. Pursuant to Commission Rule 210.12(c), four copies of the certified prosecution histories of each of the Asserted Patents – the '809 Patent, the '977 Patent, the '186 Patent, and the '564 Patent – are submitted with this Complaint as Appendices A, C, E, and G, respectively. Pursuant to Commission Rule 210.12(c), the cited prior art references for each of the Asserted Patents – the '809 Patent, the '977 Patent, the '186 Patent, and the '564 Patent – also have been submitted with this Complaint as Appendices B, D, F, and H, respectively.

⁴ Philips reserves the right to identify additional categories of accused products if it learns of such products through discovery or other means.

64. Pursuant to Commission Rule 210.12(a)(9)(v), a list of the foreign patents and applications also claiming the same benefit of priority as the Asserted Patents is included in the following table.

List of known related foreign counterparts for U.S. Patent Nos. 9,436,809; 9,590,977; 10,091,186; and 10,298,564				
Status	Publication Number	Application Number	File Date	Publication Date
Expired	AT416552T	AT20030766508T	2003-6-27	2008-12-15
Granted	AT523019T	AT20080160321T	2003-6-27	2011-09-15
Expired	AU2003246997A1	AU2003246997	2003-6-27	2004-02-23
Granted	CN1672382 (B)	CN20038017847	2003-6-27	2005-09-21 (Application) 2010-09-01 (Grant)
Granted	DE60325059.9	DE20030766508	2003-6-27	2004-2-12 (Application) 2008-12-3 (Grant)
Granted	DE60338312.2	DE20080160321	2003-6-27	2008-9-24 (Application) 2011-08-31 (Grant)
Granted	DK1973297 (T3)	DK20080160321T	2003-6-27	2011-12-19
Granted	EP1527586 (B1) (Nationally validated in DE (as DE60325059, <i>see above</i>), ES (as ES2316826, <i>see below</i>), FR, GB, IT (as IT 50200990169908))	EP20030766508	2003-6-27	2005-05-04 (Application) 2008-12-03 (Grant)

Granted	EP1973297 (B1) (Nationally validated in AT (as AT523019T, <i>see above</i>), BE, CH, DE (as DE60338312, <i>see above</i>), DK (as DK1973297, <i>see above</i>), ES (as ES2372780, <i>see below</i>), FR, GB, IT (as IT 50201190199844), NL, SE, TR (as TR 2011 11461, <i>see below</i>))	EP20080160321	2003-6-27	2008-09-24 (Application) 2011-08-31 (Grant)
Expired	EP2270700	EP20100182321	2003-6-27	2011-01-05
Granted	ES2316826 T3	ES20030766508T	2003-6-27	2009-04-16
Granted	ES2372780 T3	ES20080160321T	2003-6-27	2012-01-26
Granted	TR2011 11461 (Registration No.) TR 2011-G-313256 (Grant No.)	TR 2011/11461	2003-6-27	2012-01-23
Granted	JP4644487 (B2)	JP20040525600	2003-6-27	2005-11-10 (Application) 2011-03-02 (Grant)
Granted	JP6134469 (B2)	JP2010220235 A	2010-4-28	2010-09-30 (Application) 2017-05-24 (Grant)
Granted	KR101016983 (B1)	KR10-2005-7001459	2003-6-27	2005-03-18 (Application) 2011-02-25 (Grant)
Filed	WO2004014037	PCT/IB2003/0029 32	2003-6-27	2004-02-12
Filed		EP 02078076.3	2002-7-26	

Philips is not aware of any other foreign counterpart applications or patents to the Asserted Patents that have been issued, abandoned, or rejected, or that remain pending.

65. Reflecting Philips' enormous investment of time, effort, and money in its formal and sustained licensing program in connection with the Asserted Patents, certain licensees exist as to the Asserted Patents. Pursuant to Commission Rule 210.12(a)(9)(iii), Complainants attach as

Confidential Exhibit 25 a list of potential entities who may be, but are not necessarily, licensed to certain limited, non-exclusive, rights under the Asserted Patents. Philips provides this list, which may be over-inclusive, to ensure compliance with Commission Rule 210.12(a)(9)(iii). By including an entity on this list, however, Philips makes no representation concerning the scope of licensed rights, if any exist, or that any such rights extend to any third party, any proposed Respondent, or any Accused Product in this Investigation.

A. U.S. Patent No. 9,436,809

66. United States Patent No. 9,436,809, entitled “Secure Authenticated Distance Measurement,” issued on September 6, 2016, to inventor Franciscus Lucas Antonius Johannes Kamperman. Pursuant to Commission Rule 210.12(a)(9)(xi), the ’809 Patent expires on June 27, 2023. The ’809 Patent issued from U.S. Patent App. Ser. No. 14/583,493, filed on November 11, 2014, and was previously published as U.S. Patent Pub. No. 2015/0074822 on March 12, 2015. Any description of the ’809 Patent herein is provided solely for compliance with the Commission Rules, and is not intended to limit, define, or otherwise affect the scope, construction, and/or application of the ’809 Patent’s claim language.

67. The ’809 Patent contains 60 claims, including 6 independent claims and 54 dependent claims. Pursuant to Commission Rule 210.12(a)(9)(vii), Complainants assert that Dell, HP, Lenovo, LG, and Intel digital video-capable devices and components thereof (the “’809 Accused Products”) infringe at least claims 1-6, 9, 11, 12, 14, 15, 17, 22, 23, 26, 49, 50, and 52-54 of the ’809 Patent, literally or under the doctrine of equivalents, as described more fully below.

68. Pursuant to Commission Rule 210.12(a)(9)(vi), in non-technical terms, the ’809 Patent discloses and claims a device for controlling delivery of protected content such as digital video. As taught in the ’809 Patent, the device includes a memory and a processor. The device is arranged to receive a certificate providing information regarding a second device, such as a

receiver, and to utilize the information provided in the certificate to determine whether the receiver is compliant with a set of compliance rules. The device is also arranged to provide a first signal to the receiver when the receiver is determined to be compliant, to receive a second signal from the receiver after providing the first signal, and to determine whether the second signal is derived from a secret known by the device. The device is arranged to determine whether a time difference between providing the first signal and receiving the second signal is less than a predetermined time, and to allow the protected content to be provided to the receiver when at least the second signal is determined to be derived from the secret and the time difference is less than the predetermined time.

69. At a high level, the innovations taught in the '809 Patent are directed to cutting-edge anti-piracy technology. This technology provides anti-piracy benefits such as ensuring that protected content is provided only to securely authenticated devices located sufficiently near a transmitting device. In this way, the '809 Patent helps reduce digital video piracy. Absent such content protection, for example, and as discussed above, the American content industry would face even more detrimental economic consequences from rampant piracy, both domestically and globally.

B. U.S. Patent No. 9,590,977

70. United States Patent No. 9,590,977, entitled "Secure Authenticated Distance Measurement," issued on March 7, 2017, to inventor Franciscus Lucas Antonius Johannes Kamperman. Pursuant to Commission Rule 210.12(a)(9)(xi), the '977 Patent expires on June 27, 2023. The '977 Patent issued from U.S. Patent App. Ser. No. 15/299,207, filed on August 5, 2016, and was previously published as U.S. Patent Pub. No. 2016/0359845 on December 8, 2016. The '977 Patent claims priority to, and is a continuation of, U.S. Patent App. Ser. No. 14/583,493, filed on November 11, 2014, now United States Patent No. 9,436,809 (the asserted '809 patent). Any

description of the '977 Patent herein is provided solely for compliance with the Commission Rules, and is not intended to limit, define, or otherwise affect the scope, construction, and/or application of the '977 Patent's claim language.

71. The '977 Patent contains 31 claims, including 3 independent claims and 28 dependent claims. Pursuant to Commission Rule 210.12(a)(9)(vii), Complainants assert that Dell, Hisense, HP, Lenovo, LG, TCL, MediaTek, and Realtek digital video-capable devices and components thereof (together, the "'977 Accused Products'"), infringe at least claims 1-3, 8-12, and 14-20 of the '977 Patent, literally or under the doctrine of equivalents as described more fully below.

72. Pursuant to Commission Rule 210.12(a)(9)(vi), in non-technical terms, the '977 Patent discloses and claims a device for receiving protected content such as digital video. As taught in the '977 Patent, the device includes a memory storing a public key and private key pair, and a microprocessor circuit connected to the memory. The device is arranged to provide a certificate including the public key to another device, such as a transmitter of digital video that determines based on the certificate that the receiving device is compliant. The device is also arranged to receive a first signal from the transmitter, to obtain a secret encrypted with the public key, and to use the private key to determine the secret. The device is arranged to derive a second signal by modifying the first signal using the secret, and to send the second signal to the transmitter. The device is arranged to receive the protected content from the transmitter after the transmitter determines that the second signal is derived from the secret and a time difference between the transmitter's provision of the first signal and the transmitter's reception of the second signal is less than a predetermined time.

73. At a high level, the innovations taught in the '977 Patent are directed to cutting-edge anti-piracy technology. This technology provides anti-piracy benefits such as ensuring that protected content is received only by securely authenticated receiver devices located sufficiently near a transmitting device. In this way, the '977 Patent helps reduce digital video piracy. Absent such content protection, for example, and as discussed above, the American content industry would face even more detrimental economic consequences from rampant piracy, both domestically and globally.

C. U.S. Patent No. 10,091,186

74. United States Patent No. 10,091,186, entitled "Secure Authenticated Distance Measurement," issued on October 2, 2018, to inventor Franciscus Lucas Antonius Johannes Kamperman. Pursuant to Commission Rule 210.12(a)(9)(xi), the '186 Patent expires on June 27, 2023. The '186 Patent issued from U.S. Patent App. Ser. No. 15/352,646, filed on November 16, 2016, and was previously published as U.S. Patent Pub. No. 2017/0063556 on March 2, 2017. The '186 Patent claims priority to, and is a continuation of, U.S. Patent App. No. 15/229,207, filed on August 5, 2016, now U.S. Patent No. 9,590,977. Any description of the '186 Patent herein is provided solely for compliance with the Commission Rules, and is not intended to limit, define, or otherwise affect the scope, construction, and/or application of the '186 Patent's claim language.

75. The '186 Patent contains 36 claims, including 2 independent claims and 34 dependent claims. Pursuant to Commission Rule 210.12(a)(9)(vii), Complainants assert that Dell, HP, Lenovo, LG, and Intel digital video-capable devices and components thereof (together, the "'186 Accused Products") infringe at least claims 1-7 and 9-16 of the '186 Patent, literally or under the doctrine of equivalents as described more fully below.

76. Pursuant to Commission Rule 210.12(a)(9)(vi), in non-technical terms, the '186 Patent discloses and claims a device for controlling delivery of protected content such as digital

video. As taught in the '186 Patent, the device includes a processor circuit arranged to execute instructions to receive a certificate from a second device, such as a receiver, and to provide a first signal to the receiver when the certificate indicates that the receiver is compliant with at least one compliance rule. The device is also arranged to receive a second signal from the receiver after providing the first signal. The device is arranged to provide the protected content to the receiver when at least the second signal is derived from a secret and a time between the providing of the first signal and the receiving of the second signal is less than a predetermined time.

77. At a high level, the innovations taught in the '186 Patent are directed to cutting-edge anti-piracy technology. This technology provides anti-piracy benefits such as ensuring that protected content is provided only to securely authenticated receiver devices located sufficiently near a transmitting device. In this way, the '186 Patent helps reduce digital video piracy. Absent such content protections, for example, and as discussed above, the American content industry would face even more detrimental economic consequences from rampant piracy, both domestically and globally.

D. U.S. Patent No. 10,298,564

78. United States Patent No. 10,298,564, entitled "Secure Authenticated Distance Measurement," issued on May 21, 2019, to inventor Franciscus Lucas Antonius Johannes Kamperman. Pursuant to Commission Rule 210.12(a)(9)(xi), the '564 Patent expires on June 27, 2023. The '564 Patent issued from U.S. Patent App. Ser. No. 16/117,019, filed on August 30, 2018, and was previously published as U.S. Patent Pub. No. 2019/0014106 on January 10, 2019. The '564 Patent claims priority to, and is a continuation application of, U.S. Patent App. No. 15/352,646, filed on November 16, 2016, now U.S. Patent No. 10,091,186. Any description of the '564 Patent herein is provided solely for compliance with the Commission Rules, and is not

intended to limit, define, or otherwise affect the scope, construction, and/or application of the '564 Patent's claim language.

79. The '564 Patent contains 53 claims, including 2 independent claims and 51 dependent claims. Pursuant to Commission Rule 210.12(a)(9)(vii), Complainants assert that Dell, Hisense, HP, Lenovo, LG, TCL, MediaTek, and Realtek digital video-capable devices, and components thereof (together, the "'564 Accused Products'"), infringe at least claims 1-11, 14-23, 25, and 28 of the '564 Patent, literally or under the doctrine of equivalents as described more fully below.

80. Pursuant to Commission Rule 210.12(a)(9)(vi), in non-technical terms, the '564 Patent discloses and claims a device for receiving protected content such as digital video. As taught in the '564 Patent, the device includes a processor circuit arranged to execute instructions to provide a certificate to another device, such as a transmitter of digital video that determines based on the certificate that the receiving device is compliant with at least one compliance rule. The device is also arranged to receive a first signal from the transmitter, to create a second signal that is derived from a secret known by the device, and to provide the second signal to the transmitter. The device is arranged to receive the protected content from the transmitter when the transmitter determines that the second signal is derived from the secret and a time between the sending of the first signal and the receiving of the second signal is less than a predetermined time.

81. At a high level, the innovations taught in the '564 Patent are directed to cutting-edge anti-piracy technology. This technology provides anti-piracy benefits such as ensuring that protected content is received only by securely authenticated receiver devices located sufficiently near a transmitting device. In this way, the '564 Patent helps reduce digital video piracy. Absent such content protection, for example, and as discussed above, the American content industry would

face even more detrimental economic consequences from rampant piracy, both domestically and globally.

VI. UNFAIR ACTS OF PROPOSED RESPONDENTS – INFRINGEMENT AND IMPORTATION

82. On information and belief, each Respondent imports, sells for importation, and/or sells after importation into the United States, Accused Products that infringe the Asserted Patents, directly or indirectly, literally or under the doctrine of equivalents.

A. Direct Infringement

1. U.S. Patent No. 9,436,809

83. On information and belief, the Dell, HP, Lenovo, LG, and Intel Respondents each import, sell for importation, and/or sell after importation into the United States, Accused Products that directly infringe the '809 Patent, literally or under the doctrine of equivalents.

84. Pursuant to Commission Rule 210.12(a)(9)(viii), exemplary claim charts comparing claims 1, 17 and 49 of the '809 Patent to the Representative Accused Products are attached as Exhibit 26 (Dell/Intel Products), Exhibit 27 (HP/Intel Products), Exhibit 28 (Lenovo/Intel Products), and Exhibit 29 (LG/Intel Products).

2. U.S. Patent No. 9,590,977

85. On information and belief, each of the Dell, Hisense, HP, Lenovo, LG, TCL, MediaTek, and Realtek Respondents import, sell for importation, and/or sell after importation into the United States, Accused Products that directly infringe the '977 Patent, literally or under the doctrine of equivalents.

86. Pursuant to Commission Rule 210.12(a)(9)(viii), exemplary claim charts comparing claims 1 and 11 of the '977 Patent to the Representative Accused Products are attached as Exhibit 30 (Dell/MediaTek Products), Exhibit 31 (Hisense/MediaTek Products), Exhibit 32

(HP/MediaTek Products), Exhibit 33(Lenovo/Realtek Products), Exhibit 34 (LG/Realtek Products), Exhibit 35 (TCL/MediaTek Products).

3. U.S. Patent No. 10,091,186

87. On information and belief, the Dell, HP, Lenovo, LG, and Intel Respondents each import, sell for importation, and/or sell after importation into the United States, Accused Products that directly infringe the '186 Patent, literally or under the doctrine of equivalents.

88. Pursuant to Commission Rule 210.12(a)(9)(viii), exemplary claim charts comparing claim 1 of the '186 Patent to the Representative Accused Products are attached as Exhibit 37 (Dell/Intel Products), Exhibit 38 (HP/Intel Products), Exhibit 39 (Lenovo/Intel Products), and Exhibit 40 (LG/Intel Products).

4. U.S. Patent No. 10,298,564

89. On information and belief, each of the Dell, Hisense, HP, Lenovo, LG, TCL, MediaTek, and Realtek Respondents import, sell for importation, and/or sell after importation into the United States, Accused Products that directly infringe the '564 Patent, literally or under the doctrine of equivalents.

90. Pursuant to Commission Rule 210.12(a)(9)(viii), exemplary claim charts comparing claim 1 of the '564 Patent to the Representative Accused Products are attached as Exhibit 41 (Dell/MediaTek Products), Exhibit 42 (Hisense/MediaTek Products), Exhibit 43 (HP/MediaTek Products), Exhibit 44 (Lenovo/Realtek Products), Exhibit 45 (LG/Realtek Products), Exhibit 46 (TCL/MediaTek Products).

A. Indirect Infringement

1. The Component Respondents

91. On information and belief, each of the Component Respondents (i.e., Intel, MediaTek, and Realtek) use, sell, offer for sale, and/or import Intel, MediaTek and/or Realtek Accused Products in the United States as set forth below.

i. Intel

92. On information and belief, Intel: (a) tests, evaluates, and demonstrates Intel Accused Products in the United States; and (b) sells, offers for sale, and imports into the United States Intel Accused Products to one or more proposed Respondents, including Dell, HP, Lenovo, and LG.

93. On information and belief, Intel contributes to and induces direct infringement by others, including Intel's customers, one or more of proposed Respondents Dell, HP, Lenovo, and LG, and consumers and users of the Intel articles and the devices into which they are incorporated. Such directly infringing acts by these others include importation, sales, use, and offer for sale of the foregoing articles that are covered by, the Asserted Patents.

94. Upon information and belief, Intel had, and has, knowledge of, or was willfully blind to, the Asserted Patents. For example, Intel has knowledge of the Asserted Patents as a result of the filing and/or service of this Complaint. Additionally, prior to, or contemporaneous with, the filing of this Complaint, Intel had actual knowledge of the Asserted Patents by way of the Related Litigation, described below, and a notice letter. Exhibit 47 (Letter to Intel dated September 17, 2020).

95. Upon information and belief, Intel knowingly induced and induces the foregoing others' directly infringing acts with specific intent to encourage infringement by those others. Upon information and belief, Intel made the Intel Accused Products such as to result in infringement of the Asserted Patents if made, used, sold, offered for sale, or imported into the

United States. Upon information and belief, Intel provided, directly or indirectly, the Intel Accused Products to the foregoing other direct infringers knowing and intending that those others would use, sell, offer for sale, and import into the United States those Intel Accused Products or products incorporating them, thereby directly infringing the Asserted Patents. Intel also contributes to the foregoing infringement by others because the Intel Accused Products have no substantial non-infringing uses and are a material part of the invention of each Asserted Patent and claim. Thus, on information and belief, Intel is contributing to and/or inducing the infringement of the Asserted Patents.

ii. MediaTek

96. On information and belief, MediaTek: (a) tests, evaluates, and demonstrates MediaTek Accused Products in the United States; and (b) sells, offers for sale, and imports into the United States MediaTek Accused Products to one or more Proposed Respondents, including Dell, Hisense, HP, LG, and TCL.

97. On information and belief, MediaTek contributes to and induces direct infringement by others, including MediaTek's customers, one or more of Proposed Respondents Dell, Hisense, HP, LG, and TCL, and consumers and users of the MediaTek articles and the devices into which they are incorporated. Such directly infringing acts by these others include importation, sale, use, and offer for sale of the foregoing articles that are covered by, the Asserted Patents.

98. Upon information and belief, MediaTek had, and has, knowledge of, or was willfully blind to, the Asserted Patents. For example, MediaTek has knowledge of the Asserted Patents as a result of the filing and/or service of this Complaint. Additionally, prior to, or contemporaneous with, the filing of this Complaint, MediaTek had actual knowledge of the

Asserted Patents by way of the Related Litigation, described below, and a notice letter. Exhibit 48 (Letter to MediaTek dated September 17, 2020).

99. Upon information and belief, MediaTek knowingly induced and induces the foregoing others' directly infringing acts with specific intent to encourage infringement by those others. Upon information and belief, MediaTek made the MediaTek Accused Products such as to result in infringement of the Asserted Patents if made, used, sold, offered for sale, or imported into the United States. Upon information and belief, MediaTek provided, directly or indirectly, the MediaTek Accused Products to the foregoing other direct infringers knowing and intending that those others would use, sell, offer for sale, and import into the United States those MediaTek Accused Products or products incorporating them, thereby directly infringing the Asserted Patents. MediaTek also contributes to the foregoing infringement by others because the MediaTek Accused Products have no substantial non-infringing uses and are a material part of the invention of each Asserted Patent and claim. Thus, on information and belief, MediaTek is contributing to and/or inducing the infringement of the Asserted Patents.

iii. Realtek

100. On information and belief, Realtek: (a) tests, evaluates, and demonstrates Realtek Accused Products in the United States; and (b) sells, offers for sale, and imports into the United States Realtek Accused Products to one or more proposed Respondents, including Lenovo, LG, and TCL.

101. On information and belief, Realtek contributes to and induces direct infringement by others, including Realtek's customers, one or more of proposed Respondents Lenovo, LG, and TCL, and consumers and users of the Realtek articles and the devices into which they are

incorporated. Such directly infringing acts by these others include importation, sales, use, and offer for sale of the foregoing articles that are covered by, the Asserted Patents.

102. Upon information and belief, Realtek had, and has, knowledge of, or was willfully blind to, the Asserted Patents. For example, Realtek has knowledge of the Asserted Patents as a result of the filing and/or service of this Complaint. Additionally, prior to, or contemporaneous with, the filing of this Complaint, Realtek had actual knowledge of the Asserted Patents by way of the Related Litigation, described below, and a notice letter. Exhibit 49 (Letter to Realtek dated September 17, 2020).

103. Upon information and belief, Realtek knowingly induced and induces the foregoing others' directly infringing acts with specific intent to encourage infringement by those others. Upon information and belief, Realtek made the Realtek Accused Products such as to result in infringement of the Asserted Patents if made, used, sold, offered for sale, or imported into the United States. Upon information and belief, Realtek provided, directly or indirectly, the Realtek Accused Products to the foregoing other direct infringers knowing and intending that those others would use, sell, offer for sale, and import into the United States those Realtek Accused Products or products incorporating them, thereby directly infringing the Asserted Patents. Realtek also contributes to the foregoing infringement by others because the Realtek Accused Products have no substantial non-infringing uses and are a material part of the invention of each Asserted Patent and claim. Thus, on information and belief, Realtek is contributing to and/or inducing the infringement of the Asserted Patents.

2. The Device Respondents

104. On information and belief, Dell, Hisense, HP, Lenovo, LG, and/or TCL Respondents (collectively, the "Device Respondents") contribute to and induce direct infringement by others, including Intel, MediaTek and/or Realtek. The Device Respondents had

and have knowledge of, or were willfully blind to, the Asserted Patents. For example, the Device Respondents have knowledge of the Asserted Patents as a result of the filing and/or service of this Complaint. Additionally, the Device Respondents had actual knowledge of the Asserted Patents at the latest by way of the Related Litigation, described below, and a notice letter—if not sooner. Exhibit 50 (Letter to Dell dated September 16, 2020); Exhibit 51 (Letter to Hisense dated September 17, 2020); Exhibit 52 (Letter to HP dated September 16, 2020); Exhibit 53 (Letter to Lenovo dated September 16, 2020); Exhibit 54 (Letter to TCL dated September 17, 2020).

105. The Device Respondents knowingly induce the directly infringing acts of others with specific intent to encourage infringement by those others. For example, TCL induces MediaTek's and Realtek's direct infringement by contracting with and encouraging MediaTek and Realtek to sell and import into the United States MediaTek Accused Products and Realtek Accused Products, including such components that are incorporated into TCL Accused Products. TCL knows or should have known that these induced acts directly infringe the Asserted Patents because of, for example, the infringement allegations and evidence provided in connection with this Complaint. Also, for example, TCL contributes to the foregoing infringement by others because neither the MediaTek Accused Products nor the Realtek Accused Products have any substantial non-infringing uses, and such components are a material part of the invention of each Asserted Patent and claim.

106. Additionally, each of the Device Respondents knowingly induces the directly infringing acts of their downstream customers, with specific intent to encourage infringement by such customers. For example, the Device Respondents encourage infringement by their downstream customers by labeling their device ports with infringing functionality (e.g., "HDCP

2.2”), and/or publishing websites and user manuals that instruct consumers how to connect, utilize, and troubleshoot devices in such a way that makes use of the infringing functionality.

B. Specific Instances of Importation and Sale

1. Dell

107. On information and belief, Dell is importing, selling for importation, and/or selling within the United States after importation, certain digital video-capable devices and components thereof.

108. Prior to filing the Complaint, representatives for Complainants purchased several imported Dell products within the United States. Pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 55 includes a copy of a receipt for purchase in the United States of a representative Dell computer product, the Dell Inspiron 13 5000, Model No. Inspiron 13 5391 (the “Dell Representative Computer Product”), and at least one photograph of the Dell Representative Computer Product. Pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 56 includes a copy of a receipt for purchase in the United States of a representative Dell display product, the Dell UltraSharp 27 4K PremierColor Monitor, Model No. UP2720Q (the “Dell Representative Display Product”), and at least one photograph of the Dell Representative Display Product.

109. Pursuant to Commission Rule 210.12(a)(3), the following exhibit shows that the Dell Representative Computer Product was “Made in China.” Exhibit 57 (Dell Inspiron 13 5000, Model No. Inspiron 13 5391 – China). Accordingly, the Dell Representative Computer Product was imported into the United States. Likewise, the following exhibit shows that the Dell Representative Display Product was “Made in China.” Exhibit 58 (Dell UltraSharp 27 4K PremierColor Monitor, Model No. UP2720Q – China). Accordingly, the Dell Representative Display Product was imported into the United States.

110. Thus, Dell is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation, at least the Dell Representative Computer Product and the Dell Representative Display Product, as well as any other Dell Accused Products that infringe the Asserted Patents.

2. Hisense

111. On information and belief, Hisense is importing, selling for importation, and/or selling within the United States after importation, certain digital video-capable devices and components thereof. The specific instances set forth below are representative examples of Hisense's unlawful importation, sale for importation, and/or sale within the United States after importation of infringing products.

112. Prior to filing the Complaint, representatives for Complainants purchased an imported Hisense product in the United States. Pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 59 (Hisense H65G Series 4K UHD Android Smart TV, Model No. 43H6570G) includes a copy of a receipt for a purchase in the United States of a representative device, the Hisense H65G Series 4K UHD Android Smart TV, Model No. 43H6570G (the "Hisense Representative Product"), and at least one photograph of the Hisense Representative Product.

113. Pursuant to Commission Rule 210.12(a)(3), the following exhibit shows that the Hisense Representative Product was "Assembled in Mexico." Exhibit 60 (Hisense H65G Series 4K UHD Android Smart TV, Model No. 43H6570G – Mexico). Accordingly, upon information and belief, the infringing Hisense Representative Product was imported.

114. Thus, Hisense is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation, at least the Hisense Representative Product, as well as any other Hisense Accused Products that infringe the Asserted Patents.

3. HP

115. On information and belief, HP is importing, selling for importation, and/or selling within the United States after importation, certain digital video-capable devices and components thereof.

116. Prior to filing the Complaint, representatives for Complainants purchased several imported HP products in the United States. Pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 61 includes a copy of a receipt for purchase in the United States of a representative computing product, an HP ProBook x360 11 G6 EE Notebook PC, Model No. 3C534UT#ABA (“HP Representative Computer Product”), and a series of photographs of the product. Pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 62 includes a copy of a receipt for purchase in the United States of a representative display product, an HP ENVY 27 27-inch Monitor, Model W5A12AA#ABA (“HP Representative Display Product”), and a series of photographs of the product.

117. Pursuant to Commission Rule 210.12(a)(3), the following exhibit shows that the HP Representative Computer Product was “Made in China.” Exhibit 63 (HP ProBook x360 11 G6 EE Notebook PC, Model No. 3C534UT#ABA - China). Accordingly, the HP Representative Computer Product was imported into the United States. Likewise, the following exhibit shows that the HP Representative Display Product was “Made in China.” Exhibit 64 (HP ENVY 27 27-inch Monitor, Model W5A12AA#ABA - China). Accordingly, the HP Representative Display Product was imported into the United States.

118. Thus, HP is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation, at least the HP Representative Computer Product and the HP Representative Display Product, as well as any other HP Accused Products that infringe the Asserted Patents.

4. Lenovo

119. On information and belief, Lenovo is importing, selling for importation, and/or selling within the United States after importation, certain digital video-capable devices and components thereof.

120. Prior to filing the Complaint, representatives for Complainants purchased several imported Lenovo products in the United States. Pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 65 includes a copy of a receipt for purchase in the United States of a representative product, the Lenovo IdeaPad Flex 5 14 laptop computer, Model No. 81X1000QUS (“Lenovo Representative Computer Product”), and at least one photograph of the product. Pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 66 includes a copy of a receipt for purchase in the United States of a representative product, the Lenovo ThinkVision P32p-20 31.5-inch 16:9 UHD Monitor, Model 62A2GAR2US (“Lenovo Representative Display Product”), and at least one photograph of the product.

121. Pursuant to Commission Rule 210.12(a)(3), the following exhibit shows that the Lenovo Representative Computer Product was “Made in China.” Exhibit 67 (Lenovo IdeaPad Flex 5 14 laptop computer, Model No. 81X1000QUS - China). Accordingly, the Lenovo Representative Computer Product was imported into the United States. Likewise, the following exhibit shows that the Lenovo Representative Display Product was “Made in China.” Exhibit 68 (Lenovo ThinkVision P32p-20 31.5-inch 16:9 UHD Monitor, Model 62A2GAR2US - China). Accordingly, the Lenovo Representative Display Product was imported into the United States.

122. Thus, Lenovo is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation, at least the Lenovo Representative Computer Product and the Lenovo Representative Display Product, as well as any other Lenovo Accused Products that infringe the Asserted Patents.

5. LG

123. On information and belief, LG is importing, selling for importation, and/or selling within the United States after importation, certain digital video-capable devices and components thereof. The specific instances set forth below are representative examples of LG's unlawful importation, sale for importation, and/or sale within the United States after importation of infringing products.

124. Prior to filing the Complaint, representatives for Complainants purchased several imported LG products in the United States. Pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 69 (LG UN7300 Series LED 4K UHD Smart webOS TV, Model No. 43UN7300PUF) includes a copy of a receipt for a purchase in the United States of a representative display device, the LG UN7300 Series LED 4K UHD Smart webOS TV, Model No. 43UN7300PUF (the "LG Representative Display Product"), and at least one photograph of the LG Representative Display Product. Likewise, Exhibit 70 (LG gram 15" Ultra-Lightweight Laptop, Model No. 15Z90N-U.ARS5U1) includes a copy of a receipt for a purchase in the United States of a representative computing device, the LG gram 15" Ultra-Lightweight Laptop, Model No. 15Z90N-U.ARS5U1 (the "LG Representative Computer Product"), and at least one photograph of the LG Representative Computer Product.

125. Pursuant to Commission Rule 210.12(a)(3), the following exhibit shows that the LG Representative Display Product was "Assembled in Mexico." Exhibit 71 (LG UN7300 Series LED 4K UHD Smart webOS TV, Model No. 43UN7300PUF - Mexico). Accordingly, upon information and belief, the infringing the LG Representative Computer Product was imported. Likewise, the following exhibit shows that the LG Representative Computer Product is a "Product of China." Exhibit 72 (LG gram 15" Ultra-Lightweight Laptop, Model No. 15Z90N-U.ARS5U1 -

China). Accordingly, upon information and belief, the infringing the LG Representative Computer Product was imported.

126. Thus, LG is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation, at least the LG Representative Display Product and the LG Representative Computer Product, as well as any other LG Accused Products that infringe the Asserted Patents.

6. TCL

127. On information and belief, TCL is importing, selling for importation, and/or selling within the United States after importation, certain digital video-capable devices and components thereof. The specific instances set forth below are representative examples of TCL's unlawful importation, sale for importation, and/or sale within the United States after importation of infringing products.

128. Prior to filing the Complaint, representatives for Complainants purchased at least one imported TCL product in the United States. Pursuant to Commission Rule 210.12(a)(9)(x), Exhibit 73 (TCL 4-Series 4K UHD Smart TV, Model No. 43S425) includes copies of receipts for purchase in the United States of a representative device, the TCL 4-Series 4K UHD Smart TV, Model No. 43S425 (the "TCL Representative Product"), and at least one photograph of this product.

129. Pursuant to Commission Rule 210.12(a)(3), the following exhibit shows that the TCL Representative Product was "Manufactured in China." Exhibit 75 (TCL 4-Series 4K UHD Smart TV, Model No. 43S425 - China). Accordingly, the TCL Representative Product was imported into the United States.

130. Thus, TCL is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation, at least the TCL

Representative Product, as well as any other TCL Accused Products that infringe the Asserted Patents.

7. Intel

131. On information and belief, Intel is importing, selling for importation, and/or selling within the United States after importation, certain components incorporated in the accused devices of certain of the other Proposed Respondents.

132. The specific instances set forth below are representative examples of Intel's unlawful importation, sale for importation, and/or sale within the United States after importation of infringing components. Prior to filing the Complaint, representatives for Complainants purchased the imported digital video devices in the United States, each containing a component provided by Intel. The chart below summarizes the information set forth in more detail below:

Device	Representative Intel Component⁵
Dell Inspiron 13 5000 Model No. Inspiron 13 5391	10th Gen Intel Core i3-10110U Processor
HP ProBook x360 11 G6 EE Notebook PC Model No. 3C534UT#ABA	10th Gen Intel Core i3-10110Y Processor
Lenovo IdeaPad Flex 5 14 laptop computer Model No. 81X1000QUS	10th Gen Intel Core i3-1005G1 Processor
LG gram 15" Ultra-Lightweight Laptop Model No. 15Z90N-U.ARS5U1	10th Gen Intel Core i5-1035G7 Processor

133. Pursuant to Commission Rule 210.12(a)(9)(x) and 210.12(a)(3), Exhibit 55 includes a copy of a receipt for purchase in the United States of a representative Dell computing product incorporating an Intel component, the Dell Inspiron 13 5000, Model No. Inspiron 13 5391

⁵ Each Intel component identified in this chart includes the core processor, main board hardware, integrated operating system, middleware, application program, video processing, and/or digital rights management ("DRM") software that runs on the respective product in which such components are incorporated.

(the “Dell Representative Computer Product”), and at least one photograph showing the Intel 10th Generation Intel Core i3-10110U Processor component within the product. *See also* Exhibit 77 (https://www.Dell.com/en-us/member/shop/Dell-laptops/inspiron-13-5000-laptop/spd/inspiron-13-5391-wifi-laptop/nn5391dopvh#features_section). As already alleged, labels state that the Dell Representative Computer Product was “Made in China.”

134. Pursuant to Commission Rule 210.12(a)(9)(x) and 210.12(a)(3), Exhibit 61 includes a copy of a receipt for purchase in the United States of a representative HP computer product incorporating a Intel component, the HP ProBook x360 11 G6 EE Notebook PC, Model No. 3C534UT#ABA (“HP Representative Computer Product”), and at least one photograph showing the Intel 10th Generation Intel Core i3-10110Y Processor component within the product. *See also* Exhibit 78 (<https://store.hp.com/us/en/pdp/hp-probook-x360-11-g6-ee-notebook-pc>). As already alleged, labels state that the HP Representative Computer Product was “Made in China.”

135. Pursuant to Commission Rule 210.12(a)(9)(x) and 210.12(a)(3), Exhibit 65 includes a copy of a receipt for purchase in the United States of a representative Lenovo computer product incorporating a Intel component, the Lenovo IdeaPad Flex 5 14 laptop computer, Model No. 81X1000QUS (“Lenovo Representative Computer Product”), and at least one photograph showing the Intel 10th Generation Intel Core i3-1005G1 Processor component within the product. *See also* Exhibit 79 (<https://www.lenovo.com/us/en/laptops/ideapad/ideapad-flex-series/IdeaPad-Flex-5-14IIL-05/p/88IPF501452>). As already alleged, labels state that the Lenovo Representative Computer Product was “Made in China.”

136. Pursuant to Commission Rule 210.12(a)(9)(x) and 210.12(a)(3), Exhibit 70 includes a copy of a receipt for purchase in the United States of a representative LG computer product incorporating a Intel component, the LG gram 15” Ultra-Lightweight Laptop, Model No.

15Z90N-U.ARS5U1 (“LG Representative Computer Product”), and at least one photograph showing the Intel 10th Generation Intel Core i5-1035G7 Processor component within the product. *See also* Exhibit. 80 (<https://www.lg.com/us/laptops/lg-15z90n-u.ars5u1-ultra-slim-laptop>). As already alleged, labels state that the LG Representative Computer Product is a “Product of China.”

137. Accordingly, the 10th Generation Intel Core i3-10110U Processor, 10th Generation Intel Core i3-10110Y Processor, 10th Generation Intel Core i3-1005G1 Processor, and 10th Generation Intel Core i5-1035G7 Processor components (together the “Intel Representative Components”) were imported within the computing devices in which they were incorporated.

138. Thus, Intel is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation, at least the Intel Representative Components, as well as any other Intel Accused Components that infringe the Asserted Patents.

8. MediaTek

139. On information and belief, MediaTek is importing, selling for importation, and/or selling within the United States after importation, certain components incorporated in the accused devices of certain of the other Proposed Respondents.

140. The specific instances set forth below are representative examples of MediaTek’s unlawful importation, sale for importation, and/or sale within the United States after importation of infringing components. Prior to filing the Complaint, representatives for Complainants purchased the imported displays in the United States, each containing a component provided by MediaTek. The chart below summarizes the information set forth in more detail below:

Device	Representative MediaTek Component
Hisense H65G Series 4K UHD Android Smart TV Model No. 43H6570G	MSD6886NQHT (Mstar) ⁶
TCL 4-Series 4K UHD Smart TV Model No. 43S425	MSDURN1801T (Mstar)
Dell UltraSharp 27 4K PremierColor Monitor Model No. UP2720Q	MST9U13V4 (Mstar)
HP ENVY 27 27-inch Monitor Model No. W5A12AA#ABA	MST9U11H1 (Mstar)

141. Pursuant to Commission Rule 210.12(a)(9)(x) and 210.12(a)(3), Exhibit 59 includes a copy of a receipt for purchase in the United States of a representative display product, the Hisense H65G Series 4K UHD Android Smart TV, Model No. 43H6570G (“Hisense Representative Product”), and at least one photograph showing the MediaTek MSD6886NQHT (Mstar) component within the Hisense Representative Product. Labels on the Hisense Representative Product state that it was “Made in Mexico.”

142. Pursuant to Commission Rule 210.12(a)(9)(x) and 210.12(a)(3), Exhibit 73 includes a copy of a receipt for purchase in the United States of a representative display product, the TCL 4-Series 4K UHD Smart TV, Model No. 43S425 (“TCL Representative Product”), and at least one photograph showing the MediaTek MSDURN1801T (Mstar) component within the TCL Representative Product. Labels on the TCL Representative Product state that it was “Manufactured in China.”

⁶ MStar Semiconductor, Inc. was formerly a subsidiary of MediaTek, but it no longer exists as an entity. *See* MediaTek 2019 Annual Report at F-27 (“For the purpose of reorganization, MStar Semiconductor, Inc. was dissolved due to the merger with MediaTek Inc. on January 1, 2019. Subsidiaries previously owned by MStar Semiconductor, Inc., were transferred to MediaTek Inc.”) (<https://cdn-www.mediatek.com/posts/2019-MediaTek-Annual-Report.pdf>). Notwithstanding, it appears that MediaTek still uses the “Mstar” mark on at least some of its components.

143. Pursuant to Commission Rule 210.12(a)(9)(x) and 210.12(a)(3), Exhibit 56 includes a copy of a receipt for purchase in the United States of a representative display product, the Dell UltraSharp 27 4K PremierColor Monitor, Model No. UP2720Q (“Dell Representative Product”), and at least one photograph showing the MediaTek MST9U13V4 (Mstar) component within the Dell Representative Product. Labels on the Dell Representative Product state that it was “Made in China.”

144. Pursuant to Commission Rule 210.12(a)(9)(x) and 210.12(a)(3), Exhibit 62 includes a copy of a receipt for purchase in the United States of a representative display product, the HP ENVY 27 27-inch Monitor, Model No. W5A12AA#ABA (“HP Representative Display Product”), and at least one photograph showing the MediaTek MST9U11H1 (Mstar) component within the HP Representative Display Product. Labels on the HP Representative Display Product state that it was “Made in China.”

145. Accordingly, the MediaTek MSD6886NQHT, MSDURN1801T, MST9U13V4, MST9U11H1 components (together, the “MediaTek Representative Components”) were imported within the computing and display devices in which they were incorporated.

146. Thus, MediaTek is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation, at least the MediaTek Representative Components, as well as any other MediaTek Accused Components that infringe the Asserted Patents.

9. Realtek

147. On information and belief, Realtek is importing, selling for importation, and/or selling within the United States after importation, certain components incorporated in the accused devices of certain of the other Proposed Respondents.

148. The specific instances set forth below are representative examples of Realtek’s unlawful importation, sale for importation, and/or sale within the United States after importation of infringing components. Prior to filing the Complaint, representatives for Complainants purchased the imported displays in the United States, each containing a component provided by Realtek. The chart below summarizes the information set forth in more detail below:

Device	Representative Realtek Component
Lenovo ThinkVision P32p-20 31.5-inch 16:9 UHD Monitor (Model 62A2GAR2US)	Realtek (RTD2795T)
LG 43” Class UN7300 Series LED 4K UHD Smart webOS TV (Model 43UN7300PUF)	Realtek (LGE0551-AS1)

149. Pursuant to Commission Rule 210.12(a)(9)(x) and 210.12(a)(3), Exhibit 66 includes a copy of a receipt for purchase in the United States of a representative Lenovo display product incorporating a Realtek component, the Lenovo ThinkVision P32p-20 31.5-inch 16:9 UHD Monitor, Model 62A2GAR2US, and at least one photograph showing the Realtek RTD2795T component within the product. Labels state that it was “Made in China.”

150. Pursuant to Commission Rule 210.12(a)(9)(x) and 210.12(a)(3), Exhibit 69 includes a copy of a receipt for purchase in the United States of a representative LG display product incorporating a Realtek component, the LG 43” Class UN7300 Series LED 4K UHD Smart webOS TV, Model 43UN7300PUF, and at least one photograph showing the Realtek LGE0551-AS1 component within the product. Labels state that it was “Assembled in Mexico.”

151. Accordingly, the Realtek RTD2795T and LGE0551-AS1 components (together the “Realtek Representative Components”) were imported within the display devices in which they were incorporated.

152. Thus, Realtek is violating Section 337 of the Tariff Act of 1930 by importing, selling for importation, and/or selling within the United States after importation, at least the

Realtek Representative Components, as well as any other Realtek Accused Components that infringe the Asserted Patents.

VII. HARMONIZED TARIFF SCHEDULE ITEM NUMBERS

153. On information and belief, the Harmonized Tariff Schedule of the United States item numbers under which the infringing digital video capable devices and components thereof may be imported into the United States may be at least HTSUS 8471.30.01 (Portable automatic data processing machines, weighing not more than 10 kg, consisting of at least a central processing unit, a keyboard and a display); 8471.49.00 (Other automatic data processing machines entered in the form of systems); 8471.50.01 (Processing units other than those of subheading 8471.41 or 8471.49, whether or not containing in the same housing one or two of the following types of unit: storage units, input units, output units); 8528.52.00 (Other monitors: Capable of directly connecting to and designed for use with an automatic data processing machine); 8529.10.21 (Television); 8541.21.00 (Transistors, other than photosensitive transistors); 8541.50.00 (Other semiconductor devices); 8542 (Electronic integrated circuits); and 8542.31.00 (Processors and controllers, whether or not combined with memories, converters, logic circuits, amplifiers, clock and timing circuits, or other circuits).

154. These classifications are intended for illustration only and are not intended to be restrictive of the accused products or of products subject to the relief requested.

VIII. THE DOMESTIC INDUSTRY

155. In accordance with Section 337(a)(2) and (a)(3), a domestic industry exists in the United States in connection with each of the Asserted Patents. This domestic industry comprises significant investments in plant and equipment, significant employment of labor and capital, and substantial investment in the exploitation of the claimed inventions through research, development,

engineering, and/or licensing. All of the relevant investments and related activities are within the United States in protected articles that practice the Asserted Patents.

A. The Technical Prong of the Domestic Industry Requirement Is Satisfied

156. As explained below, each of the domestic industry protected articles practices at least one claim of one or more of the Asserted Patents.

157. Pursuant to Commission Rule 210.12(a)(9)(ix), claim charts and explanatory information for exemplary Domestic Industry Products of Philips' licensees Microsoft, Samsung, and Roku that currently practice at least one exemplary claim of one or more of each Asserted Patent accompany this Complaint. *See* Exhibit 81 (Microsoft Domestic Industry Claim Chart for '809 Patent), Exhibit 82 (Microsoft Domestic Industry Claim Chart for '977 Patent), Exhibit 83 (Microsoft Domestic Industry Claim Chart for '186 Patent), Exhibit 84 (Microsoft Domestic Industry Claim Chart for '564 Patent), Exhibit 85 (Samsung Domestic Industry Claim Chart for '809 Patent), Exhibit 86 (Samsung Domestic Industry Claim Chart for '977 Patent), Exhibit 87 (Samsung Domestic Industry Claim Chart for '186 Patent), Exhibit 88 (Samsung Domestic Industry Claim Chart for '564 Patent), Exhibit 89 (Roku Domestic Industry Claim Chart for '809 Patent), Exhibit 90 (Roku Domestic Industry Claim Chart for '977 Patent), Exhibit 91 (Roku Domestic Industry Claim Chart for '186 Patent), Exhibit 92 (Roku Domestic Industry Claim Chart for '564 Patent). Pursuant to Commission Rule 210.12(a)(9)(x), Exhibits 81-92 contain visual representations of representative domestic industry protected articles.

1. Practice of the '809 Patent

158. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 81 is a claim chart that discloses how the exemplary Microsoft Surface Pro 7 Product practices at least claims 1, 17, and 49 of the '809 Patent.

159. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 85 is a claim chart that discloses how the Samsung Galaxy Tab S6 Lite tablet Product practices at least claims 1, 17, and 49 of the '809 Patent.

160. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 89 is a claim chart that discloses how the Roku Premiere Streaming Stick Product practices at least claims 1, 17, and 49 of the '809 Patent.

2. Practice of the '977 Patent

161. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 82 is a claim chart that discloses how the exemplary Microsoft Surface Hub 2S Product practices at least claims 1 and 11 of the '977 Patent.

162. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 86 is a claim chart that discloses how the Samsung Q60T QLED 4K UHD HDR Smart TV Product practices at least claims 1 and 11 of the '977 Patent.

163. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 90 is a claim chart that discloses how the Roku Premiere Streaming Stick Product practices at least claims 1 and 11 of the '977 Patent.

3. Practice of the '186 Patent

164. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 83 is a claim chart that discloses how the exemplary Microsoft Surface Pro 7 Product practices at least claim 1 of the '186 Patent.

165. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 87 is a claim chart that discloses how the Samsung Galaxy Tab S6 Lite tablet Product practices at least claim 1 of the '186 Patent.

166. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 91 is a claim chart that discloses how the Roku Premiere Streaming Stick Product practices at least claim 1 of the '186 Patent.

4. Practice of the '564 Patent

167. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 84 is a claim chart that discloses how the exemplary Microsoft Surface Hub 2S Product practices at least claim 1 of the '564 Patent.

168. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 88 is a claim chart that discloses how the Samsung Q60T QLED 4K UHD HDR Smart TV Product practices at least claim 1 of the '564 Patent.

169. Pursuant to Commission Rule 210.12(a)(9)(ix), Exhibit 92 is a claim chart that discloses how the Roku Premiere Streaming Stick Product practices at least claim 1 of the '564 Patent.

B. The Economic Prong of the Domestic Industry Requirement Is Satisfied

170. Pursuant to Commission Rule 210.12(a)(6), a domestic industry under subparts (A), (B), and (C) of Section 337(a)(3) exists by virtue of the activities and investment within the United States of Philips' domestic licensees Microsoft, Samsung, and Roku. This significant and substantial domestic investment includes monies spent on personnel, facility, equipment, manufacturing, research, product development, testing, application engineering. Separately, an economic domestic industry under subpart (C) exists by virtue of the activities and substantial investment within the United States of Philips' extensive licensing efforts in connection with the Asserted Patents.

1. Domestic Licensee Microsoft's Domestic Activities and Investments Are Significant and Substantial

171. Among the many metrics reflecting the value of Philips' patent-protected innovations, including the Asserted Patents, Microsoft Corporation ("Microsoft"), one of the largest electronics companies in the world, is licensed to practice the Asserted Patents. Confidential Exhibit 93 (Microsoft License). Based in Redmond, Washington, Microsoft designs, develops, engineers, manufactures, supports, and sells products that use the novel technology claimed by one or more of the Asserted Patents. More specifically, as set forth in more detail below, Microsoft's Surface-series tablet computers, laptops, and Surface Hub products (the "Surface Products"), including the exemplary Surface Pro 7 and Surface Hub 2S (together, the "Microsoft Protected Articles"), practice at least one claim of each of the Asserted Patents.

172. As the second largest employer in Washington State, Microsoft makes significant and substantial domestic investments in connection with the Surface Products, including the Microsoft Protected Articles. As a result, a domestic industry in the United States exists under 19 U.S.C. § 1337(a)(3)(A) due to Microsoft's significant investment in plant and equipment; under 19 U.S.C. § 1337(a)(3)(B) due to its significant employment of capital or labor; and under 19 U.S.C. § 1337(a)(3)(C) due to its substantial investment in the exploitation of the Asserted Patents through the engineering, research and development of products that practice the Asserted Patents.

173. Among Microsoft's primary product offerings are the Surface Products, including the Microsoft Protected Articles. The Surface Products include, for example, laptop computers, tablet computers, and the Surface Hub, which is an all-in-one digital whiteboard, meetings platform, and collaborative computing device. Each of the Surface Products, including the Microsoft Protected Articles, is a video-capable device. *See* Exhibit 94 at 4 (Microsoft 2020 Form

10-K (July 31, 2020)); Exhibit. 95 (<https://www.microsoft.com/en-us/surface/business>, <https://www.microsoft.com/en-us/surface>).

174. Microsoft released one of the exemplary Microsoft Protected Articles, the Surface Pro 7 tablet computer, on October 22, 2019. Microsoft released other Surface devices in 2019 and 2020: the Surface Laptop 3 on October 12, 2019, the Surface Book 3 on May 21, 2020, and the Surface Go 2 on May 12, 2020. Microsoft released the other exemplary Microsoft Protected Article, the Surface Hub 2, on April 17, 2019. *See* Exhibit 96 (Microsoft Surface Wikipedia page). The Surface Products are Microsoft-designed and manufactured hardware devices. *See* Exhibit 94 (Microsoft 2020 10-K at 2, 4).

175. On information and belief, Microsoft's Surface Products, including the Microsoft Protected Articles, each practice at least one claim of one or more of the Asserted Patents. The relevant functionality of the Surface Pro 7 is an example of the relevant functionality of the Surface devices. So too is the Surface Hub 2 an example of the relevant functionality of the Surface devices. Microsoft's practice of the Asserted Patents is alleged above and established in the attached domestic industry claim charts.

176. Microsoft makes significant investments in research and development of its existing products, as well as future products, including the Surface Products and the Microsoft Protected Articles. *See, e.g.*, Exhibit 94 at 3, 4, 11-12, 17, 19, 20, 29, 31, 34, 38, 42, 48, 54, 63, 82 (Microsoft 2020 10-K).

177. The Surface Products fall within Microsoft's More Personal Computing Division ("More Personal Computing Division"), the business segment dedicated to Windows products and licensing, Devices, including the Surface Products, and Gaming.

178. In fiscal years 2020, 2019, and 2018, Microsoft's total revenue was \$143 billion, \$126 billion, and \$110 billion, respectively. *See, e.g.*, Exhibit 94 at 33 (Microsoft 2020 10-K). In fiscal years 2020, 2019, and 2018, Microsoft's More Personal Computing Division, which includes the Surface devices, total revenue was \$48 billion, \$46 billion, and \$42 billion respectively. *See, e.g.*, Exhibit 94 at 40 (Microsoft 2020 10-K).

179. Microsoft's revenue derived specifically from the Surface Products, including the Microsoft Protected Articles, was \$6.2 billion in fiscal year 2020, \$5.7 billion in 2019, and \$4.6 billion in 2018. *See* Exhibit 94 at 38, 41 (Microsoft 2020 10-K); Exhibit 94 at 38 (Microsoft 2019 10-K). Microsoft's significant and substantial investment in the Surface Products, including the Microsoft Protected Articles, is reflected in the revenue growth along the product line. For example, in fiscal year 2020, revenue from Surface Products increased \$457 million or 8% from fiscal year 2019. *See* Exhibit 94 at 38 (Microsoft 2020 10-K). In fiscal year 2019, Surface Products revenue increased \$1.1 billion or 23% from 2018. *See* Exhibit 94 at 41 (Microsoft 2020 10-K). Based on these publicly reported revenue numbers, as a percentage of Microsoft's total revenue, Surface Products-specific revenues in 2020 comprised 4.3% of Microsoft's total revenue. In 2019, that percentage was 4.5% and in 2018 4.2%. These percentages can be used as an approximate allocation basis against Microsoft's total investments described below.

180. By any measure, Microsoft's More Personal Computing Division is of significant importance to Microsoft's business. In the past three years, revenues from the Surface Products, including the Microsoft Protected Articles, total nearly \$16.5 billion dollars and show significant revenue growth for each year. *See supra* ¶ 179 (Surface revenues) (citing Exhibit 94 at 38, 41; Exhibit 97 at 39). As stated, these revenues comprise an average of 4.25% of Microsoft's massive revenue numbers over that time.

181. On information and belief, Microsoft has expended, and continues to expend, considerable resources on plant and equipment, labor or capital, and engineering, research and development to support its Surface Products, including the Microsoft Protected Articles, in the United States. *See, e.g.*, Exhibit 94 at 3, 4, 9, 17, 20 31, 46-48, 56-57, 65, 74, 82-83.

i. Microsoft's Significant Investment in Plant and Equipment

182. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(A) exists in the United States with respect to the Surface Products, including the Microsoft Protected Articles, via Microsoft's significant investment in plant and equipment.

183. Microsoft owns or leases 34 facilities in the United States. *See* Exhibit 94 at 31 (Microsoft 2020 10-K). Microsoft's domestic facilities include "approximately 15 million square feet located in King County, Washington that is used for engineering, sales, marketing, and operations, among other general and administrative purposes." Exhibit 94 at 31 (Microsoft 2020 10-K). These facilities include approximately 10 million square feet of owned space situated on approximately 520 acres of land at Microsoft's corporate campus in Redmond, Washington and approximately five million square feet of leased space. Using the revenue-percentage allocation basis of 4.25% discussed above, a reasonable allocation of Microsoft's facility space in Washington to the Surface Products, including the Microsoft Protected Articles, alone equals approximately 637,500 square feet of facility.

184. Additionally, Microsoft owns and leases space in the United States that includes office, datacenter, and retail space. Exhibit 94 at 31 (Microsoft 2020 10-K). Portions of this office space are used for various tasks relating to Surface Products, including the Microsoft Protected Articles. These tasks include, for example, design, research and development, manufacture, and

technical support. *See, e.g.*, Exhibit 94 at 12-13, 17, 29, 31, 37-43, 46-48, 56-57, 65, 74, 82-83 (Microsoft 2020 10-K).

ii. Microsoft's Significant Employment of Labor or Capital

185. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(B) exists in the United States with respect to the Microsoft Surface Products, including the Microsoft Protected Articles, via Microsoft's significant investment employment of labor and/or capital.

186. As of June 30, 2020, Microsoft employed approximately 163,000 people on a full-time basis, 96,000 in the United States. *See* Exhibit 94 at 17 (Microsoft 2020 10-K). These employees' primary job functions included operations, manufacturing, distribution, product support, consulting services, product research and development, sales, marketing, and general and administration. *Id.* Using the revenue-percentage allocation basis of 4.25% discussed above, a fair allocation of Microsoft's labor force within the United States to the Surface Products alone, including the Microsoft Protected Articles, equals approximately 4,080 people.

187. A significant portion of Microsoft's research and development activities and other essential business operations are conducted at its corporate headquarters in Redmond, Washington, and other essential business operations are conducted at its Silicon Valley campus. *See* Exhibit 94 at 29 (Microsoft 2020 10-K). On information and belief, Microsoft invests in United States based personnel who provide research and development, design, manufacture, and technical support activities related to the Surface Products, including the Microsoft Protected Articles.

iii. Microsoft's Substantial Investments in Engineering, Research and Development

188. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(C) exists in the United States with respect to the Surface Products, including the

Microsoft Protected Articles, via Microsoft's substantial investment in its engineering, research and development, or licensing directed to the Surface Products that practice the Asserted Patents for the reasons stated above.

189. For example, Microsoft's fiscal year 2020 10-K form states that its research and development costs in 2020 were \$19.269 billion, \$16.876 billion in 2019, and \$14.726 billion in 2018. Further, in fiscal year 2020, Microsoft's research and development expenses increased \$2.4 billion or 14%, driven, in part, by "Devices," which include the Surface Products, including the Microsoft Protected Articles. *See* Exhibit 94 at 4, 42 (Microsoft 2020 10-K). Using the revenue-percentage allocation basis of 4.25% discussed above, a fair allocation of Microsoft's research and development investment to the Surface Products alone, including the Microsoft Protected Articles, equals approximately \$819 million in 2020, \$717 million in 2019, and \$626 million in 2018.

190. Based on the foregoing, Microsoft's investments in the Surface Products, including the Microsoft Protected Articles, 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 investment of Philips' domestic licensee, Microsoft.

2. Domestic Licensee Samsung's Domestic Activities and Investments Are Significant

191. Further reflecting the value of Philips' patent-protected innovations, including the Asserted Patents, another of the largest electronics companies in the world, Samsung, is licensed to practice the Asserted Patents, and to design, develop, and manufacture and sell products that practice one or more claims of such patents. Samsung is licensed to practice the Asserted Patents. *See* Confidential Exhibit 98 (Samsung License Agreement).

192. For example, Samsung’s domestic subsidiary in Austin, Texas, Samsung Austin Semiconductor, LLC (“SAS”), has made, and continues to make, significant investments in connection with the novel technology claimed in, and protected articles that practice, the Asserted Patents. As set forth in more detail below, SAS’s Exynos system-on-chip processors, which power a range of products designed, developed, manufactured, and sold by Samsung such as the Samsung Galaxy Tab S6 Lite tablet (the “Samsung Representative Exynos Product”), which practice at least one claim of the asserted ’186 Patent and ’809 Patent (the “Samsung Exynos Products”).⁷

193. In addition, Samsung sells, and repairs and/or warrants, certain displays within the United States, such as the Samsung Q60T QLED 4K UHD HDR Smart TV (the “Samsung Representative Display Product”), which practice at least one claim of the asserted ’977 Patent and ’564 Patent (the “Samsung Display Products”). Together, the Samsung Exynos Products and the Samsung Display Products are referred to as the “Samsung Protected Articles.”

194. As for the Samsung Exynos Products, SAS was founded in 1996 and is a wholly owned subsidiary of Samsung Electronics Co., Ltd. (“Samsung Electronics”). SAS is a corporation having its principal place of business located at 12100 Samsung Blvd., Austin, Texas 78754. *See* Exhibit 99 (Samsung Electronics 2019 Business Report at 7, 78); Exhibit 100 (Samsung Austin Semiconductor Company History); Exhibit 101 (Samsung Austin Semiconductor Contact Us). SAS makes significant domestic investments in connection with activities undertaken in Austin directed to the Samsung Products. As a result, a domestic industry in the United States exists under 19 U.S.C. § 1337(a)(3)(A) due to SAS’s significant investment in plant and equipment, and under 19 U.S.C. § 1337 (a)(3)(B) due to its significant employment of labor or capital, in connection

⁷ Samsung offers a wide range of Exynos-based products. On information and belief, each of these products implements an Exynos processor fabbed in Austin. *See* Ex. 102, Samsung Exynos Showcase, <https://www.samsung.com/semiconductor/minisite/exynos/showcase/others/>.

with activities and investments directed to the Samsung Products that practice the Asserted Patents, including the Samsung Protected Articles.

195. SAS is home to a massive Texas-based manufacturing site designed to “build the chips that power Samsung’s mobile phones, tablets, and other electronic devices.” SAS has “invested more than \$17 billion and created \$4 billion in economic activity for the Greater Central Texas region.” Exhibit 100 (Samsung Austin Semiconductor Company History). On information and belief, SAS’s significant and substantial domestic investments related to the Samsung Exynos Products continued through 2019 and today, and are expected to continue for the foreseeable future given Samsung’s position as a major player in the digital video-capable device market.

196. Reflecting the extensive manufacturing-related activities in Texas, at the end of Samsung’s 2019 reporting year, SAS reported ₩3,897,162,000,000 KRW (approximately USD\$3.37 billion⁸) in sales, with a profit of ₩571,391,000,000 KRW (USD\$495 million). For reporting year 2018, SAS reported ₩3,643,739,000,000 KRW (USD\$3.42 billion) in sales, with a profit of ₩434,766,000,000 KRW (USD\$388 million). And for reporting year 2017, SAS reported ₩3,473,545,000,000 KRW (USD\$3.26 billion) in sales, with a profit of ₩197,729,000,000 KRW (USD\$185 million). *See* Ex. 99, Samsung Electronics 2019 Business Report at 86-87; Ex. 103, Samsung Electronics 2018 Business Report at 92. Therefore, in connection with and through SAS’s domestic activities, including investments in engineering, testing, repair, and/or packaging and distribution of semiconductor products, SAS has generated over USD\$10 billion in revenue, and over USD\$1 billion in profit, from 2017 through 2019.

⁸ Conversion from Korean Won to US Dollars made using the exchange rate as of December 31, 2019 (\$1USD = ₩1,157.32KRW); December 31, 2018 (\$1USD = ₩1,116.98KRW); and December 31, 2017 (\$1USD = ₩1,066.13KRW). *See* <https://www.xe.com/currencycharts/?from=USD&to=KRW&view=5Y> (accessed Aug. 25, 2020).

197. SAS's Exynos processors and devices fall within Samsung's Device Solutions ("DS") Division of Samsung Electronics. Samsung Electronics 2019 Business Report at 4. The DS Division includes the Memory Business, System LSI Business, Foundry Business, and Display Panel Business. *Id.* at 5. The Foundry Business is in charge of consignment production of semiconductors. *Id.* SAS operates two semiconductor fabrication plants located in the United States. *See* Exhibit 100 (Samsung Austin Semiconductor Company History). For example, Samsung's proprietary Exynos line of chipsets include functionality that practice the Asserted Patents. The functionality of the Samsung Representative Exynos Product is exemplary of the relevant functionality of the Exynos devices. SAS's practice of the Asserted Patents is alleged above and established in the attached domestic industry claim charts.

198. On information and belief, SAS has expended, and continues to expend, considerable resources on plant and equipment, labor or capital, and engineering and research and development to support its Exynos devices in the United States. *See, e.g.,* Exhibit 99 (Samsung Electronics 2019 Business Report at 4-5, 86-87); Exhibit 103 (Samsung Electronics 2018 Business Report at 92); Exhibit 104 (*Certain Graphics Processing Chips, Systems on a Chip, and Products Containing the Same* ("Graphics Processing Chips"), Inv. No. 337-TA-941, Complaint (public version) (Nov. 21, 2014) at ¶¶ 200-202). In fact, as of 2014, in the 20 years that SAS's Austin manufacturing facility had been active, the company had invested over \$15 billion in the facility, which Samsung represented to the Commission was "one of the largest foreign investments ever in the United States." *Id.* at ¶ 200. Notably, the Commission previously concluded that these investments satisfied the economic domestic industry requirement. *See* Exhibit 105 (*Graphics Processing Chips*, Order No. 12, Initial Determination (July 16, 2015) (unreviewed)). On

information and belief, SAS's significant domestic industry investment in the Exynos processors continues to this day, including in the Samsung Exynos Products.

199. With respect to the Samsung Display Products, on information and belief, Samsung invests significant amounts in an extensive repair and warranty service industry directed to servicing the displays it sells within the United States each year. On information and belief, such warranty support and repair occurs at facilities owned and/or leased by or on behalf of Samsung, including a call center which it operates in South Carolina. Samsung employs and/or contracts with others who employ personnel who perform such warranty support and repair activities across the country.

i. Samsung's Significant Investment in Plant and Equipment

200. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(A) exists in the United States with respect to the Samsung Exynos Products via Samsung Austin Semiconductor's significant investment in plant and equipment. Likewise, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(A) also exists in the United States with respect to the Samsung Display Products via Samsung's significant investment in plant and equipment in connection with its display repair and warranty services.

201. By virtue of its manufacturing site located in Austin, Texas, SAS has made and continues to make significant investments in facilities, plant and equipment in the United States that are dedicated to the engineering, testing, manufacture, repair, and/or packaging and distribution of the Samsung Products, including chipsets which provide key functionality claimed by the Asserted Patents, including the Samsung Protected Articles. For example, SAS develops and makes semiconductor and microprocessor devices at its Austin, Texas facility called FAB1 which, at the time of its opening, was the largest semiconductor fabrication facility in the United

States. *See* Exhibit 104 (*Graphics Processing Chips*, Complaint at ¶ 200). “In June 2007, Samsung announced the opening of its second fab, or FAB2 or ‘Main Fab,’ was is an approximately 1.6 million square foot building.” *Id.* This 2.5 million square feet of total manufacturing space makes SAS one of the largest single semiconductor facilities in the United States. *Id.* On information and belief, all or nearly all of this facility is dedicated to the manufacture of the Samsung Products, including the Samsung Exynos Products.

202. Samsung investments related to the Samsung Display Products include expenditures for warranty support and repair, and for call center support for the displays it sells within the United States. On information and belief, warranty support and repair occurs both on-site, at “Central Repair Center” facilities owned and/or leased by Samsung located in California and New Jersey, and off-site at authorized service centers and dealer service centers located throughout the United States. Also on information and belief, Samsung owns and/or leases a call center which it operates in Greenville, South Carolina, which manages customer support and service for U.S. customers of Samsung products, including displays.

ii. Samsung’s Significant Employment of Labor or Capital

203. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(B) exists in the United States with respect to the Samsung Exynos Products via SAS’s significant employment of labor and/or capital in Texas. Likewise, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(B) also exists in the United States with respect to the Samsung Display Products via Samsung’s significant employment of labor and/or capital in connection with its display repair and warranty services.

204. As of December 31, 2019, Samsung employed 54,421 people worldwide in its DS business unit. *See* Exhibit 99 at 211 (2019 Business Report). Around that time, Samsung Austin

Semiconductor employed approximately 3,000 personnel resident in Austin, Texas. *See* Exhibit 106 (Andy Boxall, Mobile, *Samsung closes Texas R&D center, leaving future of Exynos chip in doubt*, (Nov. 6, 2019) (“Boxall”)). Although Samsung recently made the decision to close a facility dedicated to research and development in Austin, the approximately 3,000 employees at its Austin manufacturing facility were unaffected. *Id.* On information and belief, these employees are involved in the manufacture of products that practice the Asserted Patents, including the Samsung Exynos Products. *See, e.g.*, Exhibit 104 (*Graphics Processing Chips*, Complaint at ¶ 202). On information and belief, Samsung has also made significant capital investments in its Austin fab relating to those products. *Id.*

205. Samsung investments in labor and capital related to the Samsung Display Products include significant expenditures for the personnel engaged in Samsung’s warranty support and repair efforts within the United States, and the personnel manning Samsung’s call center support for the displays it sells within the U.S. On information and belief, personnel working for or on behalf of Samsung engage in extensive warranty support and repair activities. These personnel work on-site at Samsung’s “Central Repair Center” facilities located in Los Angeles, California and Riverdale, New Jersey, and off-site. The off-site personnel include Samsung’s trained field engineers, and personnel working at authorized service centers and dealer service centers located throughout the United States. Samsung also employs personnel to operate its customer support and service for U.S. customers of Samsung products, including displays, at its call center in Greenville, South Carolina.

206. Based on the foregoing, SAS’s investments in the Samsung Products, including the Samsung Protected Articles, are significant 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 Philips' domestic licensee, Samsung.

3. Domestic Licensee Roku, Inc.'s Domestic Activities and Investments Are Significant and Substantial

207. As yet more evidence of the value of Philips' patent-protected innovations, including the Asserted Patents, another major United States-based electronics company, Roku, Inc. ("Roku"), is licensed to practice the Asserted Patents, and to design, develop, and manufacture and sell products that practice one or more claims of such patents. Among Roku's most important product and services offerings are the Roku streaming players, such as the Roku Premiere, the Roku Ultra, and the Roku Streaming stick (the "Roku Protected Articles"). *See* Exhibit 108 (<https://www.roku.com/products/players> (last accessed Sept. 17, 2020)). Central to Roku's platform is the Roku operating system (the "Roku OS"), which is purpose-built to enable Roku to manufacture and sell its streaming players. *See* Exhibit 107 at 5 (Roku FY2019 Form 10K).

208. In connection with its streaming players Roku has made, and continues to make, significant and substantial investments within the United States. As set forth in more detail below, Roku's streaming player products are designed, developed, tested, sold, and supported by Roku within the United States. Each of these products, including the Roku Protected Articles, practice at least one claim of each of the Asserted Patents and are encompassed within the scope of Roku's license (the "Roku Products"). Roku is licensed to practice the Asserted Patents. *See* Confidential Exhibit 109 (Roku License Agreement).

209. Founded in 2002, Roku is a Delaware corporation with its current corporate headquarters, comprised of multiple buildings, located in San Jose, California. *See* Exhibit 107 at 46 (Roku FY2019 Form 10K). Until March of 2020, Roku's corporate headquarters was located in Los Gatos, California, and included space for sales, research and development, and

administrative purposes. *Id.* Roku maintains other facilities within the United States in, for example, New York, Boston, Austin, Chicago, and Santa Monica. *Id.*

210. Most of Roku's streaming player revenue, including from the Roku Protected Articles, is derived from sales within the United States. *See* Exhibit 107 at 54 (Roku FY2019 Form 10K). Reflecting the extensive domestic activities directed to the Roku streaming players, including the Roku Protected Articles, at the end of Roku's fiscal year ending December 31, 2019, Roku reported total revenue of net revenue of \$1.13 billion, with Roku streaming players accounting for \$388 million of that amount (or 34% of total). For the fiscal year ending in December 2018, Roku reported net revenue of \$728 million, with Roku streaming players accounting for \$325 million of that amount (or 44% of total). And for the fiscal year ending in December 2017, Roku reported net revenue of \$513 million, with Roku streaming players accounting for \$287 million of that amount (or 56% of total). *See* Exhibit 107 at 56-57 (Roku FY2019 Form 10K). In connection with and through Roku's domestic activities, including investments in research, development, engineering, testing, repair, and/or support of the Roku streaming products, including from the Roku Protected Articles, Roku generated approximately \$1 billion in net revenue from 2017 through 2019. Given that the Roku streaming devices, including the Roku Protected Articles, account for an average of 45% of Roku's total net revenue across the last three years, the importance of these devices to Roku's business is apparent.

211. On information and belief, Roku has expended, and continues to expend, within the United States considerable resources on plant and equipment, labor or capital, and engineering and research and development to support its streaming products, including the Roku Protected Articles. *See, e.g.,* Exhibit 107 at 46 (Roku FY2019 Form 10K).

i. Roku's Significant Investment in Plant and Equipment

212. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(A) exists in the United States with respect to the Roku streaming players, including the Roku Protected Articles, through Roku's significant investment in plant and equipment.

213. In the year ending December 31, 2019, Roku purchased \$77.2 million in property and equipment. In addition, Roku incurred more than \$30 million in lease expenses in 2019. In 2018, Roku purchased \$18.3 million in property and equipment, and that property and equipment investment number in 2017 was \$12.3 million, plus an additional \$9.2 million in leasehold improvements. *See* Exhibit 107 at 64, 97 (Roku FY2019 Form 10K).

214. Using an allocation methodology that applies (1) the percentages of streaming player revenue as a percentage of total revenue set forth above, to (2) the Roku's plant and equipment spend identified above, a reasonable allocation of these plant and equipment expenses is as follows: Roku invested approximately \$26.25 million (34% of \$77.2 million) in plant and equipment in connection with its streaming players in 2019; approximately \$8.1 million (44% of \$18.3 million) in plant and equipment in connection with its streaming players in 2018; and approximately \$11.8 million (56% of \$21.5 million) in plant, equipment, and leasehold improvements in connection with its streaming players in 2017.

215. Notably, Roku's investments in plant and equipment used specifically for research and development have steadily increased over the last several years. For example, as between 2019 compared to 2018, Roku incurred \$14.7 million more in facilities cost directed specifically to research and development. *See* Exhibit 107 at 60 (Roku FY2019 Form 10K). As between 2018 compared to 2017, Roku incurred \$4.1 million more in facilities cost directed specifically to research and development. *Id.* at 61.

ii. Roku's Significant Employment of Labor or Capital

216. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(B) exists in the United States with respect to the Roku streaming products, including the Roku Protected Articles, via Roku's significant employment of labor and/or capital.

217. For example, as of December 31, 2019, Roku employed approximately 1,650 full-time employees, of which approximately 850, or 51% of all of Roku's personnel at the time, were in research and development. *See* Exhibit 107 at 11 (Roku FY2019 Form 10K). As of December 31, 2018, Roku employed approximately 1,111 full-time employees, of which approximately 624, or 56% of all of Roku's personnel at the time, were in research and development. *See* Exhibit 110 at 10 (Roku FY2018 Form 10K). As of December 31, 2017, Roku employed approximately 817 full-time employees, of which approximately 459, or 56% of all of Roku's personnel at the time, were in research and development. *See* Exhibit 111 at 10 (Roku FY2017 Form 10K).

218. Using a similar streaming player-specific revenue percentage allocation basis as described above, a reasonable allocation of these plant and equipment expenses is as follows: Roku employed approximately 289 people (34% of 850) dedicated to research and development of its streaming players, including the Roku Protected Articles, in 2019. Roku employed approximately 275 people (44% of 624) dedicated to research and development of its streaming players, including from the Roku Protected Articles, in 2018. And Roku employed approximately 257 people (56% of 459) dedicated to research and development of its streaming players, including the Roku Protected Articles, in 2017.

219. Moreover, Roku's investment in engineering personnel dedicated to research and development has steadily increased over the last several years. For example, as between 2019 compared to 2018, Roku incurred \$68.8 million more in personnel costs as a result of increased

engineering headcount. *See* Exhibit 117 at 58 (Roku FY2019 Form 10K). As between 2018 compared to 2017, Roku incurred \$51.1 million more in personnel costs as a result of increased engineering headcount. *Id.* at 61.

iii. Roku's Substantial Investments in Engineering, Research and Development

220. On information and belief, a domestic industry as defined by 19 U.S.C. § 1337(a)(3)(C) exists in the United States with respect to Roku streaming players, including the Roku Protected Articles, via Roku's substantial investment in its engineering, research and development directed to the Roku streaming players that practice the Asserted Patents for the reasons stated above.

221. For example, in the year ended December 31, 2019, Roku's investment in research and development comprised 24% of its overall net revenue for that year, or approximately \$265 million. In the year ended December 31, 2018, Roku's investment in research and development comprised 23% of its overall net revenue for that year, or approximately \$170.7 million. In the year ended December 31, 2017, Roku's investment in research and development comprised 21% of its overall net revenue, or approximately \$107.9 million. *Id.* at 56, 60.

222. A reasonable allocation of Roku's streaming player-specific research and development investment, including in the Roku Protected Articles, can be accomplished by applying (1) the percentages of streaming player revenue as a percentage of total revenue set forth above, to (2) the overall Roku research and development spend identified above. Applying this allocation basis, Roku invested approximately \$90.1 million (34% of \$265 million) in its streaming players, including the Roku Protected Articles, in 2019; approximately \$73.5 million (44% of \$167 million) in 2018; and approximately \$60.3 million (56% of \$107.7 million) in 2017.

223. Based on the foregoing, Roku’s investments in its streaming players products, including in the Roku Protected Articles, 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 Philips’ domestic licensee, Roku.

4. Philips’ Own Domestic Activities and Investments in Licensing the Asserted Patents Are Substantial Under 19 U.S.C. § 1337(a)(3)(C)

224. Philips has a formal and robust domestic licensing program focused on the Asserted Patents (the “Licensing Program”). Along with the Asserted Patents, which are important and valuable assets within the Licensing Program, the Licensing Program is directed to, for example, a patent portfolio comprising hundreds of U.S. and foreign patents. Philips has invested heavily in the Licensing Program since at least 2015. Given Philips’ substantial investments in connection with the Licensing Program, a domestic industry for the purposes of 19 U.S.C. § 1337(a)(2), as defined in 19 U.S.C. § 1337(a)(3)(C), exists with respect to the Asserted Patents. The Licensing Program is responsible for the active—and successful—licensing of the Asserted Patents, and of the patent portfolio in which the Asserted Patents play a critical role.

225. Philips has invested substantial resources in the Licensing Program, including by employing licensing professionals within the United States (the “Licensing Team”). The Licensing Team focuses almost exclusively on evaluating, pursuing, and executing licensing opportunities in the consumer electronics space—and has used the Asserted Patents as among the leading patents in the patent portfolio. In fact, Philips has repeatedly identified the Asserted Patents as being among its core patents within the Licensing Program. Also reflecting the value and importance of the Asserted Patents, Philips has asserted these patents in successful prior litigation. These licenses have been achieved in large part due to the strength of the Asserted Patents.

226. Additional confidential details further supporting the substantial domestic investment by Philips in the Licensing Program are set forth in Confidential Exhibit 112 (Philips' Substantial Domestic Investments in Its Licensing Program).

227. Because Philips' extensive domestic licensing operations establish a domestic industry, Philips is not required to establish that any of its own products practice the Asserted Patents. Nonetheless, as set forth above, Philips' domestic industry also includes significant and substantial investments in the United States through its domestic licensee's domestic industry protected articles that practice the Asserted Patents.

IX. RELATED LITIGATION

228. Complainants are also asserting all Asserted Patents against all proposed Respondents in actions filed prior to, or contemporaneously with, this action, in certain United States District Court litigations. A responsive pleading has been filed in the *Koninklijke Philips NV et al v. TTE Technology, Inc. d/b/a TCL USA et al.*, 2-20-cv-01406 (CDCA) matter. In addition, the court denied TCL's partial motion to dismiss. No responsive pleading has been filed in any of the other district court proceedings. These litigations are each listed below:

Caption	Kamperman Patent(s)	Status
<i>Koninklijke Philips NV f/k/a Koninklijke Philips Electronics NV et al v. Dell Technologies Inc. et al</i> 1-20-cv-01240 (DDE)	'809 patent '977 patent '186 patent '564 patent	Pending
<i>Koninklijke Philips NV f/k/a Koninklijke Philips Electronics NV et al v. HP Inc. f/k/a Hewlett-Packard Company</i> 1-20-cv-01241 (DDE)	'809 patent '977 patent '186 patent '564 patent	Pending
<i>Koninklijke Philips NV f/k/a Koninklijke Philips Electronics NV et al v. Lenovo Group Ltd. et al</i> 1-20-cv-01242 (DDE)	'809 patent '977 patent '186 patent '564 patent	Pending
<i>Koninklijke Philips NV f/k/a Koninklijke Philips Electronics NV et al v. Intel Corporation</i> 1-20-cv-01243 (DDE)	'809 patent '977 patent '186 patent	Pending

Caption	Kamperman Patent(s)	Status
	'564 patent	
<i>Koninklijke Philips NV f/k/a Koninklijke Philips Electronics NV et al v. LG Electronics, Inc. et al 1-20-cv-01244 (DDE)</i>	'809 patent '977 patent '186 patent '564 patent	Pending
<i>Koninklijke Philips NV f/k/a Koninklijke Philips Electronics NV et al v. MediaTek Inc. et al 1-20-cv-01246 (DDE)</i>	'977 patent '564 patent	Pending
<i>Koninklijke Philips NV f/k/a Koninklijke Philips Electronics NV et al v. Realtek Semiconductor Corp. 1-20-cv-01247 (DDE)</i>	'977 patent '564 patent	Pending
<i>Koninklijke Philips NV f/k/a Koninklijke Philips Electronics NV et al v. Hisense Co. Ltd. et al 2:20-cv-08546 (CDCA)</i>	'977 patent '564 patent	Pending
<i>Koninklijke Philips NV et al v. TTE Technology, Inc. d/b/a TCL USA et al., 2-20-cv-01406 (CDCA)</i>	'977 patent '564 patent	Pending

229. Philips previously asserted one of more of the Asserted Patents in litigation against other entities. These litigations are each listed below, along with their present status and an identification of which of the Asserted Patents are or were involved in each such litigation:

Caption	Kamperman Patent(s)	Status
<i>Koninklijke Philips NV et al. v. Acer Inc. et al., 1-15-cv-01170 (DDE)</i>	'809 patent	Closed; Markman order
<i>Koninklijke Philips N.V. et al. v. ASUSTek Computer Inc. et al., 1-15-cv-01125 (DDE)</i>	'819 patent ⁹ '809 patent	Closed; Markman order
<i>Koninklijke Philips N.V. et al. v. HTC Corporation et al., 1-15-cv-01126 (DDE)</i>	'819 patent '809 patent	Closed; Markman order
<i>Microsoft Corporation et al. v. Koninklijke Philips N.V. et al., 1-15-cv-01170 (DDE)</i>	'819 patent '809 patent	Closed; Markman order
<i>In Re Koninklijke Philips Patent Litigation, 4-18-cv-01885 (NDCA)</i>	'819 patent '809 patent	Pending as to ASUSTek only
<i>Koninklijke Philips N.V. et al. v. ASUSTeK Computer Inc. et al., 4-18-cv-01886 (NDCA)</i>	'819 patent '809 patent	Pending
<i>Koninklijke Philips NV et al. v. Acer Inc. et al., 4-18-cv-01885 (NDCA)</i>	'809 patent	Closed
<i>Microsoft Mobile Inc. et al. v. Koninklijke Philips N.V. et al., IPR2018-00277 (PTAB)</i>	'819 patent	Institution Denied

⁹ The '819 patent refers to U.S. Patent No. 8,543,819, which is in same patent family as the Asserted Patents.

Caption	Kamperman Patent(s)	Status
<i>Microsoft Mobile Inc. et al. v. Koninklijke Philips N.V. et al.</i> , IPR2018-00279 (PTAB)	'809 patent	Institution Denied
<i>Koninklijke Philips N.V. et al. v. HTC Corp. et al.</i> , 4-18-cv-01887 (NDCA)	'819 patent '809 patent	Closed
<i>Koninklijke Philips NV et al. v. Tongfang Global Inc. et al.</i> , 2-19-cv-01366 (CDCA)	'977 patent	Closed
<i>Koninklijke Philips NV et al. v. Seiki Corp. et al.</i> , 2-19-cv-01366 (CDCA)	'977 patent	Closed

230. In the District of Delaware actions, the court issued a *Markman* order construing certain disputed claim terms of the Asserted Patents. In addition, Intervenor Microsoft filed two petitions for *inter partes* review with the Patent Trials and Appeals Board, neither of which were instituted.

231. Responsive pleadings have been filed in the *In Re Koninklijke Philips Patent Litigation*, 4-18-cv-01885 (NDCA) by the ASUSTek defendants, the only remaining parties in that consolidated action.

232. Pursuant to Commission Rule 210.12(a)(5), Philips states that, other than the litigations specified above, to Philips' knowledge, the alleged unfair methods of competition and unfair acts, or the subject matter thereof, are not, and have not been, the subject of any court or agency litigation.

X. RELIEF REQUESTED

233. WHEREFORE, by reason of the foregoing, Complainants respectfully request that the U.S. International Trade Commission:

- a. Institute an immediate investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337(a)(1)(B)(i) and (b)(1) with respect to violations of Section 337 based upon the importation, sale for importation, and sale after importation into the United States by the proposed respondents of certain

digital video capable devices and components thereof, that infringe one or more of the asserted claims of U.S. Patent Nos. 9,436,809; 9,590,977; 10,091,186; and 10,298,564.

- b. Find a violation of Section 337 based on said unlawful acts;
- c. Issue a permanent limited exclusion order under 19 U.S.C. § 1337(d)(1) barring from entry into the United States all infringing digital video capable devices and components thereof manufactured by or on behalf of, or imported by or on behalf of, each of the Respondents or their affiliates;
- d. Issue permanent cease-and-desist orders, under 19 U.S.C. § 1337(f), directing each respondent to cease and desist from the sale for importation, importation, sale after importation, distribution, offering for sale, promoting, marketing, advertising, testing, demonstrating, warehousing inventory for distribution, solicitation of sales, programming, repairing, maintaining, transferring, and other commercial activity relating to infringing digital video capable devices and components thereof;
- e. Impose a bond upon Respondents who continue to import infringing articles, including infringing digital video capable devices and components thereof, during the 60 day Presidential review period per 19 U.S.C. §1337(j); and
- f. Grant such other and further relief as the Commission deems just and proper based on the facts determined by the investigation and the authority of the Commission.

Dated: September 18, 2020

Respectfully Submitted,



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VERIFICATION OF COMPLAINT

I, Koop Jan Eleveld, declare, in accordance with 19 C.F.R. §§ 210.4 and 210.12(a)(1), under penalty of perjury, that the following statements are true:

1. I hold the position of Head of IP Licensing, VP at, and I am currently an authorized signatory of, Koninklijke Philips N.V. ("Philips N.V."). I am duly authorized by Complainant Philips N.V. to verify the foregoing Complaint.

2. To the best of my knowledge, information, and belief, formed after a reasonable inquiry, the allegations and other factual contentions of the Complaint have evidentiary support, or, where specifically identified, are likely to have evidentiary support after a reasonable opportunity for further investigation or discovery;

3. To the best of my knowledge, information, and belief, formed after a reasonable inquiry, the claims and other legal contentions set forth in the Complaint are warranted by existing law or by a non-frivolous argument for the extension, modification, or reversal of existing law, or by the establishment of new law; and

4. To the best of my knowledge, information, and belief, formed after a reasonable inquiry, the Complaint is not being filed for any improper purpose, such as to harass or to cause unnecessary delay or needless increase in the cost of litigation.

Executed this 18th day of September 2020

A handwritten signature in blue ink, appearing to read 'Koop Jan Eleveld', is written over a horizontal line.

VERIFICATION OF COMPLAINT

I, Brian Wieghaus, declare, in accordance with 19 C.F.R. §§ 210.4 and 210.12(a)(1), under penalty of perjury, that the following statements are true:

1. I hold the position of Principal Licensing Counsel, IP Licensing at, and I am currently an authorized signatory of, Philips North America LLC (“Philips North America”). I am duly authorized by Complainant Philips North America to verify the foregoing Complaint.
2. To the best of my knowledge, information, and belief, formed after a reasonable inquiry, the allegations and other factual contentions of the Complaint have evidentiary support, or, where specifically identified, are likely to have evidentiary support after a reasonable opportunity for further investigation or discovery;
3. To the best of my knowledge, information, and belief, formed after a reasonable inquiry, the claims and other legal contentions set forth in the Complaint are warranted by existing law or by a non-frivolous argument for the extension, modification, or reversal of existing law, or by the establishment of new law; and
4. To the best of my knowledge, information, and belief, formed after a reasonable inquiry, the Complaint is not being filed for any improper purpose, such as to harass or to cause unnecessary delay or needless increase in the cost of litigation.

Executed this 18th day of September 2020

