

**Submission of Huawei Technologies Co., Ltd. in Response to the Federal Trade
Commission’s Invitation for Public Comments In Connection with The Hearings on
Competition and Consumer Protection in the 21st Century
Project Number P181201**

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I. Introduction

Huawei Technologies Co., Ltd. (Huawei) appreciates the opportunity to submit these comments in connection with the Commission’s upcoming Hearings on Competition and Consumer Protection in the 21st Century. In this submission, Huawei focuses on the Commission’s solicitation of comments on Topic 8 regarding the intersection of intellectual property and competition policy in promoting innovation. In particular, given that the world is in a state of transition to the 5G and Internet of Things (IoT) era, Huawei wishes to offer its observations regarding emerging novel business practices and trends in intellectual property litigation with respect to standard essential patents (SEPs) and the attendant obligations to license such patents on fair, reasonable, and non-discriminatory (FRAND) terms.

Huawei is a leading global information, communication, and telecommunications (“ICT”) solutions provider. Huawei’s business focuses on the technologies associated with the generation, transmission, processing, and storage of information. In connection with its business, Huawei and its personnel participate in over 360 standardization bodies and industry organizations such as ETSI, 3GPP, and IEEE-SA, and it has been involved for many years in the research, development, and implementation of many critical ICT standards.

As we enter the 5G and IoT era, such wireless standards will be more widely implemented as the number and types of interconnected devices proliferate. Recent reports put the number of IoT devices active today at 8.4 billion—already spanning industries ranging from cars to household appliances to wearables—and that number is only forecasted to increase drastically in the next several years.¹ For example, reports estimate that by 2020 over 20.4 billion IoT devices will be installed globally, with that number forecasted to increase to 55 billion devices by 2025. *Id.* By 2020 it is expected that over half of new businesses will rely on the IoT.² Huawei’s own prediction is that there will be 100 billion internet connections around the world by 2025, including 40 billion personal smart devices. As a result, it has become simultaneously more challenging and more important to establish clear guidance on SEP licensing practices aimed at facilitating the development of a healthy and competitive industry for the innovators involved in the development of these standards and the growing and more

¹ See, e.g., Verizon, *The Internet of Things will thrive on 5G technology* (June 12, 2018), available at <https://www.verizon.com/about/our-company/5g/internet-things-will-thrive-5g-technology>.

² *Id.*

diverse set of firms that will implement them. As both a leading vendor of standard-compliant products and a major SEP owner, Huawei believes that it is uniquely positioned to provide an impartial and valuable view on these issues which it hopes will assist the Commission as it formulates policy in this critical area.

II. SEP Licensing in the IoT and 5G Era

It has been long recognized that uncertainty regarding the potential costs of implementing industry standards can serve as an impediment to their adoption. At the same time, some have expressed the concern that firms that implement industry standards before such costs are determined may later be subject to opportunistic efforts by the holders of intellectual property to extract excessive royalties after implementers are locked in to the standards. Huawei believes that one way to mitigate these concerns, which are likely to be magnified in the 5G/IoT era given the vastly larger number of firms and products that will implement standards, is to encourage the holders of SEPs voluntarily to disclose publicly the aggregate royalty that they believe would be reasonable for a license to all 5G SEPs.

In the 4G/LTE context, Huawei and other major industry players made public announcements regarding the royalty rate for the licensing of 4G SEPs for their individual 4G SEP portfolios and, in some cases, some expressed their views as to the appropriate aggregate royalty that should be paid for implementation of the standard as a whole.³ In recent months, there have been similar announcements by patent holders such as Ericsson and Qualcomm regarding the anticipated individual royalty rate for licensing of their 5G SEP portfolios for implementation in handsets.⁴ While it is widely recognized that the firm-specific rates announced in this context have generally exceeded the rates actually obtained in bilateral negotiations, Huawei believes that the announcement of anticipated aggregate rates will continue to be helpful in negotiating SEP licenses between major innovators and standards implementers as a rough consensus emerges among the stakeholders as to the appropriate aggregate rate. While SEP holders may over-estimate at least initially the share of the aggregate royalty to which they are individually entitled, to the extent that they are also implementers, they will have

³ Ericsson, *Wireless Industry Leaders commit to framework for LTE technology IPR licensing* (April 14, 2008), available at <https://www.ericsson.com/en/press-releases/2008/4/wireless-industry-leaders-commit-to-framework-for-lte-technology-ipr-licensing> (Ericsson, Sony Ericsson, Nokia, Nokia Siemens Networks, and Alcatel-Lucent announcing that they “support that a reasonable maximum aggregate royalty level for LTE essential IPR in handsets is a single-digit percentage of the sales price”).

⁴ See Ericsson, *Ericsson’s FRAND licensing terms for 5G/NR in 3GPP Release 15* (Mar. 3, 2017), available at <https://www.ericsson.com/assets/local/tech-innovation/patents/doc/frand-licensing-terms-for-5g-nr-in-3gpp-release-15.pdf>; Qualcomm, *Qualcomm 5G NR Royalty Terms Statement* (Nov. 19, 2017), available at <https://www.qualcomm.com/media/documents/files/qualcomm-5g-nr-royalty-terms-statement.pdf>.

an incentive to support overall aggregate royalties at more reasonable, balanced levels. Announced aggregate rate expectations also provide one potential means by which to determine the appropriate FRAND royalty rate for a given portfolio of SEPs in the event of a dispute.⁵ Additionally, for product planning purposes it is useful for standards implementers to better understand the potential maximum SEP royalty exposure for their standard-compliant products. In these regards, Huawei believes that policies and advocacy by competition authorities encouraging the announcement of anticipated rates for 5G SEPs can be procompetitive in promoting standard adoption and mitigating the risk of patent hold-up, as the U.S. antitrust agencies have previously recognized.⁶

For its part, Huawei anticipates that reasonable aggregate royalty rates for the 5G standard with respect to handsets are likely to be lower than what has prevailed in the 4G context, particularly as the range of devices incorporating communications technologies continues to broaden significantly with the development of the IoT and as more traditional mobile devices like smartphones become increasingly complex and multi-functional. A “one-size-fits-all” approach to licensing in the IoT context is unlikely to be desirable given drastically varying price points of the products in question and varying degrees of cellular utilization in those devices. Because wireless standards will be more widely implemented, the reasonable royalty for wireless SEPs will likely also need to vary among different product classes in order for the royalty to accurately reflect the value contributed by wireless standard technologies. Therefore, SEP holders and standards implementers may wish to give consideration to the use of reasonable per unit caps for particular categories of devices based on the price and importance of

⁵ See, e.g., *TCL Comm’n’s Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. SAVC 14-341 JVS(DFMx), 2017 WL 6611635, at *10-*14 (C.D. Cal. Dec. 21, 2017) (relying on a “top down” approach starting with announced total aggregate royalty burdens to assess FRAND rates for 2G, 3G, and 4G SEPs).

⁶ See, e.g., U.S. Department of Justice and the Federal Trade Commission, *Antitrust Enforcement and Intellectual Property Rights: Prompting Innovation and Competition* (April 2007) (“FTC/DOJ 2007”), Chapter 3: “Antitrust Analysis of Portfolio Cross-Licensing Agreements and Patent Pools,” at 53-54, available at <https://www.ftc.gov/sites/default/files/documents/reports/antitrust-enforcement-and-intellectual-property-rights-promoting-innovation-and-competition-report.s.department-justice-and-federal-trade-commission/p040101promotinginnovationandcompetitionrpt0704.pdf> (“Such *ex ante* knowledge about licensing terms could help mitigate hold up that is not resolved in the first instance by the existence of SSO rules requiring disclosure of IP or by requirements that SSO members license on RAND terms. Because of the strong potential for procompetitive benefits, the Agencies will evaluate joint *ex ante* activity to establish licensing terms under the rule of reason.”); Response of the U.S. Department of Justice to VITA’s Request for Business Review Letter (Oct. 30, 2006), available at <https://www.justice.gov/sites/default/files/atr/legacy/2006/10/31/219380.pdf> (stating that the DOJ had no intention to take antitrust enforcement action against VITA’s then-proposed policy requiring SEP holders to disclose the most restrictive licensing terms they will request for use of any essential patents in implementing the standards).

connectivity to the category in question. Caps may be particularly relevant, for example, in the case of IoT devices that utilize the standardized technologies only in a limited way relative to the device's overall function. To be clear, it remains critical that FRAND royalty rates adequately compensate patent holders for the R&D investments made in order to incentivize innovation, encourage sharing of proprietary technology with the industry, accelerate the application of the new technology, and enable the development of critical new developed standards, while at the same time promoting a sustainable and healthy industry that will attract more industry players to use the standardized technologies.

III. Concerns Raised by SEP Licensing in Patent Pools in the IoT and 5G Era

Huawei believes that the FTC and DOJ's past guidance and analysis on the issue of licensing via patent pools has been helpful.⁷ However, in light of the concerns set forth below, Huawei suggests that the Commission remain vigilant in its analysis of such joint licensing structures in the 5G and IoT context.

To date, patent pools and other group licensing platforms for licensing 3G and 4G SEPs have been largely unsuccessful because the largest SEP holders have generally preferred to license their SEPs through bilateral negotiations. Moreover, most of patent pools that have been formed have often behaved more like traditional non-practicing entities (NPEs) seeking to maximize licensing fees without regard to the need to maintain a balance between the interests of SEP holders and implementers. Nevertheless, in recent years, patent pools and similar platforms have become conceptually popular as a one-stop shop solution for licensing SEPs in the 5G and IoT era. Huawei believes this is largely in recognition of the fact that 5G and the IoT will lead to a larger, more diverse class of standards implementers, many of whom will manufacture standard-compliant devices but will not hold SEPs and will be unfamiliar with bilateral SEP licensing negotiations. However, Huawei does not believe patent pools as they are currently set up are necessarily an ideal solution to licensing future generations of cellular standards, including 5G, and it believes that any joint licensing programs that do emerge should be scrutinized carefully to ensure that they incorporate the kinds of safeguards that have been previously recognized as being helpful or necessary to minimize the risk of anticompetitive effects.

For example, in Huawei's view, SEP holders and implementers should have the freedom to select the channel by which a license to SEPs may be granted or obtained, and implementers should not be forced to license any particular patent holder's portfolio exclusively via a patent pool. Standards implementers should always be given the right to choose between taking

⁷ See FTC/DOJ 2007, Chapter 3: "Antitrust Analysis of Portfolio Cross-Licensing Agreements and Patent Pools," § III.

licenses from individual SEP holders that may be members of the pool, and the SEP holder should not be allowed to refuse to grant licenses on its individual rate when requested.

Likewise, Huawei believes that antitrust authorities should encourage increased transparency about the manner in which pools involving SEPs calculate their FRAND rates and with respect to the terms on which such pools have granted licenses to various implementers, both of which should be helpful in ensuring antitrust and FRAND-compliance.

Finally, in evaluating the legality of pool arrangements, Huawei believes that competition authorities should be cognizant of whether the composition or governance structure of the pool reflects the interests of a broad array of relevant stakeholders, including the interests of implementers. Where a pool consists entirely of NPEs or other non-implementing entities, competition authorities should carefully consider whether the patent pool serves any procompetitive purpose or rather is merely a means to leverage a larger portfolio of patents to extract non-FRAND royalties. Huawei suggests that, where possible, antitrust authorities should encourage patent pools to incorporate representatives of the “public interest” or at least a broad cross-section of the industry in their governance to help ensure compliance with competition laws and the pool members’ FRAND licensing commitments.

IV. The Availability of Injunctive Relief for Infringement of SEPs

The Commission’s previous guidance and advocacy with respect to the availability of injunctions for infringement of SEPs has been helpful in identifying the risks of granting such relief too freely.⁸ While Huawei believes that injunctions have a role to play in the enforcement

⁸ See Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* (March 2011), Chapter 8 §V.D, available at <https://www.ftc.gov/sites/default/files/documents/reports/evolving-ip-marketplace-aligning-patent-notice-and-remedies-competition-report-federal-trade/110307patentreport.pdf> (“Injunction Analysis in the Standard Setting Context”); *In re Certain Gaming and Entertainment Consoles, Related Software, and Components Thereof*, ITC Inv. No. 337-TA-752, Third Party United States Federal Trade Commission’s Statement on the Public Interest (June 6, 2012), available at https://www.ftc.gov/sites/default/files/documents/advocacy_documents/ftc-comment-united-states-international-trade-commission-concerning-certain-gaming-and-entertaining/1206ftcgamingconsole.pdf (“ITC issuance of an exclusion or cease and desist order in matters involving RAND-encumbered SEPs, where infringement is based on implementation of standardized technology, has the potential to cause substantial harm to U.S. competition, consumers and innovation.”); *In re Certain Wireless Communication Devices, Portable Music and Data Processing Devices, Computers and Components Thereof*, ITC Inv. No. 337-TA-745, Third Party United States Federal Trade Commission’s Statement on the Public Interest (June 6, 2012) available at https://www.ftc.gov/sites/default/files/documents/advocacy_documents/ftc-comment-united-states-international-trade-commission-concerning-certain-wireless-communication/1206ftcwirelesscom.pdf (same); *In re Certain 3G Mobile Handsets and Components Thereof*, ITC Inv. No. 337-TA-613 (Remand), Written Submission on the Public

of U.S. SEPs (particularly in the case of a holder of a large portfolio of SEPs that has demonstrated its willingness to license its U.S. portfolio on FRAND terms via negotiation, arbitration, or otherwise that is facing a counter-party that is unwilling to take a FRAND license), it urges the Commission to be on the look-out for potential abuses that Huawei has continued to observe.

For example, outside the U.S., Huawei has experienced efforts by NPEs and patent pools to attempt to evade limitations on the availability of injunctive relief on SEPs by instead pursuing seizures of allegedly infringing products through border control authorities. In the U.S., this strategy has taken—and in the future is likely to take—the form of actions by SEP holders under Section 337 in the International Trade Commission (ITC). Although such attempts to exclude standard-compliant articles from importation into the United States on the basis of infringement of SEPs have been unsuccessful to date (see, for example, the United States Trade Representative’s disapproval of an exclusion order against Apple in ITC Inv. No. 337-TA-794⁹), the Administrative Law Judges and Commissioners of the ITC have indicated in previous investigations that they are receptive to such requests by SEP holders and they have thus far not articulated a consistent standard for consideration of the patent holder’s FRAND obligations in assessing the availability of the quasi-injunctive remedies to which the ITC is limited.¹⁰ Thus, Huawei believes that the Commission should continue to monitor the situation at the ITC to

Interest of Federal Trade Commission Chairwoman Edith Ramirez (July 14, 2015), *available at* https://www.ftc.gov/system/files/documents/public_statements/682011/150714publicinterestftc1.pdf (“I recommend that, as part of its public interest analysis before issuing an exclusion order, the ITC require a SEP holder to prove that the implementer is unwilling or unable to take a FRAND license.”) (footnotes omitted).

⁹ See Letter from United States Trade Representative Ambassador Michael B. G. Froman to Hon. Irving A. Williamson, *Disapproval of the U.S. International Trade Commission’s Determination in the Matter of Certain Electronic Devices, Including Wireless Communication Devices, Portable Music and Data Processing Devices, and Tablet Computers, Investigation No. 337-TA-794*, at 2 n.3 (Aug. 3, 2013), *available at* [https://ustr.gov/sites/default/files/08032013%20Letter 1.PDF](https://ustr.gov/sites/default/files/08032013%20Letter%201.PDF).

¹⁰ See, e.g., *In re Certain Electronic Devices, Including Wireless Communication Devices, Portable Music and Data Processing Devices, and Tablet Computers*, Inv. No. 337-TA-794, Notice of the Commission’s Final Determination Finding a Violation of Section 337; Issuance of a Limited Exclusion Order and Cease and Desist Order; Termination of the Investigation (June 4, 2013), *available at* https://www.usitc.gov/secretary/fed_reg_notices/337/337-794_notice06042013sgl.pdf; *In re Certain 3G Mobile Handsets and Components Thereof*, Inv. No. 337-TA-613 Remand, Initial Determination on Remand (April 27, 2015), *available at* <https://essentialpatentblog.lexblogplatform.com/wp-content/uploads/sites/64/2015/05/2015.04.27-Public-Version-of-ID-on-Remand.pdf> (ALJ’s initial determination that the public interest did not preclude issuance of an exclusion order for infringement of SEPs subject to FRAND licensing obligations).

ensure that it applies an appropriate standard in assessing the availability of its injunction-like remedies for infringement of SEPs.

V. Conclusion

Huawei is grateful to the Commission for its consideration of these comments and suggestions and for its attention to these important issues surrounding the licensing of SEPs in the era of 5G and the IoT.