

Counter Comments on Responses Received by TRAI in its Consultation on Promoting Local Telecom Equipment Manufacturing

Qualcomm Inc.

Qualcomm Incorporated (“Qualcomm”) respectfully submits this paper for providing counter comments on responses received and made available by the Telecom Regulatory Authority of India (“TRAI”) for the “Consultation Paper on Promoting Local Telecom Equipment Manufacturing” (“CP”).

We express our gratitude and admiration for the open consultation process instituted by TRAI for informed policy making towards the important issue of promoting local telecom equipment manufacturing in India. Qualcomm has a strong interest and has invested significant resources in India, and has closely partnered with the local device ecosystem, including local handset manufacturers, to enable access to 4G technology. To that end, we note several constructive comments that have been received by the TRAI stressing the importance of providing appropriate fiscal incentives for local firms to invest in manufacturing and research and development (“R&D”).

However, we have observed several issues raised in some of the comments related to standards essential patents (“SEPs”) and licensing that are not represented in a balanced manner, which we address here. We are in a position to provide a balanced view from the perspective of both an implementer and owner of SEPs, as we play a leading role in the design and development of wireless cellular technologies and standards, as well as the implementation of a some of those technologies in the wireless communications products and services. In addition to our perspective, we would like to share some notable developments that have occurred related to these issues after the issuance of the CP in other jurisdictions, notably, in the United States and the European Union which deserve the TRAI’s attention. We focus on the issues related to Questions 2, 3, and 5 in the original consultation paper, that have been raised in some of the comments submitted to the TRAI.

1. Can SEPs serve as a barrier to entry?

Some commentators have suggested that some companies may “exploit the need of implementers to practice their SEPs, and that threat can lead directly to consumer harm through increased costs of goods, and consequently less competition”. We’d like the TRAI to note the tremendous success of the mobile industry both in India and in other parts of the

world overlapping with a widespread FRAND licensing regime, as noted by many commentators to the CP.

It is not in the interest of SEP holders to increase the cost of goods or reduce competition, and therefore reduce the size of their own market. There are other checks and balances in the system, economic studies have identified that the nature of the standards development process as a repeated game can serve to deter opportunistic behaviour by SEP holders for fear of future punishment, such as exclusion from a later standard.¹ Indeed, the prices of products and services relying on wireless cellular standards have steadily decreased and competition amongst handset manufacturers, including new entrants, has steadily increased both in India and worldwide².

2. Do SEPs confer market power?

Some commentators have claimed that SEPs necessarily confer market power without any corroboration to the claim. This may arise due to a misunderstanding of the standards development organizations (SDOs). Empirical research suggests that the standardization process may not generally confer market power.³ Courts have also agreed, stating “the fact that an undertaking owns an SEP does not necessarily mean that it holds a dominant position ... and that it is for the national court to determine, on a case-by-case basis, whether that is indeed the situation.”⁴ Rather, more valuable technologies are natural candidates for inclusion in standards such that SDOs tend to “crown winners”, not create them.”⁵ This evidence is consistent with the institutional mechanics of SDOs, where standardized technologies are chosen based upon their technical merits through a consensus or majority driven decision process where most participating firms are not SEP owners, but implementers.⁶ Furthermore,

¹ See Pierre Larouche & Florian Schuett, *Repeated Interaction in Standard Setting*, TILBURG LAW SCHOOL RESEARCH PAPER NO. 16/2016 (2016). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2792620

² See BCG, *The Mobile Revolution: How Mobile Technologies Drive a Trillion-Dollar Impact* (2015). See GSMA, *The Mobile Economy* (2017).

³ See Anne Layne-Farrar & Jorge Padilla, *Assessing the Link Between Standards and Patents*, 9 INT'L J. IT STANDARDS AND STANDARDIZATION RES. 19 (2011).

⁴ See Case C-170/13 *Huawei Technologies Co. Ltd v. ZTE Corp.* (2015); see also *France Brevet vs. HTC – Landgericht Düsseldorf* (2015) (the Court rejected the defendant's FRAND defense it had failed to establish the plaintiff's SEP resulted in a dominant market position).

⁵ See Anne Layne-Farrar & Koren W. Wong-Ervin, *Standard-Essential Patents and Market Power*, GEORGE MASON LAW & ECONOMICS RESEARCH PAPER NO. 16-47 (2016).

⁶ See Kirti Gupta, *How SSOs Work: Unpacking the Mobile Industry's 3GPP Standards*, HANDBOOK OF STANDARD SETTING (2017).

any market power held by an SEP holder to extract supra-competitive prices is mitigated by a valid FRAND commitment.⁷

3. The Patent Statute and SEPs

Several commentators have observed and clarified that SEPs are no different than non-SEPs in terms of the protection that is available to them under Indian statutes as well as their enforceability after grant. The origin (filing, prosecution leading to grant) of an SEP is identical to that of a non-SEP, and the only difference that arises between the two is the possibility of a voluntary FRAND/RAND contractual commitment that exists between an SEP owner and an SDO. Unlike with non-SEPs, owners of SEPs provide commitments that they will license the SEPs for products that fully implement the relevant standard to willing licensees on FRAND terms.

4. Availability of injunctive relief for SEPs

Several commentators argued for limited to no availability of injunctive relief for FRAND encumbered SEPs. Every court that has considered this approach has rejected it, especially when the implementer is an unwilling licensee. Furthermore, we note a recent development in the United States related to this issue. On November 10, 2017, the Department of Justice's (DOJ's) top antitrust enforcer, Assistant Attorney General (AAG) Makan Delrahim, delivered a powerful speech on antitrust law and policy enforcement towards intellectual property rights (IPRs)⁸. Related to issue raised in point #3 above, he clarifies that SEPs are patents first, and "*patents are a form of property, and the right to exclude is one of the most fundamental bargaining rights the patent owner possesses.*" The speech further states that "*patent owners cannot violate the antitrust laws by properly exercising the rights patents confer, such as seeking an injunction or refusing to license such a patent.*"

⁷ See William H. Page, *Judging Monopolistic Pricing: F/RAND and Antitrust Injury*, 22 TEX. INTELL. PROP. L.J. 181, 206 (2014). For an overview of the U.S. debate whether breach of a FRAND commitment can itself be an antitrust violation. See George S. Cary, Mark W. Nelson & Steve J. Kaiser, *The Case for Antitrust Law to Police the Patent Holdup Problem in Standard Setting*, 77 ANTITRUST L.J. 913 (2011), and in reply see Bruce H. Kobayashi & Joshua D. Wright, *The Limits of Antitrust and Patent Holdup: A Reply to Cary et. al*, 78 ANTITRUST L.J. 701 (2012).

⁸ See Makan Delrahim, Assistant Att'y Gen., Antitrust Div., U.S. Dep't of Justice, *Remarks at the USC Gould School of Law's Center for Transnational Law and Business Conference* (Nov. 10, 2017). Available at: <https://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-usc-gould-school-laws-center>

5. Concerns related to “patent hold-up” and “royalty stacking”

Much ink has been shed in the recent years on the concerns related to “patent hold-up” and “royalty stacking”, which, although valid theoretical concerns, have failed under the scrutiny of evidence and stress testing as systemic problems plaguing the industry – as unlike the theories predict, prices of SEP-intensive products and services have decreased sharply, much more so than other comparable industries, and competition and entry has steadily increased while the number of SEPs and unique SEP owners continued to rise⁹.

The new AAG's speech also addresses the issue of patent hold-up directly -- the idea that a patent holder can hold-up implementers after a standard is set, and opportunistically seek higher royalties. The hold-up theory as proposed by Nobel Laureate economist Oliver Williamson¹⁰, is a symmetric concern, with both patent holder and implementer able to hold each other up. The new AAG's speech expresses the concern that *“too often lost in the debate over the hold-up problem is recognition of a more serious risk: the hold-out problem”* which arises when *“when implementers threaten to under-invest in the implementation of a standard, or threaten not to take a license at all, until their royalty demands are met.”*¹¹

The underlying economics of this conclusion is simple. Hold-up refers to one party in an incomplete contract taking advantage of a sunk cost investment. The patent hold-up theory is based on the ability of patent holders to hold-up implementers after the latter have sunk their costs in the processes of implementing the standards. But by the same token, the patent holders themselves have sunk their costs into the R&D for technology standards long before implementers. When the R&D investments were made, the risks were higher – will the technology be chosen for inclusion in the standard (only one third of proposals are usually adopted in cellular standards), will the standard succeed among competing standardization options, will the markets adopt the standard widely – vs. when the sunk cost investments by implementers are made. Thus, the speech recognizes that *“if the implementers hold-out, the innovator has no recourse, even if the innovation is successful.”* On the other hand, *“the implementer has some buffer against the risk of hold-up because at least some of its*

⁹ See Alexander Galetovic, Stephen Haber, & Ross Levine, *An Empirical Examination of Patent Holdup*, JOURNAL OF COMPETITION LAW & ECONOMICS 11.3 (2015): 549-578. See, also Alexander Galetovic & Kirti Gupta, *Royalty Stacking and Standard Essential Patents: Theory and Evidence from the World Mobile Wireless Industry*, HOOVER IP2, WORKING PAPER NO. 15012 (2015).

¹⁰ See Oliver E. Williamson, *Transaction-Cost Economics: The Governance of Contractual Relations*, JOURNAL OF LAW AND ECONOMICS (1979).

¹¹ *Supra*, note 7.

investments occur after the royalty rates of the new technology could have been determined.”

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This observation is indeed true for some of the most widely deployed standards, such as 4G LTE, for which the major SEP owners had announced their maximum royalty rates *before* the standards were commercialized and deployed widely.¹³ Similar ex ante announcements are already made and/or expected for 5G. By way of example, Qualcomm's royalty statement on its 5G royalty rates can be found on its website.¹⁴

6. Transparency and Disclosure concerns

Some commentators have raised concerns related to transparency and disclosure practices, aka, the information available about which patents are SEPs and licensing terms. Most SDOs promote disclosure of potentially essential patents in their IPR policies. Qualcomm, along with most other companies, supports mechanisms for enhancing the quality of patent declaration databases. SSOs like VITA, ITU and ESTI now encourage or facilitate the making of ex ante disclosures of licensing terms by licensors, at early stages. An ex ante disclosure of licensing terms involves a disclosure of the most restrictive rates at which a patent holder will license their technology.¹⁵ As noted previously, Qualcomm has disclosed its SEPs and its licensing terms.

However, we take the opportunity to explain that although companies like ours expend enormous amounts of effort in making sure that we declare SEPs appropriately, the process is necessarily uncertain. This is because standards by their nature are iterative and evolve over time, parties provide technical submissions which are not patents themselves, and patent filings related to the submissions are prosecuted around the world with varying statutory requirements. Thus, potential SEPs are not always equivalent to the relevant technical submissions. Furthermore, most SDOs do not determine the essentiality of the patents declared by individual members, and a patent can only be determined to be essential after it has been adjudicated as such.

¹² Supra note 9.

¹³ Eric Stasik, *Royalty Rates and Licensing Strategies for Essential Patents on LTE (4G) Telecommunication Standards*, LES NOUVELLES (2010). Available at:

<https://pdfs.semanticscholar.org/6eb5/1955ffbc2af76ff610dd7779e439a2b3825c.pdf>

¹⁴ <https://www.qualcomm.com/documents/qualcomm-5g-nr-royalty-terms-statement>

¹⁵ More information on ex ante disclosures is available at <http://www.etsi.org/about/how-we-work/intellectual-property-rights-iprs/ex-ante-disclosures> and <http://www.etsi.org/about/how-we-work/intellectual-property-rights-iprs/ex-ante-disclosures>.

In terms of clarity regarding licensing rates, as noted in #5 above, several patent holding companies follow a practice of publicly disclosing royalty statements. By way of example, Qualcomm's royalty statement on its 5G royalty rates can be found on its website. Most large SEP holders had announced maximum royalty rates for 4G LTE prior to its widespread deployment.

7. Obligations on Willing Licensors and Willing Licensees

Some commenters have made suggestions regarding requirements on "willing licensors" to comply with their FRAND obligations. Some of these obligations go well beyond what courts, regulatory bodies, and SDOs have required. As discussed in our original submission, all of these parties recognize that there needs to be a balance between the interests of SEP licensors and willing licensees. On this point, we bring to the TRAI's attention a decision from the European Court of Justice (CJEU)¹⁶ that analyses this balance between the interests of SEP licensors and licensees from which Indian policy makers can derive a valuable insight.

In *Huawei vs. ZTE*, the CJEU provided guidelines for conduct by a SEP licensor and licensee in licensing negotiations to avoid both hold-up and hold-out. To summarize, the CJEU stated that SEP licensors should give notice to the licensee of the infringement and make a specific FRAND license offer. On the other hand, the SEP licensees should: diligently respond to FRAND license offer in good faith, and, if there is any disagreement, submit a counter-offer that is FRAND and provide appropriate security. If the parties fail to reach agreement, they could seek resolution through arbitration. We respectfully ask the TRAI to consider this well-reasoned balance, as compared to some of the commentators excessive proposed requirements for licensors.

8. FRAND licensing: Where to license in the value chain

Some commentators have claimed that FRAND licensing requires licensing to all-comers in the value chain. This is inconsistent with both the definition of FRAND as intended by most SDOs and the current view of US and EU regulators.

¹⁶ See Case C-170/13 *Huawei Technologies Co. Ltd v. ZTE Corp.* (2015).

SDOs recognize that FRAND terms are, by their nature, the result of arm's-length negotiation between interested parties. SDOs also recognize that FRAND terms are not, and should not be, the result of any centralized decision-making process by SDOs or others.

On Nov 29, 2017, the European Commission released a communications document setting out their policy for SEPs¹⁷. The commission recognizes the concerns of both innovators and implementers of SEPs, considers it urgent to set out key principles to foster a balanced framework by “preserving fair and adequate return for contributions [to standards], and ensuring smooth and wide dissemination of standardised technologies”, endorses determination of FRAND royalty rates through bilateral negotiations, and stays away from any specific requirements related to licensing practices, including mandating licensing to any specific point in the industry value chain. This important principle of maintaining balance is also upheld in the EC's response to the TRAI CP.

The new AAG's speech in the United States also submits that antitrust law should not be misused to police the private commitments such as FRAND that IP holders make to SSOs.¹⁸

9. Royalty Base and Smallest Saleable Patent Practicing Unit (SSPPU)

Some commentators have proposed the use of the smallest saleable patent practicing unit or “components” as the appropriate royalty base for calculating FRAND royalties for wireless cellular SEPs. Others have pointed out the contrary position taken both by the US Federal Circuit court in *CSIRO v. CISCO*¹⁹, and by the Delhi High Court in *Ericsson v. Intex*, and instead embraced the use of existing comparable licenses, which best indicate the market value of the licensed technologies.

In recent years, the newly formed Indian telecommunications SDO, the Telecommunications Standards Development Society, India (“TSDSI”), carefully deliberated and adopted its IPR policy consistent with that of ETSI's, and maintains the principles of openness, balance, and flexibility.

Instead of following the TSDSI and ETSI, some commentators have endorsed one of the most controversial changes of the amends made by the Institute of Electrical and Electronics

¹⁷ See European Commission, *Communication from the Commission on the Institutions on Setting out the EU approach to Standard Essential Patents* (2017). Available at: <https://ec.europa.eu/docsroom/documents/26583>

¹⁸ Supra, note 8 (“There is a growing trend supporting what I would view as a misuse of antitrust or competition law, purportedly motivated by the fear of so-called patent hold-up, to police private commitments that IP holders make in order to be considered for inclusion in a standard. This trend is troublesome.”).

¹⁹ See *CSIRO v. Cisco Sys.*, 809 F.3d 1295 (Fed. Cir. 2015).

Engineering Standards Association (IEEE-SA) to its IPR policy in March 2015, by stating that the reasonable rate for an SEP should be limited to the value the patented technology contributes to the smallest saleable component practicing the SEP according to the standard, rather than the value the SEP contributes to the overall device practicing the standard. This approach has been rejected and criticized not only by other SDOs, but also by the members of the IEEE.

Two major European SDOs, CEN and CENELEC, stated in their position paper that they do not support initiatives for SSOs to provide guidance on, or impose compliance with, FRAND pricing, valuation, and rate-setting methodologies, and they “firmly believe that pricing should be determined by patent holders and implementers outside of SSOs in the context of bilateral negotiations.”²⁰ Undermining it, would be an invalidation of this process, as well as the principles of openness, balance, and flexibility upon which this nascent organisation has been established.

The members have also been rejecting the IEEE-SA amendments – there has been a decrease in non-duplicate Letters of Assurances (LoAs), the licensing commitments given by patent owners for licensing their SEPs on FRAND terms.²¹ For the flagship IEEE 802.11 Wi-Fi standards, there has been an 86% surge in the number of negative LoAs submitted by patent owners relative to the past year, meaning that the patent owners refuse to license their technology under the IEEE's new IPR policy. At the same time, almost all the positive LoAs constitute repeat submissions for which a LoA was already submitted for the same standard under the old policy. A reduced willingness to submit LoAs is an indicator of the degree to which the inventors contributing their technologies to standards are unwilling to invest in R&D and license their IP under the new policy. Furthermore, new IEEE projects initiated via Project Authorization Requests (PARs) have dropped by approximately 5% in the IP-intensive IEEE 802 working groups, raising the possibility of a broader decline in the standards development process.

Furthermore, the new AAG's speech criticizes how the IEEE implemented its new IPR policy in warning against cartel-like behaviour among SDO participants and stating that:

²⁰ See *CEN and CENELEC position on SEPs and FRAND Commitments* (2016). Available at: https://www.cencenelec.eu/News/Policy_Opinions/PolicyOpinions/EssentialPatents.pdf

²¹ See Ron D. Katznelson, *Presentation at IEEE GLOBECOM 2015: Decline in Non-Duplicate Licensing Letters of Assurance (LOAs) from Product/System Companies for IEEE Standards* (updated Mar. 30, 2016). Available at: <https://works.bepress.com/rkatznelson/80/>

“while the so-called “smallest saleable component” rule may be a useful tool among many in determining patent infringement damages for multi-component products, its use as a requirement by a concerted agreement of implementers as the exclusive determinant of patent royalties may well warrant antitrust scrutiny”.

As explained in detail in our initial submission, requiring licensing at the component level is inefficient, impractical, and burdensome, and it will increase uncertainty and costs, without providing real benefit. Moreover, as seen with IEEE, it could hamper innovation as companies will no longer agree to license their technology on FRAND terms.

Conclusion

In summary, we believe that the European Commission's submission said it best, identifying two main objectives that are just as (if not more) important in the Indian context: “On the one hand, incentivising the development and inclusion of high-end technologies in standards, by preserving fair and adequate return for the contributors, and on the other, ensuring smooth and wide dissemination of standardised technologies based on fair access conditions. Ultimately, a successful policy on SEPs licensing should balance these two principles and any policy on the matter should not be tilted to either of these two principles. Therefore the European Commission urges the Telecom Regulatory Authority of India to weigh in very careful these principles in coming up with any policy proposals.”

As India positions itself to both be a leader in development as well as dissemination of the future standards based technologies, it is important for Indian policies to reflect this balance.