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Commerce Commission New Zealand
Level 9
44 The Terrace
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New Zealand

RE: ACT | The App Association Comments on the Commerce Commission's *Draft Guidelines on the Application of Competition Law to Intellectual Property Rights*

ACT | The App Association (the App Association) applauds the New Zealand Commerce Commission for its commitment to enabling competition by identifying and condemning anti-competitive conduct. We write in response to the Draft Guidelines on the Application of Competition Law to Intellectual Property Rights ("Draft Guidelines").[1]

The App Association is a not-for-profit trade association representing the small business technology developer community. Our members are entrepreneurs, innovators, and independent developers that engage with verticals across every industry. We work with and for our members to promote a policy environment that rewards and inspires innovation while providing resources that help them raise capital, create jobs, and continue to build incredible technology. App Association members are responsible for countless jobs, and drive a global app economy worth approximately $10 trillion NZD.[2]

We support the Commission's decision to remove the exceptions that prevented certain types of conduct relating to intellectual property from being recognized as capable of breaching the Commerce Act.[3] [4] Notably, the App Association applauds the Commerce Commission's inclusion of sections in the Draft Guidelines addressing IPR licensing harms that amount to anti-competitive conduct in the context of standard essential patent (SEP) abuses.[5] In order to advance the interests of New Zealand in improving the production or distribution of goods or

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[1] *See* https://comcom.govt.nz/business/business-consultations/draft-guidelines-on-the-application-of-competition-law-to-intellectual-property-rights#projecttab.

[2] *See* https://atonline.org/global-appcon22-competition-and-privacy/.

[3] Commerce Commission New Zealand, Guidelines on the Application of Competition Law to Intellectual Property Rights, p. 2, (December 19, 2022), https://comcom.govt.nz/__data/assets/pdf_file/0018/302508/Draft-Guidelines-on-Application-of-Competition-Law-to-Intellectual-Property-Rights-December-2022.pdf.

[4] The App Association notes that it does not support the notion that patent owners should be forced to license their non-SEPs, which they have not voluntarily committed to licensing on FRAND terms during the standardization process, to competitors that allegedly cannot compete without such access—even in the rare cases where there is little harm or impact to the IP holder, or consumer interests are allegedly harmed by lack of competition. Such compulsory licensing provisions seriously undermine the fundamental right to exclude others from using one's intellectual property, and thus affects incentives to innovate in the long term. Indeed, the Commission notes in its Draft Guidelines that "[g]enerally speaking, licensors are free to refuse to license other firms and to limit the use of intellectual property to either themselves or to selected licensees." Draft Guidelines at 8.

[5] Supra note 3 at 8-11.

services and in promoting technical or economic progress, the Commerce Commission should provide guidance on the implications under the Competition and Consumer Act 2010 (Cth) of breaches of fair, reasonable, and non-discriminatory (FRAND) commitments made by a SEP holder during the standardization process. We agree with the Commission that the FRAND commitment in the SEP context increases competition by reducing intellectual property licensing-related abuse and deterring unnecessary and burdensome litigation, supporting ingenuity in the market. Clarifications on the meaning of FRAND commitments made on SEPs are beneficial to both SEP holders, to the innovators who utilize standards, and to the consumer and enterprise end-users of technology. We appreciate the Commerce Commission providing examples of anti-competitive SEP licensing refusals and restrictive licensing in key markets, including in the telecommunication and automotive industries.

The Commission's Draft Guidelines appropriately reflect that SEPs give rise to unique competition concerns. To avoid the harmful effects of abusive licensing of SEPs in New Zealand, the App Association strongly urges the Commerce Commission to align its Guidance with the following:

- ***Standards, Patents, and Competition Policy to Drive Small Business Innovation***, a position paper authored by the App Association capturing its views on the interplay of competition, standards, patents, and innovation **[Appendix 1]**;
- ***The Pricing and Valuation of Standard-Essential Patents***, a position paper authored by the App Association analysing the pricing and valuation of patents that are voluntarily committed to a fair, reasonable, and non-discriminatory (FRAND) license **[Appendix 2]**; and
- ***CWA 95000:2019 ("Core Principles and Approaches for Licensing of Standard Essential Patents")***, leading cross-sectoral consensus recommendations (a) providing educational and contextual information regarding SEP licensing and the application of FRAND, (b) identifying and illustrating the questions that negotiating parties may encounter, and (c) setting forth key behaviours and best practices that parties might choose to adopt to resolve any SEP licensing issues amicably and in compliance with the FRAND obligation **[Appendix 3]**.

In alignment with the above, the Commission's updates to its Guidelines represent a critical opportunity to provide certainty and to demonstrate global leadership in competition and intellectual property policy. One key way the Commission can do this is to clarify that abusing the dominant position that a SEP holder occupies through means such as refusing to license a FRAND-committed SEP indeed contravenes the Competition and Consumer Act 2010 (Cth).

The App Association appreciates the opportunity to provide input on the Commerce Commission's Draft Guidelines on the application of competition law in relation to intellectual property rights. We look forward to continuing our support for the Commerce Commission's efforts to promote compliance with the Commerce Act 1986.

Sincerely,

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Standards, Patents, and Competition Policy to Drive Small Business Innovation

ACT | The App Association represents more than 5,000 small and medium-sized app development companies in the United States, Europe, and around the world. The association is committed to preserving and promoting innovation while encouraging a healthy and robust standards ecosystem, as well as a balanced intellectual property system, to accelerate the growth of technology markets.

This paper was developed by the App Association to convey its overarching views on standards, intellectual property, and competition (and how these areas interrelate) to policymakers as well as stakeholders throughout the standard-essential patent (SEP) licensing ecosystem. Below, the App Association provides its general views on SEP licensing; summarizes key FRAND licensing-related enforcement actions and policymaker guidance from across important jurisdictions and notes common themes that are contributing to a global consensus on SEP policies; and makes specific recommendations on reasonable approaches to SEP royalty level calculations.

The App Association presents these views in large part to advance the public dialogue on laws and policies that affect SEP licensing. We are committed to partnership with all policymakers and other stakeholders to advance innovation and competition.

General Views of ACT | The App Association on Standard-Essential Patents Licensing

The App Association strongly supports efforts to provide clarity about the SEP licensing ecosystem for all stakeholders. The rise of the internet of things (IoT) is poised to expose new markets and verticals to SEP licensing, and we strongly urge policymakers to build upon existing, global-consensus guidance providing clarity on what fair, reasonable, and non-discriminatory (FRAND) commitments made on SEPs mean, and the effects of FRAND abuse on competition and innovation.

From Europe to Asia to North America, a variety of market regulators have provided significant guidance regarding SEPs and FRAND licensing commitments. Further, leading standards development organizations (SDOs) have, after much effort, successfully revised their intellectual property rights (IPR) policies to clarify technology contributors' FRAND commitments in ways that are consistent with such guidance. These government policies, as well as the patent policies developed by SDOs, will affect the way citizens work, live, and play for decades to come.

We believe that guidance on the anti-competitive implications of breaches of FRAND commitments can increase competition by reducing IP abuse and deterring unnecessary and burdensome litigation, supporting ingenuity in the market. Specifically, the App Association believes clarifications on the meaning of FRAND commitments are beneficial to both SEP holders and standard implementers as well as the consumers of technology. The negative effects of abusive licensing of SEPs can be particularly harmful to the App Association's members, which include thousands of small and medium-sized enterprises (SMEs) that both hold SEPs and implement standards in their products. These SMEs often do not have the resources to deal with larger enterprises holding numerous SEPs. As a result, they face potential financially debilitating litigation with no predictable outcome or are forced to accept excessive royalty demands made by the SEP holders. In the worst case, the SME may be forced to change their product, or abandon their business plan altogether, if they cannot afford the litigation or the supra-FRAND SEP licenses. Patent licensing abuses pose a major threat to any industry that relies on standards in its innovation cycle.

The convergence of computing and communication technologies will continue as a diverse array of industries come together to build IoT. IoT's seamless interconnectivity will be made possible by technological standards like Wi-Fi, LTE/5G, and Bluetooth, which bring an expanding value to consumers by promoting interoperability while enabling healthy competition between innovators.

Unfortunately, as some FRAND-committed SEP owners are reneging on their commitment to license in a fair, reasonable, and non-discriminatory manner. These practices are anticompetitive and jeopardize the potential of nascent markets like IoT.

These issues are important to the small business technology developer community the App Association represents as well as emerging industries around the globe, which prompted the App Association to launch the All Things FRAND initiative (http://www.allthingsfrand.com/).

SDOs vary widely according to their membership, the industries they cover, and the procedures for establishing standards.[i] Each SDO needs the ability to tailor its intellectual property policy to its particular needs and membership. We do not believe that governments should prescribe detailed requirements for all SDOs. However, basic principles underlie the FRAND commitment which ensure standard-setting is pro-competitive and SEP licensing terms are indeed FRAND. SDO IPR policies that provide for SEP owners to make FRAND commitments should include all of the following principles to prevent patent “hold up” and anti-competitive conduct.[ii] These principles are also endorsed by industry practitioners as set out in *CWA 95000* “Core Principles and Approaches for the licensing of standard essential patents”.[iii]

- **Fair and Reasonable to All** – A holder of an SEP subject to a FRAND commitment must license such SEP on fair, reasonable, and non-discriminatory terms to all companies, organizations, and individuals who implement or wish to implement the standard.
- **Injunctions Available Only in Limited Circumstances** – Injunctions and other exclusionary remedies should not be sought by SEP holders or allowed except in limited circumstances. The implementer or licensee is always entitled to assert claims and defenses.
- **FRAND Promise Extends if Transferred** – If a FRAND-encumbered SEP is transferred, the FRAND commitments follow the SEP in that and all subsequent transfers.
- **No Forced Licensing** – While some licensees may wish to get broader licenses, the patent holder should not require implementers to take or grant licenses to a FRAND-encumbered SEP that is not essential to the standard, unenforceable, or not infringed, or invalid.
- **FRAND Royalties** – A reasonable rate for a valid, infringed, and enforceable FRAND-encumbered SEP should be based on several factors, including the value of the actual patented invention apart from its inclusion in the standard, the anticipated overall royalty-rate for all SEPs relevant to a particular standard, and the innovative impact of an SEP to the specific standard. A reasonable rate must not be assessed in a vacuum.

We also note that for a number of SDOs, IPR policies require SDO participants to disclose patents or patent applications that are, may be, or may become, essential to a standard under development. Reasonable disclosure policies can help SDO participants evaluate whether technologies being considered for standardization are covered by patents. Disclosure policies should not, however, require participants to search their patent portfolios. These requirements can be overly burdensome and expensive, effectively deterring participation in an SDO. In addition, FRAND policies that are “participation” or “contribution” based, where the FRAND commitment attaches based on a patent holder’s participation in and/or contribution to a technical standard can accomplish many, if not all, of the goals of a disclosure-based FRAND regime.

The Global Consensus on SEPs and FRAND Licensing Behavior

We strongly encourage an acknowledgment of the inherent link between standard setting, competition and innovation, and the role of competition law in ensuring a balanced and fair SEP licensing ecosystem. Standard setting naturally gives rise to competition issues.

Consistent with a growing number of enforcement actions by competition regulators and courts across key jurisdictions, a refusal to license, or bringing an injunction against, a party who is willing to take a license based on FRAND terms should be considered exclusionary conduct under antitrust laws. Further, a prospective licensee's challenge to the validity, essentiality, or infringement of the SEP(s) should not be grounds for labeling a licensee as unwilling, as long as that licensee undertakes negotiations in good faith in light of standard business practices.

Clear, coordinated rules for SEP licensing will allow for informed participation and enable participants to make knowledgeable decisions about the implementation of the standard. For many years, market regulators have taken numerous steps to provide this clarity in the SEP context. FRAND licensing-related enforcement actions and guidance have developed across key jurisdictions, and are detailed in an appendix to this position paper.

Although different jurisdictions' guidance varies in detail, they do exhibit common licensing principles for FRAND-committed SEPs. In particular, one commonly shared guidance indicates that the following conduct can be a breach of the FRAND commitment, or even an abuse of competition law: refusing to license SEPs to standard implementers; coercing the licensee to accept a license of a non-SEP as a condition for the licensing of a SEP; requesting discriminatory terms for an SEP license; imposing an unreasonable level of royalties or other non-FRAND conditions; seeking or using injunctive relief against willing licensees that are able to pay a reasonable royalty; or imposing licensing conditions that unreasonably restrict the licensee's exercise of related patents it owns. This guidance does not, however, prescribe specific royalty rates for SEPs because of the highly fact-specific nature of SEP licensing.

Reasonable Royalty Level Calculation Methodologies and Factors

As representatives of small business innovators that rely on FRAND access to SEPs, we seek to avoid two well-established, and deleterious effects - royalty stacking, when the cumulative demands for SEP licenses cascade to make accepting them economically unviable; and patent holdup, where a SEP holder demands supra-FRAND royalties or (other unreasonable requirements) from potential user of the standard, preventing licensing.[iv]

As we have noted, guidance on the general meaning of FRAND commitments can be beneficial. The App Association recommends that guidelines fill in the details left unaddressed by existing legal framework. This guidance would provide SDOs, courts, SEP holders, and implementers with more clarity on how the law will be applied. We note that the guidelines offered by key market regulators do not establish royalty rates specific to FRAND commitments. Instead, they establish general principles to determine whether a proposed royalty or other licensing term is reasonable.

There is no need to prescribe royalty methodologies or establish an independent expert body to determine the details of FRAND licensing terms. Together, guidance can help courts understand the difference between legitimate exercises of patent rights in the standardization context and contractual breaches of FRAND commitments, including instances where the breaches constitute abuses of unearned market power and harm to competition.

Regarding the “royalty base,” we urge policymaker guidance to avoid exclusive mandates regarding calculation of a royalty base, even though the “smallest saleable unit” (SSU) approach and others have emerged as a reliable basis for calculation.[v] We believe it may be helpful to support the SSU pricing methodology as one—but not the only—approach to determining a reasonable royalty base.

When addressing royalty calculations, the App Association recommends that a reasonable rate for a valid, infringed, and enforceable FRAND-encumbered SEP should be based on a variety of holistic factors, including the value of the actual patented invention, apart from its inclusion in the standard. This value cannot be assessed in a vacuum that ignores the portion of a product, e.g. a component of a larger device or even a sub-component of a component, in which the SEP is substantially practiced, or royalty rates from other SEPs to implement the standard. Such factors may include those noted (royalty rates of patent pools or other licenses, relative values of SEPs under negotiation to other SEPs, cumulative royalty rates, total numbers of SEPs, patent portfolio strength, and negotiation histories), as well as other factors used in precedent-setting case law.

Conclusion

The App Association recommends the advancement of guidance by policymakers consistent with the above. Such guidance will guide standardization activities; ensure SEP licensing on FRAND terms; prevent, and effectively resolve, disputes over the meaning of FRAND; and encourage the enforcement of FRAND commitments. The future of standardization, and the ability of small business innovators to drive new IoT developments across consumer and enterprise use cases, is at stake.

APPENDIX: Summary of key SEP-related policies, guidance, and enforcement actions

Canada

- In March 2017, the Canadian Competition Bureau finalized revisions to IP enforcement guidelines that for the first time define breaches of FRAND commitments as a competition issue. [vi] The IP guidelines note that (i) bundling of SEPs and non-SEPs can cause competitive harm; (ii) there are only limited circumstances under which SEP holders can obtain injunctive relief; (iii) while contract law may be sufficient to resolve contractual breaches of FRAND, competitive effects from some breaches may need to be addressed under competition law; and (iv) the Bureau is not a rate regulator and would likely only find a competition problem based solely on a supra-FRAND royalty if the SEP owner had set a maximum rate during standards development and then breached it. The Bureau acknowledges in its guidelines that rapid developments continue in competition enforcement policy, so the Bureau will regularly revisit its guidance in light of relevant developments.

China

- On February 9, 2015, China's National Development and Reform Commission (NDRC) issued an administrative penalty decision against Qualcomm, Inc. The NDRC determined that several aspects of Qualcomm's licensing of telephony SEPs constituted an abuse of a dominant position.[vii] The specific practices deemed to be unlawful were: (i) charging royalties for expired SEPs, (ii) conditioning SEP licenses on licensees' agreement to take licenses to other Qualcomm patents that were not SEPs (non-SEPs), (iii) requiring SEP licensees to grant back royalty-free licenses to their non-SEPs, (iv) imposing a "relatively high royalty" calculated on a device-level royalty base, and (v) requiring baseband chip purchasers to agree to licenses with unreasonable conditions such as the ones listed above and not to challenge Qualcomm's licenses.

- China's State Administration for Industry and Commerce issued a Regulation on Prohibiting Abuse of Intellectual Property Rights to Eliminate or Restrict Competition on April 7, 2015.[viii] The regulation prevented SEP holders with a dominant market position from engaging in conduct that eliminates or restricts competition by refusing to license implementers, tying SEPs to non-SEPs, or imposing other unreasonable conditions in violation of the FRAND commitment.

European Union

- The European Commission's guidelines regarding horizontal co-operation agreements, published in 2011, discuss the anticompetitive threat of patent "hold up" in the SDO context and the importance of the effective use of FRAND commitments in combating that threat.[ix] "While a standard is being developed, alternative technologies can compete for inclusion in the standard. Once one technology has been chosen and the standard has been set, competing technologies and companies may face a barrier to entry and may potentially be excluded from the market." (Par. 266). This characteristic of standard-setting presents the potential of enabling "companies to behave in anti-competitive ways, for example by 'holding-up' users after the adoption of the standard either by refusing to license the necessary IPR or by extracting excess rents by way of excessive royalty fees thereby preventing effective access to the standard." (Par. 269). To avoid this anticompetitive outcome, the guidelines stress that SDOs should adopt IPR policies that "require participants wishing to have their IPR included in the standard to provide an irrevocable commitment in writing to offer to license their essential IPR to all third parties on fair, reasonable and non-discriminatory terms ('FRAND commitment')." (Par. 285). The Commission points out that "FRAND commitments can prevent IPR holders from making the implementation of a standard difficult by refusing to license or by requesting unfair or unreasonable fees (in other words excessive fees) after the industry has been locked-in to the standard or by charging discriminatory royalty fees." (Par. 287). In case of a dispute involving a FRAND commitment, "the assessment of whether fees charged for access to IPR in the standard-setting context are unfair or unreasonable should be based on whether the fees bear a reasonable relationship to the economic value of the IPR." (Par. 289). Because FRAND commitments are voluntary, however, IPR holders should be permitted "to exclude specified technology from the standard-setting process and thereby from the commitment to offer to license, providing that exclusion takes place at an early stage in the development of the standard." (Par. 285).

- In the European Commission's market testing in December 2009 of a set of proposed commitments offered by Rambus to license its SEPs on reasonable terms, some respondents expressed the concern that Rambus would seek to "extract royalties based not on the price of the individual chips or controllers, but on the value of the end-product (such as PCs, mobile phones and other devices integrating DRAMs), even if the licensed technologies only represent a small percentage of such end-products." In response, the Commission made clear that the "royalty shall be determined on the basis of the price of the individually sold chip and not of the end-product. If they are incorporated into other products, the individual chip price remains determinative".[x]

- On April 29, 2014, the European Commission issued a decision in which it determined that "Motorola Mobility's seeking and enforcement of an injunction against Apple before a German court on the basis of a smartphone SEP constitutes an abuse of a dominant position prohibited by EU antitrust rules."[xi] The Commission explained that FRAND commitments are "designed to ensure effective access to a standard for all market players and to prevent 'hold-up' by a single SEP holder." The Commission determined that seeking an injunction against a willing licensee of a FRAND-encumbered SEP "could risk excluding products from the market" and "lead to anticompetitive licensing terms that the licensee of the SEP would not have accepted absent the seeking of the injunction. Such an anticompetitive outcome would be detrimental to innovation and could harm consumers." On the same day, the Commission issued a press release on the case that provided further guidance, including the points that (i) the licensee can challenge the validity, essentiality, or infringement of SEPs and still be considered a "willing" licensee; and (ii) the specific rate of a reasonable royalty should be determined by courts or arbitrators.

- On April 29, 2014, the European Commission formally accepted commitments from Samsung not to seek injunctions on FRAND-encumbered SEPs for smartphones and tablets against licensees that agree to an approved licensing framework.[xii] This framework gave licensees the choice of having a reasonable royalty rate and other FRAND terms determined by a court or, if both agree, by an arbitrator. The Commission also iterated the same principles that it stated in connection with the Motorola case described above.

- On November 29, 2017, the European Commission issued a highly anticipated Communication on licensing practices for SEPs. The EC issued the Communication to provide a "balanced, smooth and predictable framework for SEPs" that will contribute to "the development of the Internet of Things and harnessing Europe's lead role in this context."[xiii] Notably, in the SEP Communication, the Commission:

    - Recognized the significant contributions of SMEs to innovative IoT solutions and the critical role of standards in empowering SMEs to compete with industry giants.

    - Reinforced the license to all obligation of FRAND-committed SEP holders. The EC's 2011 Horizontal Guidelines clearly established SEP holders' requirement to offer licenses to "all third parties" on FRAND terms. It is well known that SEP holders increase their market power when their patent is incorporated into a standard, and as a result of their FRAND commitment, they cannot refuse a license to any willing third party. In the Communication, the EC reiterates that the Court of Justice of the European Union (CJEU) confirmed in the *Huawei v. ZTE* decision of 2015 that an effort "to grant licenses on FRAND terms creates legitimate expectations on the part of third parties that the proprietor of the SEP will in fact grant licenses on such terms."

    - Refused to endorse the "access for all" rationale with regard to SEP license availability that would allow SEP holders to arbitrarily refuse to license to some parties, even if their potential licensees were willing to negotiate on FRAND terms.

    - Rejected the dangerous “use-based pricing” model that would have allowed SEP holders to inflate license fees based on the value created by other innovators, or factors unrelated to the patent.

- In January 2018, the European Commission fined Qualcomm €997 million ($1.2 billion) for abusing its position in the LTE standard-compliant chip market base.[xiv]

Japan

- In early 2016, the Japan Fair Trade Commission updated its Guidelines for the Use of Intellectual Property under the Antimonopoly Act.[xv] This stated that a refusal to license to, or bringing an injunction against, a party who is willing to take a license based on FRAND terms, can be considered exclusionary conduct under Japan’s Antimonopoly Act. The Guidelines indicate that a “willing” licensee will be judged on a case-by-case basis, based on the conduct of both negotiating parties. Examples include whether the licensor notified the prospective licensee of a specific patent that has been infringed and how it was infringed; whether the licensor made a licensing offer based on reasonable conditions; whether the prospective licensee made a prompt and reasonable counteroffer; and whether the parties otherwise acted in good faith. The JFTC clarified that a prospective licensee’s challenge to the validity, essentiality, or infringement of the SEP(s) would not be grounds for labeling it an unwilling licensee, as long as it undertakes the negotiations in good faith in light of standard business practices.

Malaysia

- On April 5, 2019, the Malaysian Competition Commission (MyCC) issued its *Guidelines on Intellectual Property Rights and Competition Law* (MyCC Guidelines),[xvi] intended to provide guidance on MyCC’s approach in respect of competition issues arising from matters relating to intellectual property. Under the MyCC Guidelines, the MyCC recognizes that the exclusivity granted by IP rights incentivizes enterprises to be more innovative and to improve the quality of their products and services. This will in turn benefit consumers as they have wider choices at more competitive prices. MyCC recognizes that IP rights of exclusivity, however, are not without restraints, and provide that where the conduct of IP owners is such that rival enterprises would encounter difficulties selling substitute products and technology in the market, or IP owners in a dominant position are able to dictate unfair terms and conditions on other market players or consumers, the ability to exercise such rights will be restricted by competition law. The MyCC Guidelines notably discuss how predatory behavior including refusals to license SEPs, refusals to allow access to SEPs on fair, reasonable and non-discriminatory (FRAND) terms, and royalty stacking will violate Malaysian competition law.

Republic of Korea

- In December 2014, the Korean Fair Trade Commission (KFTC) revised its Guidelines on the Unreasonable Exercise of Intellectual Property Rights to address breaches of FRAND commitments as a competition law matter.[xvii] According to the KFTC, the following licensing practices by SEP holders may be deemed to be abusive:

    - Coercing the licensee to accept a license of a non-SEP as a condition for licensing a SEP;
    - Not disclosing patents applied for or registered to increase the possibility of one's technology being standardized or to avoid prior consultations on license conditions;
    - Unreasonably refusing to license the SEP;
    - Not licensing the SEP on FRAND terms so the patentee can strengthen its monopoly power or exclude competitors in the relevant market;
    - Requesting discriminatory terms for a SEP license, or imposing an unreasonable level of royalties;
    - Imposing licensing conditions that unreasonably restrict the licensee's exercise of related patents held by the licensee;
    - Seeking injunctive relief unless (i) the potential licensee refuses to enter into a license agreement on FRAND terms objectively confirmed in proceedings in a court or an arbitration forum, or (ii) a willing licensee is unable to pay damages due to imminent bankruptcy, etc.; or
    - Unreasonably imposing licensing conditions that require a cross-license of non-SEPs held by the licensee. (See Section III.3.A, B & D(5)).

  The KFTC also indicated that a FRAND commitment obligates SEP holders to negotiate in good faith with willing licensees and listed various factors to help the agency make that determination.

- In December 2016, the KFTC issued a decision imposing sanctions against Qualcomm Inc. in the amount of 1.03 trillion Korean Won (approximately €762 million) for alleged violations of Korean competition laws.[xviii] After conducting a comprehensive investigation that spanned for more than a year and issuing its examination report to Qualcomm on November 13, 2015, the KFTC found that Qualcomm, an SEP holder, breached its FRAND commitments when engaging in licensing agreements with certain companies. The Seoul High Court subsequently denied a stay of the Corrective Order.

United States

- In 2011, the U.S. Federal Trade Commission (FTC) issued a report entitled *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* (2011), in which the FTC addresses the issue of a reasonable royalty for FRAND-encumbered SEPs and recommends that "[c]ourts should cap the royalty at the incremental value of the patented technology over alternatives available at the time the standard was chosen."[xix] The FTC explains that setting the royalty for a FRAND-encumbered SEP "based on the *ex-ante* value of the patented technology at the time the standard is chosen is necessary for consumers to benefit from competition among technologies to be incorporated into the standard – competition that the standard setting process itself otherwise displaces." The FTC also addresses the question of the appropriate royalty base in patent cases and recommends that "[c]ourts should identify as the appropriate base that which the parties would have chosen in the hypothetical negotiation as best suited for accurately valuing the invention. This may often be the smallest priceable component containing the invention." According to the FTC, "the practical difficulty of identifying a royalty rate that accurately reflects the invention's contribution to a much larger, complex product counsels toward choosing the smallest priceable component that incorporates the invention."

- The U.S. Department of Justice (DOJ) and Federal Trade Commission issued a report in 2007 entitled *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition*, which discusses various way to minimize patent holdup, including SEP disclosure policies, FRAND undertakings, and *ex ante* disclosure of licensing terms.[xx]

- The U.S. Federal Trade Commission issued a Decision and Order in 2013 accompanying its challenge to an injunction sought by Google's Motorola Mobility Division, which sets forth in detail procedures that a declared SEP holder must undertake before it may seek an injunction or other exclusionary relief based on an SEP and makes clear that a potential licensee may challenge infringement, validity, and enforcement of a declared SEP before being ordered to pay a royalty.[xxi]

- In August 2013, the U.S. Trade Representative (USTR), acting on behalf of the President of the United States, overturned a U.S. International Trade Commission ruling that would have issued (i) an exclusion order (similar to an injunction) prohibiting importation of Apple products into the United States that purportedly infringed Samsung SEPs; and (ii) a cease and desist order that would have prevented Apple from engaging in certain activities, such as the sale of these products in the United States.[xxii] The USTR decision included substantial discussion of the policy reasons for disallowing the exclusion order.

- In January 2013, the U.S. Department of Justice and U.S. Patent and Trademark Office issued the Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments, which recognizes the harms of patent hold up and explains that FRAND commitments are designed as a solution to that problem that benefits both standard implementers and SEP holders.[xxiii] The policy statement reasons that FRAND commitments may be incompatible with injunctive relief: "A decision maker could conclude that the holder of a F/RAND-encumbered, standards-essential patent had attempted to use an exclusion order [a form of injunctive relief] to pressure an implementer of a standard to accept more onerous licensing terms than the patent holder would be entitled to receive consistent with the F/RAND commitment—in essence concluding that the patent holder had sought to reclaim some of its enhanced market power over firms that relied on the assurance that F/RAND-encumbered patents included in the standard would be available on reasonable licensing terms under the SDO's policy." However, such relief may be appropriate in some circumstances, "such as where the putative licensee is unable or refuses to take a F/RAND license and is acting outside the scope of the patent holder's commitment to license on F/RAND term" or "is not subject to the jurisdiction of a court that could award damages."

- In 2017, the FTC brought an enforcement action in the U.S. District Court for the Northern District of California against Qualcomm, asserting that Qualcomm violated competition law in its mobile phone chip licensing practices.[xxiv] This enforcement action is significant in seeking to provide clarity about what constitutes FRAND behavior. The FTC alleged Qualcomm's behavior was due, in part, to its dominant position in the chip manufacturing market. Qualcomm is the leading company in Code Division Multiple Access (CDMA) and premium LTE chips, which are essential components to nearly every cell phone. According to the FTC, Qualcomm either refused licenses, or threatened device manufacturers with the withholding of access, to those necessary chips unless licensees agreed to pay disproportionate royalty fees. The FTC described this as an anticompetitive "no license-no chips" policy, which allowed Qualcomm to obtain royalties significantly higher than those suggested within their FRAND obligation. In 2018, this case survived a motion to dismiss by Qualcomm and has produced a ruling that held that a FRAND commitment represents an obligation to license to any willing licensee (consistent with the "non-discriminatory" component of FRAND) continues to be litigated in the U.S. federal court system.

  Further, in 2019, U.S. District Court judge Lucy Koh found that Qualcomm's licensing practices, including in the context of SEPs, clearly violate U.S. antitrust law. The court found that Qualcomm has continued its anticompetitive conduct despite rulings by competition authorities around the world demanding it end these practices and, therefore, ordered five remedies:

  - Based on their dominant position, Qualcomm can no longer tie their supply of chips to a customer's patent license and has to negotiate (and for existing arrangements, renegotiate) licensing terms with its customers without using its "no license, no chips" policy.

  - Qualcomm must make its SEPs available on fair, reasonable, and non-discriminatory (FRAND) terms, even to competitors.

  - Qualcomm can no longer employ exclusive dealing agreements (agreements only to purchase from Qualcomm) for supplying chips.

  - Qualcomm can no longer interfere with its customers in communicating with a government agency about a potential law enforcement or regulatory matter.

  - Qualcomm must submit to compliance and monitoring for seven (7) years and must annually report to the FTC about its compliance with the above remedies.

[i] U.S. Fed. Trade Comm'n & U.S. Dep't of Justice, *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition*, at 33-34, footnote 5 (2007), *available at* https://www.ftc.gov/sites/default/files/documents/reports/antitrust-enforcement-and-intellectual-propertyrights-promoting-innovation-and-competition-report.s.department-justice-and-federal-tradecommission/p040101promotinginnovationandcompetitionrpt0704.pdf.

[ii] "Principles for Standard Essential Patents" About AllThingsFRAND.com (explaining the FRAND commitment requirements.) http://www.allthingsfrand.com/about/about-allthingsfrand.com/

[iii] "Core Principles and Approaches for Licensing of Standard Essential Patents" (industry-led agreement on principles pertaining to standard essential patent licensing). ftp://ftp.cencenelec.eu/EN/News/WS/2019/CWA_SEP/CWA95000.pdf

[iv] http://bit.ly/1QTIDYv.

[v] *E.g.*, *Ericsson, Inc. v. D-Link Systems, Inc.*, 773 F.3d 1201, 1227 (Fed. Cir. 2014).

[vi] http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04031.html.

[vii] National Development and Reform Commission, [2015] Administrative Penalty Decision No. 1, February 9, 2015, http://jjs.ndrc.gov.cn/fjgld/201503/t20150302_666170.html.

[viii] http://bit.ly/2zrGDcX.

[ix] Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreement, Par. 285 (Jan. 14, 2011).

[x] http://ec.europa.eu/competition/antitrust/cases/dec_docs/38636/38636_1203_1.pdf

[xi] http://europa.eu/rapid/press-release_IP-14-490_en.htm\

[xii] http://europa.eu/rapid/press-release_IP-14-490_en.htm

[xiii] https://ec.europa.eu/docsroom/documents/26583/attachments/1/translations/en/renditions/native

[xiv] https://www.reuters.com/article/us-eu-qualcomm/eu-fines-qualcomm-1-2-billion-over-apple-chip-deals-idUSKBN1FC2WP

[xv] *See* Guidelines for the Use of Intellectual Property under the Antimonopoly Act, Part 3, Section 1(i)(e) (January 21, 2016); *available at* http://www.jftc.go.jp/en/pressreleases/yearly-2016/January/160121.files/IPGL_Frand_attachment.pdf.

[xvi] https://www.mycc.gov.my/sites/default/files/WJW013224%20Teks%20%282%29.pdf.
[xvii] http://bit.ly/2jdxbUa.

[xviii] http://bit.ly/2hoADuI.

[xix] https://www.ftc.gov/sites/default/files/documents/reports/evolving-ip-marketplace-aligning-patent-notice-and-remedies-competition-report-federal-trade/110307patentreport.pdf

[xx] 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

[xxi] https://www.ftc.gov/sites/default/files/documents/public_statements/statement-commission-regarding-consent-agreement-google/motorola/130103brillgooglemotorola-sep-stmt.pdf

[xxii] https://ustr.gov/sites/default/files/08032013%20Letter_1.PDF

[xxiii] https://www.justice.gov/sites/default/files/atr/legacy/2014/09/18/290994.pdf

[xxiv] *FTC v. Qualcomm*, Case No. 17-cv-220 (N.D. Cal.).

ACT The App Association

The Pricing and Valuation of Standard-Essential Patents

April 2020

1. Context

The following is an analysis of ACT | The App Association's views on the pricing and valuation of patents that the patent owner has voluntarily contributed to a standard and voluntarily agreed to license on fair, reasonable, and nondiscriminatory (FRAND) terms.

As representatives of small business innovators that rely on FRAND licensing terms to license standard-essential patents (SEPs) based on these voluntary commitments, the App Association seeks to ensure that a SEP is valued based on its technical merits and scope, not on value or uses created by downstream innovators or from its inclusion in a standard. To appropriately value a SEP it is important to avoid royalty stacking, when the cumulative demands for SEP licenses cascade to make accepting them economically unviable, and to avoid holdup, where a SEP holder leverages lock-in to demands supra-FRAND royalties or (other unreasonable requirements) from potential users of the standard, preventing licensing.

In most cases, SEP licensors and licensees are able to reach agreement on FRAND licensing terms. Where they disagree, courts are best equipped to resolve these disagreements based on the arguments and evidence presented by the parties in each individual case. FRAND royalty guidance also may be provided by competition authorities with investigative power and access to detailed and confidential factual information in specific cases, or by other similarly-situated arbitrators or mediators who may be mutually and voluntarily agreed upon by the concerned parties. The App Association does not at believe that an update is needed to the 2017 Commission Communication on Setting out the EU approach to Standard Essential Patents.[1] If, however, the Commission plans to undertake this type of project, we urge the Commission to take into account the following principles and supporting analysis to best promote European innovation.

[1] Communication of the Commission To The European Parliament, The Council And The European Economic And Social Committee, Setting out the EU approach to Standard Essential Patents COM (2017) 712 final 29 November 2017, sec. §2.1 ("EC SEP Communication").

2. FRAND Valuation Principles Should Correspond to the Value of the Patented Technology

Holders of patents that are essential to a standard should be reasonably compensated for the use of those SEPs. Indeed, such compensation is at the center of the FRAND bargain: in exchange for inclusion of the patented technology into the standard, the patent holder agrees to license any implementer on FRAND terms. Potential users of the standard choose to use a standard because they are assured they will be able to license the patents essential to the standard on FRAND terms and contributors gain access to a broader market of users willing to license their standard-essential patents than they would licensing them for use outside the standard. This FRAND compensation should be based on the value of the patented invention as determined by its technical merits and scope, as is the case with every patent, whether or not FRAND-encumbered.

The Commission first addressed the importance of focusing on the value of the patented invention when determining royalties for SEPs in 2011, stating in its Horizontal Agreement Guidelines that such royalties "should be based on whether the fees bear a reasonable relationship to the economic value of the patent."[2] The Commission similarly recognised the importance of this approach in its 2017 SEP Communication stating "[l]icensing terms have to bear a clear relationship to the economic value of the patented technology" whose "value primarily needs to focus on the technology itself and in principle should not include any element resulting from the decision to include the technology in the standard."[3] Going beyond the technical merits and scope of the patented invention would reward the patent holder with value it did not create, such as the additional value created by downstream innovators who use the patented standardised technology in their products.

Many of the major EU legal systems measure patent damages based on what the parties would have negotiated in advance of the use of the patented technology.[4] The Commission's Intellectual Property (IP) Enforcement Directive directs EU Member States to ensure that damages awarded are apportioned to encompass only the value of the use of the patented technology, i.e., "*the actual prejudice suffered by [the patent owner] as a result of the infringement*."[5]

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[2] Communication from the Commission: Guidelines on the applicability of Article 101 on the Treaty on the Functioning of the European Union to horizontal co-operation agreements, 2011 O.C.J. 14.1.12011, para. 289.

[3] EC SEP Communication, *supra* note 1, sec. 2.1.

[4] International Association for the Protection of Intellectual Property (APPPI), Summary Report, 2017-Study Questions-General, Quantification of monetary relief 4-5, https://aippi.org/wp-content/uploads/2017/08/Summary-Report-Quantification-of-monetary-relief_16August2017.pdf

[5] Directive 2004/48/EC Of The European Parliament And Of The Council of 29 April 2004 on the enforcement of intellectual property rights, Art. 13(1) (6 February 2004) ("EC IP Enforcement Directive").

The two main components for deriving a royalty are (i) the base and (ii) the rate. Disagreements between parties in negotiating processes generally relate to aspects of either one, or both, of these components. It is important to always keep both sides of this equation in mind when discussing how to price and value SEPs. If the Commission decides to address royalty calculation methodologies in more detail, it should recognise that the “smallest saleable unit” (SSU) is the most reliable way to determine the royalty base and that the royalty rate should reflect the patent holder’s share of the total number of patents essential to the standard. Moreover, the Commission should reject use-based methodologies because they inhibit downstream innovation and distort the research and development (R&D) incentives of patent holders that contribute technology to standards.

2.1. The Royalty Base

The royalty base is, at most, the smallest component of a product that is used to determine the royalty that must be paid to the patent owner for the use of a SEP. If that component contains functionalities that go beyond the invention claimed in the SEP, then the value of those functionalities must be removed from the base. The royalty base is expressed as a price, or a portion of the price, of the component. With an appropriate base, the parties can then agree on what share of the base the patent holder is entitled for use of the SEP.

Apportioning between the patent holder’s invention and other patented and non-patented features will ensure that the rightsholder’s damages reflect the value of the use of its patent. The App Association believes it would be helpful to support the SSU pricing methodology as the most useful approach to determining a reasonable royalty base because it best helps to achieve this goal. The SSU pricing methodology tailors the patent holder’s compensation to the merits and scope of its invention as practiced by the user. This tailoring rewards the patent holder for the value attributable to the patented inventive features that it contributed to the standard, not for the value created by others that falls outside the scope of that patented contribution. The right place to end value attribution in the value chain to promote downstream innovation is to assess patent merit and scope at the point in the value chain where the standard is practiced.

The framework set forth in the EC IP Enforcement Directive is informative in this regard. Relief granted to IP rightsholders by Member States must meet certain conditions: relief must be “appropriate to the actual prejudice suffered by [the rightsholder] as a result of the infringement”; it must be “fair and equitable”; it must be “effective, proportionate and dissuasive”; it must “avoid the creation of barriers to legitimate trade”; and it must be determined on the facts and characteristics of the case.[6] These conditions for relief support using an SSU methodology, particularly in the context of complex products that have thousands of features. A court must evaluate the nature of the patent right and the context of the infringement, identifying the value of the use so as to address the “actual prejudice” suffered by the rightsholder as a result of the infringement. In the context of SEPs, none of the myriad patents that read on the device represent its entire value. Attributing that entire value to the patent of an individual rights holder would unfairly attribute to it the value of

[6] EC IP Enforcement Directive, *supra* note 5, Art. 13(1), Art. 3(1), Art. 3(2) & Recital 17.

other patented and non-proprietary features. Doing so would be contrary to the operative provisions of the EC IP Enforcement Directive. Rather, it is necessary to focus on the specific infringement for a specific patent claim in order to demonstrate that royalties to remedy infringement are "damages appropriate to the actual prejudice suffered by [the rightsholder]." As the European General Court has explained, the intrinsic value of IP "lies in its innovative character" and "the basic premise of the assessment of the reasonableness of any renumeration" for access to intellectual property is "the distinction between the strategic value and the intrinsic [i.e., innovative] value of the technologies."[7] This distinction appears in the Commission's determination in *Rambus* where the Commission required that the future royalties be "determined on the basis of the price of an individually sold chip and not of the end-product."[8]

IoT innovation depends on licensing at the level of component chip supplier where the appropriate royalty base will frequently be the component that implements the standardised patented technology. For example, French App Association member Wyres provides innovative wireless geolocation technology that incorporates 4G-LTE technology to manage assets and protect workers. Wyres must rely on its Norwegian component chip supplier, Nordic Semiconductor, to guarantee that all third-party rights in Nordic's chipsets are exhausted before purchasing them. Without this guarantee, App Association members such as Wyres would find themselves unable and unwilling to innovate using 4G-LTE technology in its products because its licensing costs—for a patented component that frequently is tangential to the functioning its overall product or its eventual downstream use—would be too high for Wyres to compete efficiently.[9]

[7] Case T-167/08, *Microsoft Corp. v. Comm'n* [2012] E.C.R. 323, paras. 143, 138.

[8] Commission Decision of 12 September 2009 at para. 66, Case COMP/38/636-*Rambus* (requiring Rambus to clarify the commitments made to resolve allegations of deceptive conduct at a standards-setting organization); *see also Windsurfing International Inc. v. Commission of the European Communities,* Case 193/83, at *36 ("The clauses contained in the licensing agreements, in so far as they relate to parts of the sailboard not covered by the German patent or include the complete sailboard within their terms of reference, can therefore find no justification on grounds of the protection of an industrial property right").

[9] The doctrine of patent exhaustion, usually presented as an affirmative defence to a claim of patent infringement, is present in most jurisdictions around the globe in national, regional, or international forms, which means that its application can vary. *See* World Intellectual Property Organization Secretariat, Standing Committee on the Law of Patents, Exceptions and Limitations to Patent Rights: Exhaustion of Patent Rights, SP/21/7 (Oct. 6, 2014), https://www.wipo.int/edocs/mdocs/scp/en/scp_21/scp_21_7.pdf. In the United States, for example, the "authorized sale of an article that substantially embodies a patent exhausts the patent holder's rights and prevents the patent holder from invoking patent law to control postsale use of the article." Quanta Computer, Inc. v. LG Elecs., Inc., 553 U.S. 617, 638 (2008). By agreeing to license on FRAND terms, an SEP holder agrees to offer a license at all levels of the value chain. Having agreed to license component manufacturer, the SEP holder's right to exclude others further down the value chain is ended to the extent that the licensed component implements or substantially practices all or substantially all of the inventive aspects of the SEP.

The Commission's focus on maintaining and promoting European innovation across key sectors, such as automotive and in IoT, is why the App Association recommends that the Commission unequivocally reject use-based licensing, a valuation methodology that mandates tying the royalty base to the use of the SEP in the end product. The prices of innovative downstream products vary widely based on the value of features desired by customers that are unrelated to the invention claimed in the SEP, and the downstream standard user generates value from its own innovation on top of the claimed SEP. Awarding the SEP licensor some of that additional value, a reward that is unrelated to the invention claimed in its patent, inhibits innovation and undermine European competitiveness.[10]

Nor should the Commission rely on use-based licensing to guarantee a return on research and development (R&D) investment to SEP licensors. Such an approach would undermine the patent system by compensating SEP owners for efforts that are unrelated to their inventive contributions to society. By reducing the risk associated with R&D, use-based licensing dramatically increases the incentives for inefficient over-investment by SEP licensors that do not produce successful technologies actually needed or desired by users.

Some claim that use-based pricing makes the marketplace more efficient because it allows for price differentiation.[11] This is a strawman argument. Price differentiation will occur in the absence of use-based licensing when other standardised technologies compete in the marketplace. A number of technological standards exist and compete with one another in the IoT context, including: WiFi (802.11), O-RAN network virtualization specifications, Bluetooth, LoRa, and NB-IoT. Different chips may use different standards, or different subsets of standardised technologies. A connected vending machine would not make use of the latest Qualcomm Snapdragon 5G multimode chipset, designed to implement a cellular standard. Instead, it would likely only need to use a chipset that implements an alternative standardised technology such as WiFi. Price differentiation between competing technologies makes markets more efficient.

Recommendation: There is no need for the Commission to provide additional guidance on SEP valuation. If the Commission does, however, decide to address royalty calculation methodologies in more detail, it should recognise that the SSU—the component that substantially practices the relevant SEPs—is the most reliable way to calculate the royalty base to appropriately compensate the SEP licensor without harming the innovation incentives of downstream producers, European competitiveness, and European consumers. The appropriate royalty base is inherently linked to where standardised technology is implemented in the product. It will frequently be the component or the SSU (and in highly complex products such as an automobile or a handset, this should certainly be the case). The Commission should reject a use-based licensing model because it inhibits downstream innovation and is not needed to differentiate downstream products. Price differentiation will

[10] The same is true for average-selling price (ASP)-based licensing where the royalty varies when enhanced features make certain devices more expensive, yet all devices in the product line implement the same standardised functionality using the same component that practices the same inventive aspects claimed in the SEP.

[11] Eskil Ullberg, "Economic efficiency and field-of-use pricing of SEP licenses under FRAND terms", 4IP Council (2019).

occur in the marketplace as technological solutions compete with one another according to the needs of the market. Moreover, enabling SEP holders to arbitrarily differentiate SEP royalties at will based on known or hypothetical end uses of a product plainly runs afoul of the "non-discriminatory" requirement in FRAND.

2.2. The Royalty Rate

The royalty rate is the amount applied to the base to determine the amount of the royalty. The royalty rate can be expressed in a number of ways: a percentage on a running basis, a fixed price per unit, or (after application to the base) a lump sum.

When addressing royalty calculations, the App Association recommends that a reasonable rate for a valid, infringed, and enforceable FRAND-encumbered SEP should reflect the value of the actual patented invention, apart from its inclusion in the standard.[12] Assessments of the rate should not occur in a vacuum that ignores the licensor's proportional share of the standard's SEPs. The rate should not incorporate other innovators' contributions to the standard, or other factors that are past the patented invention itself.

Comparable licensing is a methodology widely endorsed and used by courts and regulators as a cross check on the royalty determination.[13] Deciding as an initial matter whether a prior license is indeed comparable is a complex undertaking that should separate the royalties attributable to the patented feature from any unpatented features and exclude considerations unrelated to the value of the patented technology, such as the avoidance of litigation costs, business supply needs, or the holdup value of an injunction.

For the purposes of licensing negotiations, the App Association stresses the need for transparency in the use of comparable licenses. A lack of transparency on the part of the patentholder can dramatically affect the effective FRAND rate. While some licensors may share previously concluded licensing agreements with potential licensees, this practice is not uniform. Further, licensors may share previous licenses selectively to the benefit of the licensor, who holds an inherent advantage in such negotiations.

Full disclosure of earlier licenses and their relevant terms also ensures that SEP licensors are not paid multiple times for the same use of its patent if the SEP has already been licensed within the potential licensee's supply chain (*i.e.*, "double-dipping"). Moreover, comparable licenses are only one piece of the puzzle. The other pieces needed to complete the royalty analysis are the secondary agreements between the parties that lower the effective FRAND royalty rate for licensees through special cashback agreements for bulk purchasing, marketing incentive agreements, or other rebate schemes designed to induce a potential licensee to agree to a license. The very existence of these secondary agreements is frequently excluded from the negotiations, and discovery of them may happen very late in the negotiation process

[12] EC SEP Communication, *supra* note 1, sec. 2.1.

[13] Memorandum of Findings of Fact and Conclusions of Law, *TCL Comm'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. SACV 14-341 (C.D. Cal. Dec. 21, 2017) (using a combined top-down aggregate approach with a comparable licensing methodology).

(if at all). Full access by the prospective licensee is usually only achieved by litigating the case and using the discovery process to attain the documents.

Additional factors for consideration in negotiations may include—where applicable—royalty rates of patent pools, relative values of SEPs under negotiation to other SEPs, cumulative royalty rates, total numbers of SEPs, patent portfolio strength, negotiation histories, and other factors related to the bilateral relationship.

Recommendation: A reasonable royalty rate should reflect the value of the actual patented invention, but should not include the value derived from its inclusion in the standard. If the Commission addresses royalty calculation methodologies, guidance is especially necessary regarding when and how to use comparable licenses as a cross-check to guarantee that full information is provided for potential licensees to check the that effective royalty rate is in line with the rates offered to other similarly situated companies, and to ensure that the allegedly comparable licenses value only the patented technology, as opposed to other factors.

3. The Effect of Patent Holdup on Pricing and Valuation

Courts have held that no single FRAND rate exists and that, instead, FRAND is a range.[14] Nevertheless, some SEP licensors systematically make offers that wildly exceed what parties would reasonably accept apart from the need to avoid losing their sunk investments, *i.e.,* engaging in patent holdup.[15] Numerous courts have determined appropriate FRAND rates at a mere fraction of what the SEP licensor had initially demanded.[16] Such rulings indicate that SEPs are frequently overvalued by SEP licensors.

Unreasonably inflated licensing fee demands, despite the voluntary FRAND commitment, are indicative of patent holdup behavior. The licensor can inappropriately leverage the value of the standard by virtue of the fact that its patented technology is locked in to the standard and shifting to an alternative is not economically feasible for users of the standard. Holdup enables the licensor to extract more value from the potential licensee than what the patented technology is worth. By contrast, licensors that value their SEPs based on technical merits and scope, not on downstream values or uses, reduce the risk of holdup.

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[14] *E.g.*, *Unwired Planet v. Huawei.*, *125 [2018] EWCA Civ 2344: The Court of Appeal disagreed with the court of first instance's findings that FRAND is a single set of terms.

[15] Commission Decision of 29 April 2014 at para. 280, Case COMP/AT-39985-Motorola- Enforcement of GSRS standard essential patents (determining that "Motorola's seeking and enforcement of an injunction against Apple in Germany on the basis of the Cudak GPRS SEP amounts to an abuse of a dominant position under Article 102 TFEU"), https://ec.europa.eu/competition/antitrust/cases/dec_docs/39985/39985_928_16.pdf.

[16] *E.g.*, *Unwired Planet v. Huawei.*, [2017] EWHC 711 (Pat): For handsets, Unwired Planet offered a rate of 0.13% (4G-LTE) and 0.065% (UMTS/GSM). These rates were un-FRAND according to Justice Birss. Accordingly, he awarded 0.062% for 4G-LTE and 0.032% for UMTS/GSM handsets; *Realtek Semiconductor Corp. v. LSI Corp*., 946 F. Supp. 2d 998 (United States District Court, N.D. California (2013)): the case was tried before a jury, which established a royalty of 0.19% of the selling price of Realtek's WiFi chips, or an estimated $0.0019 to $0.0033 per chip, as compared to LSI's initial demand for a royalty exceeding the $1-1.75 price of Realtek's WiFi chips; *TCL Comm'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. SACV 14-341 (C.D. Cal. Dec. 21, 2017):

Recommendation: SEP holdup and its harmful effects can be avoided when licensors abide by the FRAND commitment and seek reasonable royalties calculated based on the SSU and the licensor's pro rata share of a standard's declared SEPs. Measures should be taken by regulators to mitigate patent holdup through guidance and strong enforcement of the FRAND commitment, reinforcing that the FRAND commitment prohibits deleterious patent holdup tactics.

4. The Effect of Royalty Stacking on Pricing and Valuation

Royalty stacking is the result of the cumulative licensing demands of patent licensors on a licensee. When these demands are combined, they make it unreasonable and economically unviable for the licensee to accept the terms of any individual offer to license.

With numerous previously unconnected products across consumer and enterprise use cases becoming "smart" (e.g., enabled by wireless connectivity that unlocks real time analytics-based decision making), new IoT use cases are threatened by royalty stacking. For example, the use of sensors and wireless connectivity are enabling cities to manage their garbage collection operations based on new intelligence signals collected in rubbish bins and rubbish dumpsters. Across a smart city network, these signals provide timely knowledge to city managers, enabling them to deploy valuable resources much more efficiently. But with the connectivity unlocking these new efficiencies being provided by 4G LTE standardised technology, a standard with over 5,000 declared SEPs in it, developers of such smart city solutions face the daunting possibility of the demands for so many SEP licenses to "stack" up to exceed the cost of developing and getting a product to market. SEP royalty stacking effectively consumes a commercial product developer's profit margins, which significantly diminishes incentives to engage in R&D. In this way, royalty stacking taxes innovation and prevents technological advancement.

Both of Ericsson's FRAND offers were found to not be FRAND. For 4G SEPs, Ericsson offered Option A (2.592%) and Option B (1.46%). The court decided on a FRAND rate for 4G-LTE SEPs of 0.45% in the US and 0.314% for the rest of the world; *In re Innovatio IP Ventures, LLC Patent Litig*, MDL Docket No. 2303 Case No. 11 C 9308 (N.D Ill. Sep. 27, 2013): the court declared a rate of $0.956 per device (at *88) whereas Innovatio argued (at *22) for $3.39 per access point, $4.72 per laptop, up to $16.17 per tablet, and up to $36.90 per inventory tracking device; *Ericsson Inc. v. D-Link Sys., Inc.,* No. 10-CV-473, 2013 WL 4046225, (E.D. Tex. Aug. 6, 2013): the court decided a FRAND rate of 15 cents per device; *Microsoft v. Motorola*, 2013 WL 2111217 (W.D. Wash. Apr. 25, 2013): For 802.11 SEPs Motorola offered Microsoft 2.25% based on the price of the end product (Xbox 360, approx. $6.75 based on $300 retail price) where the court finally decided on FRAND rate for 802.11 SEPs of $0.03471 cents per unit.

The impact of royalty stacking can and should be significantly reduced through FRAND SEP pricing as described above. Further, harmful SEP royalty stacking can be avoided by taking into account an aggregate SEP royalty rate for the standard as a whole when assessing whether a royalty rate is consistent with a FRAND licensing commitment, consistent with the Commission's views.[17]

Recommendation: Harmful royalty stacking can be avoided through enforcement of the FRAND commitment by ensuring that reasonable royalties are calculated based on the SSU and the licensor's pro rata share of a standard's declared SEPs and by ensuring that an aggregate SEP royalty rate for the standard as a whole is considered when assessing whether a royalty rate is consistent with a FRAND licensing commitment.

[17] EC SEP Communication, *supra* note 1, sec. 2.1: ("Finally, to avoid royalty stacking, in defining a FRAND value, individual SEP cannot be considered in isolation. Parties need to take into account a reasonable aggregate rate for the standard, assessing the overall added value of the technology").

5. Final Observations

The Commission need not update its 2017 SEP Communication at this time. Should the Commission decide to do so, the App Association recommends the inclusion of the following principles to best promote European innovation:

- SEP holders who seek compensation for the use of their patent should be compensated for the value of the practiced invention incorporated in a standard.
- Determination of specific licensing terms and values must always occur on a case-by-case basis in view of the parties' circumstances.
- The royalty base should focus on the component in the product where the implementation of a standard occurs and reflect the scope and merit of the patent claims as practiced in the standard. It is the most reliable method for assigning the value of the technology.
- A royalty base that focuses on the end-user product or use distorts the value of the patented technology because it attributes value to the patent holder for which it is not responsible.
- A royalty rate should reflect the value of the patented invention, apart from its inclusion in the standard and the licensor's pro rata share of a standard's declared SEPs. Comparable licensing can be a useful tool where there is full transparency surrounding the comparable licenses so that potential licensees can ensure the "off-the-shelf" rate listed in the comparable license accurately reflects the effective royalty rate, and where evidence shows that the license reflects the value of the patented invention, and only that value.
- The overvaluation of SEPs is indicative of patent holdup.
- There is no single FRAND rate. FRAND is a range of licensing terms, but this range should not be abused by licensors to offer rates that inflate the value of the patented technology by virtue of its inclusion in the standard.

The App Association thanks the Commission for this opportunity to share it thoughts on the pricing and valuation of SEPs. We remain committed to assisting the Commission with input from its members as it moves forward.

APPENDIX 3

CEN WORKSHOP AGREEMENT

CWA 95000

June 2019

ICS 03.140

English version

Core Principles and Approaches for Licensing of Standard Essential Patents

This CEN/CENELEC Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN and CENELEC but neither the National Members of CEN and CENELEC nor the CEN-CENELEC Management Centre can be held accountable for the technical content of this CEN/CENELEC Workshop Agreement or possible conflicts with standards or legislation.

This CEN/CENELEC Workshop Agreement can in no way be held as being an official standard developed by CEN and CENELEC and its Members.

This CEN/CENELEC Workshop Agreement is publicly available as a reference document from the CEN Members National Standard Bodies and CENELEC National Electrotechnical Committees.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

CWA 95000:2019 was developed in accordance with CEN-CENELEC Guide 29 “CEN/CENELEC Workshop Agreements” and with the relevant provisions of CEN/CENELEC Internal Regulations - Part 2.

A CEN/CENELEC Workshop Agreement (CWA) is an agreement, developed and approved by a CEN/CENELEC Workshop and owned by CEN/CENELEC as a publication, which reflects the consensus of identified individuals and organizations responsible for its contents. A CWA is for voluntary use by those parties who wish to implement its content. A CWA should not be construed as legal advice authoritatively endorsed by CEN/CENELEC.

This Workshop Agreement, including its Annexes (CWA) has been drafted and approved by a Workshop of representatives of interested parties on 2019-01-16, the constitution of which was supported by CEN and CENELEC following a public call for participation. The Workshop’s Kick-Off meeting took place on 2018-02-12.

Organizations which supported the consensus represented by this CWA were drawn from the following economic sectors: Semiconductor; Automotive; Telecommunications; IoT; Wireless; Technology Equipment; Legal; Software; Technology SME; and Manufacturing.

The formal process followed by the Workshop in the development of this CWA has been endorsed by the National Members of CEN/CENELEC but neither the National Members of CEN/CENELEC nor the CEN-CENELEC Management Centre can be held accountable for the content of the CWA.

Public consultation for this CWA started on 2019-01-29 and ended on 2019-03-28.

The final review for this CWA before publication was started on 2019-04-24 and was successfully closed on 2019-05-02. The final text of this CWA was submitted to CEN for publication on 2019-05-03.

Below is a list of companies/organizations that developed and approved this CWA:

— **ACT The App Association**

— **AirTies Wireless Network**

— **Apple Inc.**

— **Bayerische Motoren Werke AG**

— **Cisco Systems, Inc**.

— **Creo Group**

— **Denso International Europe**

— **Deutsche Telekom AG**

— **Fair Standards Alliance**

— **Groupe Renault**

— **Honda Motor Co., Ltd.**

— **Juniper Networks**

— **Multispectral Limited**

— **N&M Consultancy**

— **Nordic Semiconductor ASA**

— **Ponti & Partners SLP**

— **Sequans Communications**

— **SolidQ**

— **TapTap**

— **Telit Communications SpA**

— **Volkswagen AG**

— **Wyres SAS**

In addition, while the following companies/organizations did not participate in the drafting of this document they are expressing their general support for its content:

— **ACEA (European Automobile Manufacturers' Association)**

— **Andaman7**

— **BadVR**

— **Barefoot & Co.**

— **Blue Badge Insights**

— **Bullitt Group**

— **Concentric Sky**

— **Crosscall**

— **Daimler Brand & IP Management GmbH & Co. KG**

— **EDMI Limited**

— **Egylis**

— **emporia**

— **Eucomreg**

— **Fairphone**

— **Ford**

— **High Tech inventors Alliance**

— **Hitachi ltd.**

— **HP Inc.**

— **IP2Innovate**

— **Kamstrup A/S**

— **Lenovo**

— **MotionMobs**

— **Nationsorg**

— **Nouss**

— **PSA Groupe**

— **Sagemcom**

— **Sierra Wireless**

— **Sigao Studios**

— **Sky**

— **Southern DNA**

— **Synesthesia**

— **Toyota Motor Corporation**

— **U-Blox**

— **Valeo**

The Participants to the CWA encourage that any interested stakeholders please provide feedback and comments to the CWA, and expect that such feedback, as well as future legal and business developments, may lead to future updates to the CWA. The Participants encourage that any suggestions for additional or updated content can be submitted through the CWA's Secretariat (DIN).

This Workshop Agreement is publicly available as a reference document from the National Members of CEN/CENELEC: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

Introduction

Technical standards help to drive the modern global economy. As industry continues to develop and evolve in Europe and worldwide, new standards are directed to the so called "Internet of Things" (IoT), the "5G" suite of standards, and other next generation standardized technologies. It is anticipated that more and more industries will incorporate these types of standardized technologies and the interoperability that they provide.

Standardized technologies are commonly developed by standard development organizations (SDOs),[1] where industry participants and other stakeholders come together to develop and agree upon technical specifications. While there are hundreds of significant SDOs, a few prominent European and international SDOs include:

— the European Telecommunications Standards Institute (ETSI), which focuses on telecommunications standards;

— the Institute of Electrical and Electronics Engineers (IEEE), which is the world's largest technical body and focuses on both wireless and wired communications, as well as other industry solutions;

— the International Telecommunication Union (ITU), which is a United Nations (UN) agency focused on standardization in telecommunication, video and audio technologies, and which commonly works in partnership with two other key SDOs, the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC);

— the European Committee for Electrotechnical Standardization (CENELEC), which is responsible for European standardization in the area of electrical engineering, and the European Committee for Standardization (CEN), which is responsible for European standardization in other areas; *and*

— Various national standards organizations, such as the German Institute for Standardization (Deutsches Institut für Normung or DIN), which is the German national organization for standardization and delegate for participation in ISO.

In developing technical standards, SDOs can develop specifications that incorporate technologies that may, in many situations, be the subject of patents (or pending patent applications) either held by the contributor to the specification or by other third-parties. Patents that are necessary in order to implement a standard are referred to as standard-essential patents (SEPs).[2] In SDOs, it is commonly the case that companies participate both as contributors to the development of standards, as well as market participants that intend to market products implementing the standard once finalized. Efforts to create sharp divisions between so called "contributors" and so called "implementers" are generally incorrect, and tend to mischaracterize the interests of the SDO participants in developing strong, usable and successful standards. Furthermore, there are many companies that are both "contributors" as well as "implementers" of standards.

1 SDOs may also be referred to as "standard setting organizations" or SSOs. The terms are meant to be used interchangeably herein.

2 SDO patent policies may provide more specificity or information in defining SEPs subject to the particular policy. Moreover, it is important to note that a patent is not a SEP simply because the patent holder asserts so. Where there are disputes about essentiality, infringement, validity or the like, the national courts are generally the appropriate body to determine whether a patent is, or is not, a SEP.

Patents reward innovation, and it is important that SDOs have the ability to incorporate innovative new technologies. The challenge is to guard against potential abuse of the lock-in effect, when competitors select patented technology for standardization thereby creating an inability to design around such technology.

To address these standardization "hold up" issues, as they are often termed, SDOs such as those listed above commonly adopt patent policies providing for licensing of SEPs on specified fair, reasonable and non-discriminatory (FRAND) terms.

SDOs differ to some extent regarding their policies for SEP licensing, and licensing terms may be a factor considered when stakeholders decide whether to participate in a given standardization effort. For example, some SDOs provide for FRAND royalty free (FRAND-RF or FRAND-Zero) licensing of SEPs applicable to their standards. Other SDOs have adopted policies that provide for licensing on FRAND terms, which may include royalties. The focus of this CWA will be on those SDOs operating under policies involving FRAND licensing obligations that may include royalties.[3]

Under FRAND policies, standards participants voluntarily promise to license their patents on fair and reasonable terms. This secures for patent holders an ability to obtain reasonable and non-discriminatory value for patents contributed to SDOs, while also addressing – provided the FRAND commitment is upheld – SDO and SDO participant interests to mitigate the possibility of SEP hold up.

In recent years, there have been quite a lot of debates, disputes, court litigation and, more recently, governmental and regulatory investigations involving disagreements around obligations that arise from the voluntary FRAND commitment (or "FRAND obligations"). These issues are of increasing importance as standardized technologies, including wireless communication technologies, move into new industries such as automotive, industrial, energy, finance, transportation, warehousing, infrastructure and security.

This CWA seeks to (a) provide educational and contextual information regarding SEP licensing and the application of FRAND, (b) identify and illustrate some of the questions that negotiating parties may encounter, and (c) set forth some of the key behaviors and "best practices" that parties might choose to adopt to resolve any SEP licensing issues amicably and in compliance with the FRAND obligation. Our hope is that this CWA can assist both experienced and inexperienced SEP negotiators and inform any other interested stakeholders how to more effectively reach fair agreements and to better promote the goals and interests of industry, standardization and, ultimately, consumers.

To develop this CWA, which was organized under the auspices of CEN-CENELEC and with DIN serving as the Secretariat, a public call for participation was published by CEN-CENELEC. More than fifty parties joined a "kick off" meeting at DIN's headquarters in Berlin to begin the development process. The participants exchanged multiple drafts, each of which was subject to comment and edit by the full participant group. Ultimately, this agreed-upon CWA was developed.

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[3] This CWA often refers generally to "standards", but it is noted that, depending on the context, various terms may be used to refer to standardized technologies. For example, Regulation (EU) 1025/2012 on European standardisation defines the meaning of the terms "standard" and "technical specification", both of which are relevant to this document. Likewise some SDOs may use terms such as "deliverables", "technical output", "recommendation", or other terms. In this CWA the term "standard" is used generally to refer to various types of standardized technologies regardless of the formal name that may be applicable in the particular context or organization. As noted, the focus of this CWA is addressing SDOs and standards involving FRAND licensing obligations that may include royalties.

While this CWA reflects practical approaches and policy views endorsed, on a general consensus basis, by the signatories, it is noted that the detailed corporate positions of each of the participants may not be reflected in each aspect of the draft, and it is recognized that such corporate positions may include additional or different best practices. Likewise, while the CWA offers guidance and practices that negotiating parties may choose to support in their own dealings, it is emphasized that all participants in this CWA, and all others, remain free to pursue their own individual licensing negotiations on a case-by-case basis, whether or not the approaches set forth herein are employed. While courts and other decision makers might take into account the policy issues, approaches and practices addressed herein, and while the CWA identifies a number of supporting legal decisions, legal approaches may often differ on a country-by-country basis, and nothing herein is intended to suggest that a particular court or other decision-maker will support each of the issues, approaches or practices set forth.

This CWA does not constitute legal advice. Parties should always consult with their own advisors and attorneys, as necessary, in connection with their specific dealings on a case-by-case basis.

1 Scope

This CWA addresses some of the key behaviors and "best practices" that parties might choose to adopt to resolve any SEP licensing issues amicably and in compliance with the FRAND obligation, and in a manner that can be beneficial to innovation, industry, standardization and, ultimately, consumers. The CWA addresses SEP licensing practices in the 5G and IoT industries, as well as in other areas were SEPs are applicable. The CWA also provides educational and contextual information regarding SEP licensing and the application of FRAND.

2 Summary of Document and SEP Licensing Core Principles

This CWA includes an Introduction, six Sections and two Annexes, as follows:

— The **Introduction** provides a brief overview of the industry issues addressed, and important economic and business impact that standards and SEPs have on the European and International economy.

— **Section 1** identifies the scope of the document, and identifies areas that the CWA addresses.

— This **Section 2** summarizes the CWA, and lists the Core Principles for SEP licensing that have been identified and agreed upon by the CWA Participants.

— **Section 3** provides a practical summary of SEP licensing "best practices", which embody and support the Core Principles, and which can help to facilitate a FRAND process and result in conducting bi-lateral negotiations.

— **Section 4** offers a market background, as well as a summary of relevant competition law considerations important to understanding and applying the FRAND obligation.

— **Section 5** offers a more detailed legal review and analysis of the FRAND obligation, including extensive citation to applicable law, as an explanation of and support for the six Core Principles for SEP licensing set forth therein.

— **Section 6** provides a short conclusion to the CWA.

— **Annex A** lists Frequently Asked Questions (FAQs) and offers responses that may be helpful to parties engaged in SEP licensing.

— Finally, **Annex B** lists materials that should be readily available to negotiating parties, in the interests of transparency and to facilitate SEP licensing based on a common base of information and facts.

While negotiating parties may in some instances focus on the practical issues addressed in Section 3's "best practices" summary, it should also be understood that the six Core Principles summarized below – and the legal basis in background therefore as set forth in Section 5 – help to drive FRAND licensing practices and ground them in processes and approaches that facilitate FRAND results. The six Core Principles are:

Core Principle 1: *A FRAND SEP holder must not threaten, seek or enforce an injunction (or similar de facto exclusion processes) except in exceptional circumstances and only where FRAND compensation cannot be addressed via adjudication, e.g. lack of jurisdiction or bankruptcy. Parties should seek to negotiate FRAND terms without any unfair "hold up" leverage associated with injunctions or other de facto market exclusion processes.*

Core Principle 2: *A FRAND license should be made available to anybody that wants one to implement the relevant standard. Refusing to license some implementers is the antithesis of the FRAND promise. In many cases, upstream licensing can create significant efficiencies that benefit the patent holder, the licensee and the industry.*

Core Principle 3: *SEPs should be valued based on their own technical merits and scope, not based on downstream values or uses. In many cases this will involve focusing on the smallest component that directly or indirectly infringes the SEP, not the end product incorporating additional technologies. As noted by the European Commission, SEP valuations "should not include any element resulting from the decision to include the technology in the standard." Moreover, "[i]n defining a FRAND value, parties need to take account of a reasonable aggregate rate for the standard."*

Core Principle 4: *While in some cases parties may mutually and voluntarily agree to a portfolio license (even including some patents subject to disagreements), no party should withhold a FRAND license to patents that are agreed to be essential based on disagreements regarding other patents within a portfolio. This approach can allow parties to identify areas of agreement within a patent portfolio despite other areas of disagreement. For patents that are not agreed upon, no party should be forced to take a portfolio license, and if there is a dispute over some patents, a SEP holder must meet its burdens of proof on the merits (e.g., to establish that the alleged SEP is infringed and requires payment, and to establish the FRAND rate).*

Core Principle 5: *Neither party to a FRAND negotiation should seek to force the other party into overbroad secrecy arrangements. Some information, such as patent lists, claim charts identifying relevant products, FRAND licensing terms, aspects of prior licensing history and the like are important to the evaluation of potential FRAND terms, and public availability of those materials can support the public interest in consistent and fair application of FRAND. A patent holder should not seek to exploit its information advantage regarding the patents or prior licenses to interfere with the potential licensee's ability to effectively negotiate.*

Core Principle 6: *FRAND obligations remain undisturbed despite patent transfers, and patent sales transactions should include express language to that effect. Patent transfers likewise should not alter value sought or obtained for particular patents. Where SEP portfolios are broken up, the total royalties charged for the broken-up parts (and the remaining part of the portfolio) should not exceed the royalties that would have been found to be FRAND had the portfolio been retained by a single owner, or that were charged by the original owner. And patent transfers should not be used to defeat a potential licensee's royalty "offset" or similar reciprocity rights.*

By upholding these six Core Principles, both licensors and licensees can maximize the benefits of standardization, retain fair compensation for patented contributions, and support both public and private interests in a healthy, fair and prosperous standard ecosystem.

3 Licensing Processes and Best Practices Summary

This Section 3 is intended to provide the reader, including those with limited experience in SEP licensing negotiations, with some practical guidance on how to prepare for and approach SEP negotiations (*e.g.*, "best practices"). The context for this Section is a bi-lateral negotiation for a SEP license for a standardized technology that is subject to a FRAND licensing obligation, and where that FRAND licensing obligation is not subject to a royalty-free limitation. Please note that the FRAND licensing undertaking involves the acceptance by the licensor of additional requirements and obligations on its behaviour. As such, it is important to note that these practice tips may not apply to the more general (or broader) circumstance of general patent licensing where the FRAND licensing obligations do not exist.

In Sections 4-5, this CWA presents the business, legal and public interest background for the practices and processes set forth in this Section 3. Those Sections more fully address and discuss the market issues, cases, agency and policy statements supporting the practices and processes outlined below.

Disclaimer: Neither this document nor this Section are offered as legal advice and are not intended as a replacement for competent legal counsel. This Section is simply intended to help educate the reader on the issues to consider and prepare for in the context of a FRAND licensing negotiation – it is understood that both parties to such a transaction will be working with and under the advice of competent legal counsel. This is not an exhaustive list of "best practices", and there may be other practices not described here that would constitute a "best practice".

3.1 The Parties

a) The parties in any licensing negotiation are referred to as the licensor and the licensee. The licensor is the owner of (or agent for) the patents to be licensed, which in this case are particular SEPs subject to a FRAND obligation. Conversely, the potential licensee (or "licensee" for short) is the party that seeks a license, or whom the licensor believes needs a license to the licensor's SEPs in order to implement the standard within the licensee's product or service due to potential infringement of the licensor's SEPs. In the context of the FRAND licensing negotiation, each party should act reasonably, as a willing licensor and a willing licensee. This subsection 3.1 describes how this willingness can be made manifest within the negotiation.

b) Willing licensors of FRAND encumbered SEPs:

1) A licensor should act in a reasonable manner and be fair and forthright in its interactions with the licensee in SEP licensing negotiations. Without a willing licensor, there can be no "unwilling licensee".

i) Licensors should use plain, simple and unambiguous language. Any delay in concluding negotiations due to poorly drafted, ambiguous agreements provided by the licensor should be held against the licensor and not the licensee that is seeking such clarity.

ii) It is not reasonable for a licensor to, for example: (a) assert claims which it knows or believes to be no longer essential to the standard; (b) withhold known information about invalidity or non-essentiality of asserted patents; (c) withhold information it has that is reasonably needed by the licensee to assess whether proposed licensing terms are FRAND, or (d) condition licensing of a SEP on a requirement that the licensee also take a license to any other patents, such as patents that are non-essential to the standard.

2) Licensors should be prepared, if requested by the licensee, to negotiate a license covering all of the FRAND-committed SEPs applicable to the licensee's implementation of a given standard. Therefore, all SEPs which fulfill the essentiality requirement relative to the standard, which are owned or controlled by the patent owner throughout the term of the license agreement, and are applicable to the licensee's product or service, should be included in the licensor's offer.

i) Licensors should be prepared, if requested by the licensee, to negotiate a license solely covering the SEPs applicable to the licensee's implementation of a given standard and the licensee's product or service.

ii) Non-SEPs: While parties may voluntarily and mutually agree on a license covering both SEPs and non-SEPs, it is inappropriate for a licensor to "tie" or otherwise condition granting a license to SEPs to a requirement that the licensee accept and pay for a license to another part of the licensor's patent portfolio (non-SEPs), even if those other patents are believed to be applicable to the licensee's product or to the implementation of the standard.

iii) SEPs Applicable to Other Standards: While parties may voluntarily and mutually agree on a license covering SEPs to different standards, it is inappropriate for a licensor to "tie" or otherwise condition granting a license to its applicable SEP portfolio to a requirement that the licensee accept and pay for a license to SEPs applicable to another standard.

iv) Disputed SEPs Within a Standard: If the prospective licensee reasonably disputes essentiality, validity and/or infringement of patents in a SEP portfolio offered to license, it is inappropriate for the licensor to "tie" or otherwise condition granting a license to portions of its applicable SEP portfolio to a requirement that the licensee accepts and pays for a license to the remainder of its alleged SEP portfolio. For example, where parties disagree whether some patents within the asserted SEP portfolio are actual, valid SEPs, the licensee should be able to obtain FRAND licensing terms for the remaining, agreed SEPs within the portfolio while both parties retain the right to pursue claims and defenses as to the remainder of the patents that the patent holder alleges to be SEPs.

3) Essentiality: If the licensor's argument for infringement is based solely on an assertion that its patents are SEPs and the target product implements the associated standard, then the licensor must be prepared to demonstrate that its patents are in fact essential to practice the standard, and that the target product infringes the SEPs. It is noted that some SEPs may relate to optional portions of a standard which are not relevant to the licensee.

4) Disclosure Obligations: Licensors should disclose all information requested by the licensee that is reasonably needed to evaluate whether the licensor's proposed SEP licensing terms and conditions are consistent with its FRAND obligation. Such information may include: (a) detail regarding the asserted patents; (b) clarity regarding the targeted products; (c) claim charts identifying the relevant portions of the standard and a mapping of the asserted claims to the standard; (d) claim charts identifying relevant portions of the targeted products; (e) historical information (comparables) for relevant prior SEP licenses; and (f) any other information used by licensor, or reasonably needed by the licensee, in its evaluation of a FRAND royalty rate for the relevant patents.

5) Valuation: A licensor should provide sufficient detail to explain their proposed licensing terms including, in particular, the valuation method used to determine the offered FRAND royalty rate and how the rate is consistent with existing guidance from case law and applicable competition law authorities.

6) Licensing Burden: The burden lies with the licensor to demonstrate that its patents are indeed SEPs and that the targeted product infringes the SEPs such that payment is required. A licensor needs to provide this information in order to establish that it is a willing licensor.

c) Willing licensees of FRAND encumbered SEPs:

1) A potential licensee should act in a reasonable manner and be fair and forthright in its interactions with the licensor.

2) Willingness: When requested to take a license to SEPs it is good practice for a potential licensee to express its willingness to take a license to the relevant SEPs on negotiated FRAND terms if the licensor establishes that a license is in fact needed.

3) Engaging the Supply Chain: A potential licensee whose implementation of a standardized technology arises only as a result of the components it purchases from its supply chain should be able to engage their supply chain in support of the negotiations and/or connect the supplier with the licensor, to enable the licensor to grant a license directly to the supplier.

i) Asking suppliers to engage in FRAND negotiations for the supplier's products should be given a fair and reasonable chance to run their course. Engaging the supply chain in this fashion does not make the potential licensee or its supplier(s) an unwilling licensee.

ii) Where a potential licensee's supplier is a willing licensee, it may be appropriate to conclude that any customer for the supplier's relevant products is to be viewed as a willing licensee. On the other hand, the conduct of the supplier should not be attributed to the potential licensee, and unwillingness (if any) by a potential licensee's supplier as such should not be attributed to the potential licensee.

4) Licensing Response: It would be difficult or impossible for a licensee to make a FRAND counter-offer unless and until the licensor has at least: (a) reasonably established the essentiality of its SEPs and reasonably established that the licensee has indeed infringed the licensor's SEPs; (b) made a FRAND offer; (c) provided the licensee with sufficient information to evaluate the "FRAND-ness" of the licensor's offer and how it was calculated; and (d) provided the licensee with sufficient time to evaluate and consider all of the above.

5) Challenging the merits or enforceability of any claimed SEP, requesting reasonable supporting information regarding the FRAND licensing offer, and/or making a FRAND counter-offer should not render a party an unwilling licensee.

3.2 Non-Disclosure Agreements (NDAs) in SEP licensing negotiations

a) Parties can voluntarily and mutually agree to broad confidentiality around licensing negotiations, protecting any or all aspects of their discussions. But in general no party is required to enter into an NDA for the purpose of patent license negotiations, and there should be no penalty to any party for choosing not to enter an NDA. Choosing not to enter an NDA does not make either party "unwilling."

b) Transparency in FRAND licensing negotiations is a virtue, as FRAND compliance serves both public and private interests. Secrecy should not be misused to conceal non-FRAND behaviours, and secrecy should not be unilaterally required by a licensor.

c) When a licensor seeks to initiate a negotiation, a licensor should be prepared to provide a base level of information regarding the SEPs to requesting licensees without an NDA. This base level of information would include information to enable the putative licensee (and its supply chain) to understand the SEPs, a sufficiently detailed specification (e.g., claim charts) describing how the patents are allegedly infringed by the products implementing the standard, and other relevant information needed by the licensee to evaluate claims of infringement, validity and essentiality. Additional examples of materials that should be available without NDA obligations are provided in Annex B to this CWA.

d) To ensure that royalties for SEP licenses are not paid multiple times for the same device because the SEPs are already licensed within a supply chain (so-called "double-dipping"), a licensor should disclose the existence of earlier licenses and the relevant terms to a potential licensee.

e) Where information is exchanged that reasonably qualifies as confidential business or technical information, or third-party information subject to confidentiality obligations, parties may choose to enter into a narrow NDA to protect only those materials (e.g., sales data, confidential product designs, or certain third-party license terms). Such an NDA should enable a potential licensee to share a licensor's confidential information with the licensee's supply chain. Similarly, parties may choose to anonymize or otherwise address confidentiality of third-party information (e.g., prior license agreements or supplier information) so as to protect the legitimate confidentiality interests of such third parties.

3.3 The Fundamentals of a FRAND License Agreement

a) Representations made during negotiations should be truthful and honest, and capable of verification.

b) The license agreement should not restrict a licensee from initiating a non-infringement, non-essentiality, or invalidity proceeding against a licensed patent. To address such subsequent developments, parties may choose to include an "adjustment clause" that provides for an appropriate reduction of the licensor's patent portfolio value, e.g. due to subsequent nullity proceedings, non-infringement findings, expiration, re-examination proceedings, or other similar developments.

c) A licensee should not be forced to take (and pay for) a "portfolio" of patents that the licensee does not believe to be applicable.

d) The initiation of SEP licensing negotiations should not be conditioned on the payment of certain administrative or other fees. Each side should typically bear their own costs associated with the negotiations.

e) Use of a formal guarantee or escrow process as part of SEP negotiations should be unnecessary unless a licensee genuinely has liquidity problems.

f) FRAND negotiations take time, and there is no "one size fits all" timeline to licensing. Negotiating parties should pursue reasonable timelines in a negotiation. As long as the parties are behaving reasonably, the timeline for negotiations should not be an issue of dispute.

3.4 SEP Valuation Methodologies

a) Reasonable royalties: This Section addresses royalty methodologies as set forth in Section 5.3 of the CWA, and as supported by the various national authorities cited therein. Nothing restricts parties' ability to voluntarily agree on alternative approaches or methodologies, or addresses particular licensing terms that may be negotiated in any given situation. Nevertheless, in the legal authorities evaluating FRAND licensing terms, the following methodological approaches have been utilized and supported. It is emphasized, however, that parties should always exercise their own independent judgement (in consultation with their own attorneys and other advisors) in assessing valuation issues, and the approaches identified in this CWA are informative based on the legal and agency authorities cited in Section 5.3 below.

   1) Parties may agree to royalty approaches or alternative methodologies for convenience, or in some cases due to lack of experience, due to unfair leverage (such as based on concerns over potential use of injunctions), or for other reasons. However, the fact that parties agree to specific terms in a given situation does not mean that those terms are necessarily FRAND-compliant. A number of courts have found that previously-signed SEP licenses were not, in fact, FRAND-compliant.

   2) As a general principle discernable from the relevant authorities, FRAND royalties should reflect the value of the patented invention, and only the value of the patented invention.

   3) As another general principle discernable from the relevant authorities, a FRAND royalty should be calculated based on the proportionate value the claimed patented invention brings to the smallest component entering the stream of commerce that substantially implements the relevant part of the standard. Normally, the smallest component that enters into commerce would be a component that can later be integrated in higher level products. Once established, that value should remain constant regardless of the complexity of the end product (e.g., due to addition of others' additional inventions and technologies in the end product) – because the patent holder is not entitled to the value created by the inventions or technologies of others. In United States jurisprudence, this principle for calculating the royalty is commonly colloquially referred to as the "smallest-saleable patent practicing unit." As set forth in the CWA document (core principle 2), this is similarly how SEPs are valued in other international jurisdictions.

i) This entails that FRAND royalties should not seek to include compensation for innovations or features that are not inherent in the underlying patent claim. In other words, the royalty for a SEP should be based on the value of the smallest component that substantially embodies the patented invention, with further apportionment where over-inclusive. By focusing on the value of the smallest component that substantially embodies the SEP, parties can ensure that royalties reflect the value of the SEP, rather than the value of other innovation, or the value of standardization itself.

I) Deviation from the value added by the patent claim is a fundamental problem inherent in so-called "use-case based licensing" of SEPs. Such practices seek to calculate a royalty based not only on the value of the patented invention, but also on all of the other innovation that goes into an end-user product.

II) In this way, use-case based licensing necessarily seeks to collect a royalty on not only the standardized innovation, but on other value-added features reflected in the product's price. Such approaches can unfairly leverage the market power of a SEP to extract a royalty on the innovation of others.

ii) As another general principle discernable from the relevant authorities, a FRAND royalty should not exceed the ex ante cost of designing around the claimed invention. This consideration is a "tool" some have used to determine the fair and reasonable cost of the claimed invention.

iii) As another general principle discernable from the relevant authorities, a FRAND royalty should not include the added value of standardization, and should be determined on an ex-ante basis (prior to the inclusion in the standard). In this way, FRAND royalties can seek to exclude the incremental value associated with the "lock-in" of the patented technology into the standard.

4) Proportional Share of SEPs: FRAND royalties should reflect the SEP owner's proportional share of all patents essential to a particular standardized technology. This does not imply that rates must always reflect a strict patent counting proportionality, although this is often a good first-order approximation. The rate may be adjusted upward or downward based on licensor establishing other legitimate factors that should be considered in setting the royalty rate.

i) Negotiating parties should recognize and consider that, based on studies promulgated by the European Commission (as cited below in Section 5.3 of the CWA), between 50% and 90% of all declared SEPs are not actual, valid SEPs.

ii) No potential licensee is obligated to take a license to every patent that is claimed by a patent holder to be a SEP where there is a dispute as to whether it is essential, valid or infringed. A company that chooses not to take a portfolio license based on good-faith disagreements about whether certain patents are indeed applicable to it is not thereby "unwilling".

5) Cumulative, aggregate royalty rate for the standard: To determine whether a royalty rate proposal is consistent with FRAND principles, the rate should be viewed in the context of a cumulative, aggregate royalty rate for the standard (including backward compatibility for prior versions of the standard, to the extent such prior versions are implemented).

6) Use-case Based Licensing of SEPs: Use-case based licensing of SEPs is generally inconsistent with such FRAND licensing principles. Use-case based licensing inextricably ties the value of the standardized technology with the other technology/innovation reflected in an end-user product, even though such technology/innovation is outside the scope of the relevant SEPs.

Consequently, the use-case based licensing model is inconsistent with the FRAND approach of calculating a royalty associated solely with the value of the standardized technology.

b) Non-discriminatory behaviour

1) A key purpose of the FRAND licensing concept can be to help maintain a "level playing field" for competition among different implementers of the standard. Charging some companies (or category of companies) discriminatory royalties can undermine their ability to compete. While multiple factors may be considered in a given bi-lateral licensing negotiation, the approach for determining the FRAND rate should not utilize differing approaches causing discrimination affecting some SEP licensing deals.

2) Any company that seeks a SEP license to implement the standardized technology in their product should be entitled to a license. Refusal to grant a SEP license to a requesting licensee is discriminatory in nature and is, therefore, inconsistent with FRAND licensing principles.

3) Discrimination among licensees is a violation of FRAND licensing principles. This is not to say that every license will be identical. Whether a company is "similarly situated" to another company may potentially be helpful in assessing whether discrimination is present, but it is incorrect to suggest that discrimination is permitted as long as a company is not "similarly situated" to another. For example, it would not be appropriate for a small new market entrant to face discriminatory licensing demands as compared to larger, existing competitors, as such approaches would restrict competition and market entry.

3.5 Refusals to License

a) Any company that implements a standard is entitled to a license from those SEP holders that have promised to offer a FRAND license.

b) It is improper for multiple SEP holders within a given standards ecosystem to collude and determine that each of them will only license companies within a given tier(s) of the supply chain.

3.6 SEP Portfolios and Portfolio Licensing

a) A licensee should be entitled to, upon request, obtain a license to all of the patents in the relevant SEP portfolio.

b) In negotiations, no licensee should be required to pay for a license to patents that it does not agree are relevant to its products (e.g., because the patent is believed to be invalid or not infringed). A licensee's unwillingness to pay for a license to patents that it does not believe to be actual, valid SEPs requiring payment should not make the licensee an "unwilling licensee."

c) Where negotiating parties dispute whether some portion of the offered portfolio includes actual, valid SEPs, the parties have various options to seek to address the disputes. For example, the parties may agree to negotiate a portfolio license, but make adjustments to the pricing to account for the particular disputed patents. Or in some instances the parties may agree upon assumptions or estimates regarding portfolio quality and adjust pricing to reflect those assumptions, without undertaking a more detailed technical review. Alternatively, the parties may mutually and voluntarily agree to Alternative Dispute Resolution (ADR), or instead retain the right to pursue traditional claims and defences in the national courts. These examples are illustrative and not an exhaustive list. In all circumstances, the licensee should be able to request and obtain FRAND license terms for the agreed portion of the portfolio while both parties retain the right to pursue claims and defenses as to all other patents that the patent holder alleges to be SEPs.

d) No Special Privileges: SEP owners are not entitled to special legal privileges different than what is afforded to other patent owners not subject to a FRAND obligation. For example, SEP owners should always comply with traditional legal rules and burdens, such as the obligation to demonstrate use of particular patents it seeks to license and the value of such patents and to withstand challenges such as invalidity, unenforceability, license and exhaustion as a condition for obtaining compensation for a SEP.

e) Disaggregation: FRAND patent valuations do not change based on patent ownership. Where a portion of a patent portfolio is transferred, the value of the transferor's patent portfolio is reduced by the value of the transferred patents, and the value of the transferee's SEPs is a corresponding percentage of the value of the original portfolio. Patent owners that transfer patents should address this by revising their licensing terms to reflect the diminished value of the portfolio.

3.7 Disputes

a) Alternative Dispute Resolution (e.g., mediation or arbitration) prior to litigation is a voluntary option that may appeal to some and may be an option to consider in SEP licensing agreements, subject to the following considerations:

   1) Except in very rare circumstances (e.g., court-ordered mediation), ADR is not mandatory and should not be imposed upon parties that do not wish to participate.

   2) A party who chooses not to participate in ADR should not be considered an "unwilling" party on that basis.

   3) Where ADR is chosen, parties have wide latitude to design an appropriate process. However, absent an express and voluntary waiver of particular rules or rights, traditional substantive and procedural rules and burdens of proof should be followed, even in ADR.

   4) ADR on FRAND encumbered SEPs should apply FRAND principles and be structured to achieve a FRAND result.

b) Adjudication and right of access to the courts

   1) Every company has a right to retain its right of access to the courts.

   2) As with any other dispute, where parties cannot agree on FRAND terms, any party may seek court resolution.

   3) FRAND actions, including ADR, may involve contract, patent, competition law and/or other legal claims.

c) Competition actions

   1) A breach of FRAND can be a competition law violation.

   2) In addition to court actions, competition law violations can be enforced by the national competition law agencies. Companies facing FRAND violations may seek to raise such issues with such agencies.

3.8 Injunctions

a) Threats of injunction (including de facto injunction such as customs seizures or criminal proceedings) should not be used in FRAND negotiations.

b) A licensor should not seek an injunction (preliminary, permanent, or de facto) on a FRAND-encumbered SEP except in exceptional circumstances such as when the implementer is in bankruptcy or is beyond the jurisdiction of the court.

c) SEP holders should not seek de facto injunctions without court oversight of infringement and validity issues (e.g., if there has been a prior final court adjudication on essentiality, validity and infringement that has not been complied with).

d) Injunctions (including de facto injunctions) for FRAND-encumbered SEPs should be rarely available to licensors of FRAND-encumbered SEPs, especially when monetary compensation is otherwise available to the licensor for the use of its patents.

e) Where a licensee is found by a court to be "unwilling", it may be appropriate for a patent owner to seek from the Court monetary compensation for harm caused by the licensee's misbehaviour – such as back royalties, interest and costs. These monetary approaches are better aligned with FRAND principles and approaches than the licensor seeking market exclusion via an injunction. Given the FRAND promise to license, monetary compensation generally is an adequate remedy for SEPs.

3.9 SDOs and Possible SDO Improvements

a) FRAND requirements should not be unduly vague. It is permissible and helpful for SDOs to provide more express guidance to parties regarding specific practices.

b) SDOs should consider updating their FRAND policies to include more clarity. For example, the IEEE successfully updated its patent policy text to provide clarifications to patent holders and potential licensees.

3.10 Licensing Through Patent Pools

a) Licensing through a patent pool may benefit both SEP holders and SEP licensees. However, both licensors and licensees retain the freedom to decide whether to license through a patent pool or through bilateral negotiations. A party's refusal to join a pool, or to take a license from a pool, should not be considered as an indication of unwillingness to grant or to take a SEP license.

b) If a SEP holder choses to offer FRAND licenses through a patent pool, this offer should be only an additional option to negotiating and granting a bilateral SEP FRAND license to any licensee asking for such a license.

c) For patent pools licensing FRAND-encumbered SEPs, the pool is subject to the same requirements and obligations to license under FRAND terms and conditions as exist for SEP licensors licensing directly. A SEP owner should not avoid or circumvent, or seek to avoid or circumvent, its obligations to license on FRAND terms by licensing through a pool.

d) Where a patent pool administrator is acting as a sub-licensor or licensing agent for multiple SEP licensors, the pool administrator and the pool's SEP licensors should work with the putative pool licensee to determine what licenses may already exist with the putative pool licensee's direct or indirect suppliers and its customers and then adjust the royalty obligation accordingly. Thus, to avoid double dipping, a patent pool administrator and SEP licensors participating in the pool should be transparent about any licenses granted to suppliers or customers in the supply chain of a multi-component product, and pool pricing should reflect appropriate reductions for such prior licenses where applicable.

e) For reasons including transparency and public interest, patent pools are encouraged to publish all of their license terms, including royalty rates and other terms and conditions.

4 Licensing on FRAND Terms: A Market Background

Now that this CWA has provided a summary of licensing processes and best practices, the following Sections will identify and discuss the background facts, law, requirements and principles that undergird those processes and practices. This Section 4 provides a summary of the context and background to the FRAND obligations, and addresses various stakeholder and legal interests. Section 5 then offers six Core Principles for FRAND licensing, from which the practices addressed above naturally flow, and identifies relevant authorities and other materials demonstrating those Core Principles.

4.1 Market Background

Wireless standards have been connecting devices for many years.[4] Wireless standards were developed primarily by companies that sought to use and implement them in their products, such as chip companies, telecommunications companies, and cellular carriers. The successful work of these companies – both in contributing to the standards, and in then developing and commercializing products to take advantage of their collaboration – supported a proliferation of wireless technologies.

A new generation of technological development through the development of various technologies associated with Industry 4.0 (4IR),[5] 5G,[6] and the IoT[7] is dawning. According to recent European Patent Office estimates, some 25-30 billion devices in the home and workplace will be equipped with sensors, processors and embedded software.[8] Connecting these devices together with one another based on data-transfers and amalgamated with other technologies such as cloud computing and artificial intelligence will foster automation of business processes.

Part of this development is the harnessing of standardized technologies for the first time across new market segments, including outside of traditional telecommunications and wireless industries. In key segments of the global economy, from agriculture to retail to healthcare, the rise of IoT is demonstrating substantial efficiencies.

In this regard, and while SEP licensing is important in many different industries and markets, the licensing of SEPs on FRAND terms for patents associated with wireless and telecommunications standards has drawn a particularly significant amount of attention. Both those who compete within transitioning verticals (markets), as well as new entrants, will increasingly encounter issues related to SEPs as new application domains open and develop the use of wireless and telecommunication standards, and as further standards are developed to address market demands within and across verticals.

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4 The first 2G (GSM) call was made 28 years ago in 1991, 2.5G (GPRS) was launched in 2000 and 3G (UMTS/WCDMA) was launched in 2001. Many of the key patents relating to those standards will have expired many years ago and/or are about to expire.

5 Cornelius Baur and Dominik Wee, Manufacturing's next act, McKinsey & Co. (June 2015), https://www.mckinsey.com/business-functions/operations/our-insights/manufacturings-next-act.

6 While there is no universal definition for a 5G mobile network, the term encompasses the future wave of interoperable mobile networks being driven through various technical standards bodies today. 5G networks are expected to utilize a wide range of spectrum bands, both licensed and unlicensed, through new and innovative spectrum efficiencies and spectrum sharing arrangements. Standard bodies such as the 3rd Generation Partnership Project (3GPP) and the Institute of Electrical and Electronics Engineers (IEEE), among many others, continue to develop 5G. *See, e.g.*, Release 15, 3GPP (July 16, 2018), http://www.3gpp.org/release-15; *see also* IEEE 5g and Beyond Standards Database, IEEE, https://futurenetworks.ieee.org/standards/standards-database.

7 While many definitions of IoT have been put forward since the term was coined in the late 1990s, a universal definition has not yet emerged. However, the IoT is widely regarded as an encompassing concept where everyday products use the internet to communicate data collected through sensors.

8 Ménière Yann, Ilja Rudyk, and Javier Valdes, (2018), Patents and the Fourth Industrial Revolution (European Patent Office, 2018), at 10, epo.org/4IR.

The demand for interoperability increases commensurately to meet the goal of standardization to proliferate technology as widely as possible. Manufacturers that wish to create interoperable devices are not able to bypass standards since standards form the interface to connect and communicate with other products and platforms. To secure the full potential of the IoT, approaches that provide a basic framework to enable interoperability need to be aligned to ensure consistency, and to allow efficient and reliable data exchanges.

Technologies developed by downstream entities need to be considered in evaluating the full potential and indirect network effects associated with IoT. The enhancement and innovation of products is increasingly taking place in the virtual layer of software in consumer-facing business models, rather than in hardware components in industry-facing business models. Some have estimated that software production and services account for 80% of total information and communications technology (ICT) value added.[9] This trend has continued in other sectors and is expected to do so in future. Licensing ought to reflect that value added by downstream innovation is distinct from upstream technologies such as telecommunication standards, and upstream SEP holders should not be permitted to seek royalties based on value created by downstream innovators.

Standardized sensor solutions allow companies to integrate a wide variety of sensors and implement their solutions in any vertical. The collection, storage and processing of mass quantities of data from assets equipped with sensors makes it possible to virtually consolidate, share capacity and create scalable data services for a host of companies and organizations using shared resources to achieve economies of scale.

For proper market functioning as the connected economy develops, it will be critical to all market actors that FRAND licensing practices are followed and that abusive assertions are prevented. The proliferation of standardized technologies outside of the traditional ICT sector warrants a fair and balanced approach to the licensing of standardized technologies, including consideration of the dynamic markets interests that constitute the IoT and other advanced communication protocols. As set forth below the impact of licensing touches upon various aspects of the economy including competition and the public interest.

4.2 Context, Competition-Law Aspect, and Public-Interest Function of the FRAND Obligation

At the most fundamental level, a voluntary FRAND commitment made by a participant in an SDO entails an obligation to license its standard-essential patent rights on FRAND terms (which may include a royalty) to any party wishing to implement the relevant standard.

To understand the broader context and purpose of the FRAND commitment, each of the following aspects needs to be considered:

— (a) The interests of standards developers in the success of their work;

— (b) Competition-law and policy constraints; *and*

— (c) Public policy and consumer interests.

The remainder of this subsection will discuss each of these aspects to provide context, information and foundation for the principles and practices set forth in this CWA.

a) The interests of standards developers in the success of their work products

Whether a standard is developed to support regulation, or whether it is intended to enable new or enlarged markets by enabling the interoperability between different products or services, the success of a standards development effort often hinges on its suitability for adoption within the industry to which it is targeted.

9 Yann, Rudyk, and Valdes, *supra* note 7, at 20.

To support broad adoption, at least the following two conditions should apply:[10]

— *Licenses should be available on FRAND terms to anyone that wishes to implement the standard in its product*: SEPs, and the unavailability of SEP licenses to users of the standard, can stand in the way of the broad proliferation of a standard (*e.g.*, if a SEP-holder limits or refuses such licenses). But even when SEP licenses are not generally refused, broad adoption of a standard can still be severely handicapped when licenses are selectively made available, or when licensing terms demanded by the SEP holder are unreasonable or discriminatory. It is therefore in the interest of those that invest time and resources in developing a standard to encourage SEP holders to commit to providing licenses to any implementer of the standard that requests a license on FRAND terms.

— *Implementation of the standard typically must be attractive to market players to receive broad adoption*: There are many reasons it may be worthwhile to implement a standard. For example, where a standard might provide an ability to participate in a market ecosystem of interoperable products and services, adoption can drive so-called "network effects". That is, the more products and services that already comply with the standard, the more attractive it can become for other companies to also implement the standard in their products or services.

In some domains, both conditions have successfully been met on the basis of encouraging and obtaining commitments from SEP holders to provide royalty-free FRAND licenses. For example, the Bluetooth standard is a well known and highly successful royalty-free standard. In such cases, patent owners may be motivated to contribute their patented technologies, and to forego the ability to monetize their patents via licensing assertions, in order to improve the standard, which in turn will support increased sales of standard-compliant products; the "better" the standard, the greater the adoption and the more successful the industry and ecosystem.

In other cases patent owners may not wish to contribute their patented technologies without retaining the right to royalty-bearing FRAND compensation for the use of those technologies. This might be the case, for example, for companies that do not broadly manufacture or sell standardized products, or for other companies that wish to pursue monetization of their patent rights via licensing. In those cases, the patent owner may choose to submit contributions including its patented features along with a FRAND commitment that allows for royalties, thus voluntarily agreeing to limit the rights the patent owner would have but for the FRAND obligation (i.e., its "normal" patent rights), while still maintaining an ability to seek FRAND royalties.[11]

But *why* would such a patent holder (*e.g*., one that wishes to monetize its SEPs through licensing) voluntarily choose to restrict its own patent rights? There must be some concomitant benefit to the SEP holder. And in fact there is. By having their patented features incorporated into a standard as "essential" to compliance with the standard, SEP holders gain the ability to obtain royalties from a large group of standards implementers – even for patents for which a commercial market might not have existed in the absence of the standard.

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10 There are certainly other important conditions for successful standardization. For example, it is generally preferable that a standard be driven by perceived market need, and remain industry driven. It is no surprise that companies interested in particular technical areas and markets have incentives to invest their time and energy in technical standardization. Absent market interest in a given technical area, standards may not attract significant development attention, or once developed, may not attract the investments and activity necessary to support broad promulgation.

11 SEP holders committing to FRAND licensing thus limit the exercise of some property rights normally associated with patents – such as the right to exclude others from practicing the patented technology, and the right to charge whatever royalty the market can bear (e.g., a royalty that reflects the absence of competitive alternatives to the SEP after the standard is adopted).

In other words, the SEP holder may dramatically expand the pool of users from which it might seek a royalty. In exchange, SEP holders agree to forego the exercise of certain rights that normally attach to patents – for instance, the right to exclude others from practicing the patented technology, and the right to charge a royalty that reflects the absence of competitive alternatives to the SEP after the standard is adopted. That trade off can be worthwhile even if the royalty from each implementer might be lower than it could have been absent the FRAND commitment. Indeed, most patent owners voluntarily choose to make FRAND commitments because they gain far more than they lose.

As a corollary, the FRAND promise helps to enable market uptake of a standard by providing security to market participants that licenses will be available on reasonable and non-discriminatory terms. The investments necessary to develop and market standards-compliant products (*e.g.*, a Bluetooth, Wi-Fi or LTE chip, or a downstream device utilizing such chips) can be enormous. Factories must be obtained; market channels must be created; equipment and infrastructure must be purchased. Without some reasonable assurance that licenses can be obtained on reasonable terms, market participants might (perhaps rightly) decide not to invest in a potentially risky venture. By reducing that risk, and providing assurance to market entrants that their investments will not be undermined by excessive and unfair SEP practices, the FRAND promise – when properly applied and followed – can incentivize investment and support further innovation and market development. As discussed below, and on the other hand, when FRAND is violated fair competition is threatened, and innovation can be stifled.

b) Competition law and policy constraints

Competition law and policy are critical aspects in understanding the purpose of voluntary FRAND commitments. The development of standards typically involves multiple parties, perhaps competitors, coming together in the context of an SDO to agree on a common technology specification. This development process necessarily includes the acceptance of certain technical contributions to the specification, and rejection of other proposed contributions. As such, this standards development activity can give rise to competition issues. Discussions in the context of standard setting, for example, can provide an opportunity for collusion to reduce or eliminate competition between otherwise competing technologies.

Nevertheless, it is widely recognized, including by the European Commission and other international competition authorities, that standards can produce significant positive economic and pro-competitive effects, for example by promoting the development of new and improved products or markets, or by enabling improved supply conditions. For that reason, policy makers generally promote standardization, subject to the condition that standards development processes and results are not abused to create anti-competitive effects.

To prevent such abuse, competition agencies have put guidelines in place to outline measures to be taken by standards developers and adopters in order to stay clear of competition-law concerns. These guidelines specifically include measures to ensure that SEPs are not used anti-competitively by abusing the leverage gained from the elimination of technology alternatives through a standard. And in some cases, competition authorities have taken action to address violation of the FRAND promise and the anti-competitive effects that can flow therefrom, expressly noting that a SEP can confer a unique power on the owner of such patent. This power is created due to the fact that participants in the standard setting process select a single technical solution to become the standard. While such selection can ensure that products and services achieve the relevant levels of compatibility and interoperability, to the benefit of businesses and consumers, at the same time, competition that may otherwise arise among different technologies is thus eliminated.

Companies that make or use standard-compliant products necessarily must use the SEPs that are incorporated into those products. Therefore, because prospective licensees have no commercial alternative to implementing the standardized technology, a SEP holder's bargaining power in the context of a licensing negotiation increases dramatically. This phenomenon – where it is either impossible or inordinately costly to switch to an alternative technology – is referred to as "lock-in". As the European Commission has noted, "FRAND commitments can prevent IPR[12] holders from making the implementation of a standard difficult by refusing to license or by requesting unfair or unreasonable fees (in other words excessive fees) after the industry has been locked-in to the standard or by charging discriminatory royalty fees."[13]

The challenge is to guard against potential abuse of the inability to design around patented technology selected for standardization (so called "lock-in"). The market strength and bargaining power associated with lock-in may result in right holders seeking to obtain high royalties or other unreasonable license terms that they would not have obtained before their patented technology was incorporated into the standard. As the European Commission has stated, being a SEP holder "could allow companies to behave in anti-competitive ways, for example by 'holding-up' users after the adoption of the standard either by refusing to license the necessary IPR or by extracting … excessive royalty fees."[14]

That is where the competition-law dimension and purpose of FRAND comes in, and explains why competition authorities have encouraged SDOs to establish FRAND-based IPR policies. FRAND obligations help to counterbalance the potential competition concerns that standardization may create. As stated in the Commission's Horizontal Guidelines:

*Where participation in standard-setting is **unrestricted** and the procedure for adopting the standard in question is **transparent**, standardisation agreements which contain no obligation to comply with the standard and **provide access to the standard on fair, reasonable and non-discriminatory terms** will normally not restrict competition within the meaning of Article 101(1).*[15]

FRAND obligations thus seek to curb a SEP holder's power obtained due to the inclusion of its patented technology in the standard, while not unfairly limiting its rights to seek reasonable and non-discriminatory compensation based on the value of the patented invention.

The European Commission's comments not only exemplify the competition law-context of FRAND, but also help to orient analysis of FRAND commitments and practices.

First, in its Horizontal Guidelines, the Commission clarifies:

*In order to ensure effective access to the standard, the IPR policy would need to require participants wishing to have their IPR included in the standard to provide an irrevocable commitment in writing to offer to license their essential IPR to all third parties on fair, reasonable and non-discriminatory terms ("**FRAND commitment**").*[16]

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12 IPR stands for "Intellectual Property Rights."

13 Communication from the Commission: Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, 2011 O.J. C, 14.1.2011, p. 1, para. 287 ("EC Horizontal Guidelines").

14 *Id*. at para. 269.

15 EC Horizontal Guidelines, ¶ 280.

16 EC Horizontal Guidelines, ¶ 285

Therefore, in order to avoid competition-law concerns, FRAND licenses need to be offered to all third parties who seek a license so that they may implement the standard.[17]

Second, as the nature of competition-law concerns around SEPs stems from the unique power that these patents can confer on their holders through the elimination of technology competition once a standard is set, it follows that what is "fair and reasonable" needs to be assessed against the economic value of the patented invention itself – independent of any value, for example negotiation leverage, conferred to the SEP holder by the patented technology having been included in a standard.[18]

Third, competition-law guidance also addresses the implication of FRAND obligations on the availability of injunctive relief to SEP holders. Absent standardization, an implementer could design-around a patent, or simply take advantage of prior art solutions, thereby creating an economic cap on the return of a patent holder. But while injunctions are an important tool to enforce patent rights, in the case of FRAND, the availability of injunctions could serve as a primary mechanism through which SEP holders can abuse the dominant position that holding a SEP may confer – either by excluding companies from a market, or by pressuring companies into accepting unreasonable licensing terms through the threat of injunction. Therefore, a body of court decisions and competition-law guidance have established that SEP holders must not abuse their market power by seeking injunctive relief against standards implementers that are willing and able to pay a FRAND royalty for valid and infringed patents.[19]

Finally, in the context of SEP licensing pools, the creation of a technology pool necessarily implies joint selling of the pooled technologies, which in the case of pools composed solely or predominantly of

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17 *See also Microsoft Corp. v. Motorola Inc*., 795 F. 3d 1024, 1031 (9th Cir. 2015) ("To mitigate the risk that a SEP holder will extract more than the fair value of its patented technology, many SSOs require SEP holders to agree to license their patents on 'reasonable and nondiscriminatory' or 'RAND' terms. Under these agreements, an SEP holder cannot refuse a license to a manufacturer who commits to paying the RAND rate."); *Microsoft Corp. v. Motorola, Inc*., 696 F.3d 872, 884 (9th Cir. 2012) ("Motorola, in its declarations to the ITU, promised to 'grant a license to an unrestricted number of applicants on a worldwide, non-discriminatory basis and on reasonable terms and conditions to use the patented material necessary' to practice the ITU standards. This language admits of no limitations as to who or how many applicants could receive a license…"); *Ericsson, Inc. v. D-Link Sys, Inc*., 773 F.3d 1201, 1230 (Fed. Cir. 2014) ("[T]he licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention [is not relevant for SEPs]. ... Because of Ericsson's RAND commitment [...] it cannot have that kind of policy for maintaining a patent monopoly."); Order Den. Anti-Suit Inj. at 31, *Apple Inc. v. Qualcomm, Inc*., Case No. 3:17-cv-00108-GPC-MDD (N.D. Cal Sept. 7, 2017) ECF No. 141 ("ETSI's IPR policy, in fact, plainly states that any willing licensee is entitled to license [a SEP declarant's] intellectual property at a FRAND rate."); Commission Decision in Case AT.39985 - *Motorola - Enforcement of GPRS Standard Essential Patents* C(2014) 2892 final, 29 April 2014, para. 55 (FRAND "oblige[s] SEP owners: [] to make the patent in question available to all interested third parties").

18 *See, e.g*., Communication of the Commission: Setting out the EU approach to Standard Essential Patents COM (2017) 712 final, 29 November 2017, sec. 2.1 ("EC SEP Communication") ("Licensing terms have to bear a clear relationship to the economic value of the patented technology. That value primarily needs to focus on the technology itself and in principle should not include any element resulting from the decision to include the technology in the standard."); *see also, e.g., Ericsson*, 773 F.3d at 1232 (Fed. Cir. 2014) ("As with all patents, the royalty rate for SEPs must be apportioned to the value of the patented invention."; "the patent holder should only be compensated for the approximate incremental benefit derived from his invention . . . [t]his is particularly true for SEPs."); US Federal Trade Commission, Decision and Order, *Motorola Mobility LLC & Google Inc*., Dkt. No. C-4410, (July 23, 2013), www.ftc.gov/sites/default/files/documents/cases/2013/07/130724googlemotorolado.pdf

19 *See, e.g*., Commission Decision of 29 April 2014 in Case AT.39985 - *Motorola - Enforcement of GPRS Standard Essential Patents* C(2014) 2892 final, 29 April 2014 (finding patent owner in breach of FRAND obligation and competition law for seeking an injunction after potential licensee had agreed to adjudication of asserted national patents); C-170/13 *Huawei Techs. Co. v. ZTE Corp*., [2015] E.C.R. 477 (establishing breach of antitrust law where injunction is sought against willing licensee); Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1331-32 (Fed. Cir. 2014) (holding that FRAND commitment makes it difficult for plaintiff to obtain injunction).

substitute technologies amounts to a price fixing cartel.[20] "[R]oyalties and other licensing terms should be non-excessive and non-discriminatory and licences should be non-exclusive."[21]

The CWA will address these aspects in further detail below.

c) Public policy and consumer interests

In the context of broader public policy interests, FRAND approaches are directed to fostering economic growth, facilitating collaborative technological development, and promoting public welfare.

On the one hand, FRAND obligations honour the SEP holder's reasonable interests in obtaining fair compensation for the use of its patented features, and thus maintain incentives for both inventive activity and the submission of the fruits of such activity for inclusion in standards. On the other hand, even a technologically advanced and well-designed standard may not be widely adopted if SEPs are used to exclude implementers and undermine incentives for adoption via excessive royalty claims. Policy makers, after all, significantly rely on standards to support regulation and public policy agendas aimed at consumer benefits and economic growth.

Therefore, policy makers frequently describe FRAND as a balance between the interests of SEP holders in obtaining fair compensation for the use of their patents, and the interests of standards implementers in obtaining fair licensing terms for patented features that are used in standards. But in practice, FRAND promises may not always prevent abusive behaviours, particularly without active enforcement mechanisms. Due to the public interest in the functioning of the FRAND promise, policy makers have a role to play in promoting common understanding of its implications – including, but also extending beyond, competition-policy and antitrust matters.

In its Communication on SEPs[22] of November 2017, the European Commission has, for example, "set out key principles that foster a balanced, smooth and predictable framework for SEPs", addressing 1) increased transparency on SEP exposure, 2) general principles for FRAND licensing terms for SEPs, and 3) a predictable enforcement environment for SEPs. The Communication also calls for "stakeholders to engage in dialogue with each other […] with the view to achieving further clarification and developing best practices". The present CWA is, in part, an industry-led response to that call.

While the scope of the present document does not lend itself to documenting a comprehensive account of all elements of guidance provided by the European Commission, we note four key points that form particularly important guideposts for the practices, procedures and principles presented in this CWA:

— the Communication (re)emphasizes that an "undertaking to grant licenses on FRAND terms creates legitimate expectations on the part of third parties that the proprietor of the SEP will in fact grant licenses on such terms".[23]

— the Communication reinforces the established FRAND valuation principle that "[l]icensing terms have to bear a clear relationship to the economic value of the patented technology" and "not include any element resulting from the decision to include the technology in the standard."[24]

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20 Communication from the Commission — Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements, OJ C 89, 28.3.2014, p. 3, para. 46 (EC Technology Transfer Guidelines).

21 *Id*. at para 269.

22 EC SEP Communication, *supra* note 17, at Sec. 2.

23 *Id.* at sec. 2.1.

24 *Id.*

— The Communication expressly recognizes, in setting licensing rates for any particular SEP or group of SEPs, and to avoid royalty stacking, royalty methodologies should ensure that overall licensing rates for all relevant SEPs must not become unreasonable or make implementation of the standard impractical; "in defining a FRAND value, parties need to take account of a reasonable aggregate rate for the standard." The Commission also notes prospective licensees receiving a FRAND offer should endeavour to make a "concrete and specific" counter-offer once the patent owner has provided "clear explanations" and information regarding the basis for its technical and business positions.[25]

— the Communication further expands on the level of information that SEP holders should make available to prospective licensees to enable them to determine the relevance of the asserted SEP(s) and the compliance of a license offer with FRAND. "[C]lear explanations are necessary on: the essentiality for a standard, the allegedly infringing products of the SEP user, the proposed royalty calculation and the non-discrimination element of FRAND."[26]

Each of these aspects of the European Commission's SEP Communication is addressed in further detail below.

4.3 Consideration of SME Interests

Now that some background and context regarding the function and interpretation of the FRAND promise has been presented, it also is important to address the significant interests of small and medium-sized enterprises (SMEs) in the markets for standardized technologies, and in the maintenance of appropriate FRAND practices.

While the increasing use of standardized technologies will affect companies large and small, SMEs are expected to play a great role in creating the connected economy, and in the innovations to come. However, unfair licensing demands relating to SEPs covering standards needed to participate in the market ecosystem can uniquely impact and harm SME market participation. In particular, a series of factors create asymmetric risks to SMEs within the standard essential patent licensing environment, and could ultimately inhibit downstream innovation:

— **Asymmetries of resources**: While the same may also be true of larger companies, SMEs targeted by Patent Assertion Entities[27] (PAEs) or abusive SEP licensing assertions are placed at significant and distinct disadvantage when defending against entities asserting SEP claims due to their relative lack of resources.

— **Asymmetries of commercial information**: SMEs have limited capacity to dedicate legal resources for understanding the complex SEP environment. A lack of transparency in market practices create doubts about prices, discrimination, patent validity or essentiality claims.[28]

— **Asymmetries of technical information**: Many SMEs do not have the technical expertise in the technology and the standards to verify whether the alleged SEP are actual, valid SEPs – particularly where the SME is unable to share details of claims made by SEP holders with the SME's upstream suppliers.

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25 *Id.* at secs. 2.4, 3.1.

26 *Id.* at sec. 3.1.

27 A Patent Assertion Entity is a person or company whose business model relies on acquiring patents or patent rights without practicing the patented invention to make profits on the royalties paid for licenses on their patent portfolios.

28 Erixon Fredrik & Matthias Bauer, Standard Essential Patents and the Quest for Faster Diffusion of Technology, (2017), European Centre for Int'l Political Econ. Policy Brief 2/2017, p. 8.

— **Asymmetries of market position**: SMEs are often inexperienced in determining FRAND royalty rates in different positions along the same value chain or in other IoT verticals. For SMEs the size disparities can lead to paying discriminatory royalty rates due to an inability to accurately assess their market position relative to previous licensing agreements. In many cases it might be that an SME merely incorporates a standardized component into its downstream product, and it could be more appropriate and efficient for the potential licensor to seek a license from an actor further upstream in the market that is responsible for designing and marketing the relevant technology.

These issues can manifest, for example, when PAEs target SMEs through "forum-shopping" and "campaigning" to extract royalty payments on patents that may or may not be essential to a standard, which often require years of expensive legal fees and litigation. Such expenses and efforts often are untenable to SMEs. Being unable to spend large amounts of resources on litigation pursuing valid and good-faith defences, SMEs may be forced instead to undergo an extensive redesign or withdraw from the market altogether.

It is likewise unreasonable to expect SMEs that are developing new products to approach SEP holders while development is ongoing, to discuss new use cases in order to get a SEP license; in this way, the SEP holder could seek to act as a gateway of new ideas and use cases. This is particularly the case if SEP holders can control the pricing for new use cases, and thereby distort downstream markets. SEP holders forcing companies to take a license can potentially use the licensing process as a means to gather information about new product development and new use cases, and to restrict competition in certain markets. Such an effect is not in the interest of innovation and the advancement of new technologies and efficiencies across markets.

In short there are many reasons to support and protect SMEs and other downstream technology developers that incorporate standardized functionalities into their devices. However, to fully enable these burgeoning markets, it must be ensured that entrenched businesses do not seek to co-opt value that they did not create by seeking royalties based on the value of downstream devices. SEP holders can obtain FRAND values based on licensing standardized components, or if downstream users seek their own licenses, by focusing royalty demands only on the value of the patented technologies, and not seeking compensation based on values that were created by others.

5 Core Principles for Addressing Key FRAND and SEP Licensing Issues: A Legal and Factual Background

Now that this CWA has identified some of the laws, policies and market needs that support and underlie the FRAND promise, we will turn to discussion of specific practices and principles that may be encountered by parties involved in FRAND licensing. For each such issue, we will present the background, address examples of the relevant law as may be applicable, and discuss approaches and Core Principles for achieving effective and fair resolutions.

5.1 The Use and Misuse of Injunctions and Threats of Injunctions in SEP Negotiations

Generally, if a patent is not a SEP, the patent holder may freely seek or enforce injunctive relief against infringement, subject to applicable legal or equitable requirements under the national laws. The ability to exclude others from the market can serve, in such cases, as one of the rights granted to a patent owner.[29]

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[29] Of course, even in such "non-SEP" situations, injunctive relief is subject to European requirements that an injunction is both equitable and proportional. *See* Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights , art. III, OJ (L 157), 30.4.2004, p. 45, 61 (Directive 2004/48/EC). Similar authority for, and limitations on, the use of injunction in non-SEP situations may apply internationally as well. See, e.g., eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006) (for injunctive relief "a plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate

However, where a patent holder has promised to license its patents on FRAND terms, the situation is different. By making a FRAND promise, the patent holder expressly agrees to pursue licensing, not market exclusion. In other words, by making a FRAND commitment, the patent holder voluntarily agrees to support the promulgation of the standard via licensing to third parties, rather than seeking to restrict the use of the standard by eliminating some market participants via injunctive remedies. While a FRAND commitment does not imply that a SEP holder has foregone its right to enforce his patents against unlicensed use, seeking an injunction against a party from whom FRAND compensation can be obtained would be incompatible with the commitment.[30]

The use of *de facto* injunction processes – such as some jurisdictions' "customs seizure" processes to seize allegedly-infringing products – is likewise contrary to the FRAND commitment and improper in most circumstances. Likewise, it is recognized that in some jurisdictions infringement issues can be raised as criminal matters. Requests by SEP holders to instigate or request criminal proceedings against individuals in firms or alleged infringers of SEPs should also be viewed similarly to injunction demands, and met with great skepticism (e.g., they may be used by some SEP holders to increase "leverage" to force a non-FRAND result). In general, and as discussed below, where FRAND compensation can be obtained from a potential licensee, using injunctions, *de facto* injunctions, criminal proceedings, or other techniques that are not directed at adjudicating FRAND rates are rarely if ever appropriate. Such "scare tactic" proceedings may be particularly improper where, for example, there has not yet been a court adjudication of infringement of the SEP in the country in which the *de facto* proceeding is sought, or where there are pending invalidity proceedings relating to the alleged SEP or its family members.

The potential for SEP hold-up, via injunctions or similar *de facto* proceedings, is a significant concern for standardization and raises important issues for competition law oversight. This has been recognized by many international jurisdictions.[31] Likewise, it must be noted that even the *seeking* of (or threats to seek) injunctive relief can lead to unfair, non-FRAND results. As one agency has noted, "[t]he threat of exclusion from a market is a powerful weapon that can enable a patent owner to hold up implementers of a standard. Limiting this threat reduces the possibility that a patent holder will take advantage of the inclusion of its patent in a standard to engage in patent hold up, and provides comfort to implementers in developing their products."[32]

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to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction").

30 Requiring that a SEP holder comply with its FRAND obligations by not restricting market access is by no means a form of "compulsory licensing." Rather, it is simply the enforcement of the obligations that a SEP holder voluntarily (i.e., without compulsion) accepted as part of the standardization process.

31 *See, e.g*., EC Horizontal Guidelines, supra note 12, para. 287 ("FRAND commitments can prevent IPR holders from making the implementation of a standard difficult by refusing to license or by requesting unfair or unreasonable fees (in other words excessive fees) after the industry has been locked-in to the standard or by charging discriminatory royalty fees."); U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition 33-57 (2007), 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 (discussing in detail approaches designed to combat patent holdup, including SEP disclosure policies and FRAND undertakings); *Ericsson*, 773 F.3d at 1209 (recognizing patent hold-up and royalty stacking as two problems "that could inhibit widespread adoption of the standard"); *Microsoft Corp. v. Motorola, Inc*., No. C10-1823JLR, 2013 WL 2111217, at *20 (W.D. Wash. Apr. 25, 2013) (directing parties negotiating RAND rates to "consider other SEP holders and the royalty rate that each of these patent holders might seek from the implementer based on the importance of these other patents to the standard and to the implementer's products").

32 US Dep't of Justice, IEEE Business Review Letter, at 9 (Feb. 2, 2015), https://www.justice.gov/atr/response-institute-electrical-and-electronics-engineers-incorporated.

There are two key issues to consider in evaluating FRAND's effect on the availability of injunctions:

— What are the *exceptions*, if any, to FRAND's general restriction on injunctions; and

— How are claims or threats to seek an injunction addressed.

By considering the function and purpose of the FRAND promise, these issues come more clearly into focus.

As a starting point, we need to consider (and to some extent, separate) two related legal issues: (1) enforcement of the FRAND promise (*e.g.*, as a contract), and (2) enforcement of competition law prohibitions where FRAND is violated. While both of these scenarios are related, they each have their own particularities, and can lead to different (albeit often complementary) conclusions.

From a contractual perspective, the FRAND promise to license is incompatible with market exclusion. The FRAND commitment functions as a *quid pro quo*: the FRAND commitment limits the assertion of the patent holder's patent rights, but in return the patent holder – as a result of the promulgation of the standard – obtains the ability to seek reasonable licensing fees for a much larger pool of potential licensees. But what if the patent holder cannot recover compensation from the potential licensee? For example, what if the potential licensee is in bankruptcy but seeks to continue selling infringing products without paying the patent holder any licensing fees? In that case, the patent holder may be left without recourse to obtain its reasonable licensing fees, and for this reason the patent holder might potentially be justified – under such extraordinary circumstances – to seek injunctive relief.

In Europe, considerations of equity and proportionality are required whenever a court is faced with a request for injunctive relief, and these considerations are particularly relevant when the patent is an alleged SEP.[33] For this reason, the European Commission's recent SEP Communication has stressed the importance of ensuring that injunctions are subject to proportionality considerations: "Given the broad impact an injunction may have on businesses, consumers and on the public interest, particularly in the context of the digitalised economy, the proportionality assessment needs to be done carefully on a case-by-case basis."[34] However, the European courts have not yet developed extensive case law addressing the situations where use of injunctions might violate the FRAND licensing promise *qua* promise. Instead, much of the European law on this issue has focused on situations where the use of injunctions might violate European competition laws. As discussed below, this related, albeit different, issue has been the subject of a decision from the European Court of Justice (ECJ), as well as by the European Commission in a competition law enforcement action.

In other jurisdictions, an equitable analysis of patent holder and licensee interests can serve to restrict SEP injunctions in most cases, while potentially permitting injunctions in those rare cases where the patent holder has no other recourse to obtain FRAND compensation. For example, in the United States, the availability of injunctions is addressed under the U.S. Supreme Court's *eBay* standard, which requires the weighing of four equitable factors before an injunction can be available.[35] In considering the availability of injunctions for FRAND-encumbered SEPs, the U.S. courts have ruled that, while injunctions are not prohibited in all SEP cases, the FRAND promise to license entails that the *eBay* factors, such as whether legal remedies (*e.g.*, the availability of monetary damages or similar compensation to the patent

33 Directive 2004/48/EC, supra, at note 30.

34 EC SEP Communication, supra, at note 17, sec. 3.2.

35 *See, e.g., eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 391 (2006) (for injunctive relief "a plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction").

holder), are unlikely to support an injunction for SEP matters.[36] As the U.S. courts have noted, "[a] patentee subject to FRAND commitments may have difficulty establishing irreparable harm" such that an injunction often will be unavailable.[37] In practice, it does not appear that any U.S. court has granted an injunction on a FRAND-encumbered SEP in at least a decade or more.[38]

In the *Huawei v. ZTE* decision, the ECJ set forth a summary of behaviours that can be followed to demonstrate a patent owner's and a licensee's good faith "willingness" to negotiate a license.[39] The ECJ held that it can be a competition law violation for a patent holder to pursue an injunction against a licensee that has demonstrated its good faith willingness to negotiate a FRAND license. In such cases, the patent holder will not be entitled to market exclusion. However, where the patent owner acts in good faith and provides certain required information and materials, but the potential licensee fails to reciprocate with its own behaviour demonstrating willingness to negotiate a license, the patent owner may not be acting in violation of the competition laws by pursuing an injunction. Whether other restrictions on the patent owner's conduct (*e.g.*, based on the language or private contractual enforceability of the FRAND promise) might apply was not addressed by the ECJ.

Similar competition law concerns regarding the seeking of injunctions were raised in the European Commission's decision in the *Motorola* matter.[40] In that decision, the European Commission found that a SEP holder's seeking an injunction based on a German patent against a licensee that had stated its willingness to enter into a license for use of the patent owner's German patents, subject to review of FRAND rates by the German courts, was a violation of the competition laws.[41] The Commission further held that allegations that the potential licensee was historically "unwilling" were irrelevant to the continued maintenance of a claim for an injunction after the date of the licensee's counter-offer for a license to the German patents.[42]

In short, whether the FRAND obligation is addressed as a binding promise by the patent holder, or alternatively as a matter of competition law, there is a significant consensus that FRAND restricts the availability and appropriateness of injunctive relief. Given that FRAND is designed to avoid market exclusion, such exclusion would seem improper except in those rare instances where FRAND compensation cannot be obtained via negotiations or, where there are disputes, via the courts. As the Commission stated in *Motorola*, "[t]he essence of the commitment to license on FRAND terms and conditions is a recognition by a SEP holder that, given the purpose of the standardisation process, its

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36 *Apple Inc. v. Motorola, Inc*., 757 F.3d 1286, 1331-32 (Fed. Cir. 2014) (RAND commitment may make it difficult for plaintiff to establish eBay factors such as irreparable harm).

37 *Id*.; see also Third Party United States Federal Trade Commission's Statement on the Public Interest at 1, *In re Certain Wireless Commc'n Devices, Portable Music & Data Processing Devices, Computers & Components Thereof*, Inv. No. 337–TA–745, (Int'l Trade Comm'n June 6, 2012), www.ftc. gov/os/2012/06/1206ftcwirelesscom.pdf ("[the threat of injunctive relief] 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.).

38 However, these same restrictions may not apply in US International Trade Commission (ITC) Actions, which are not subject to the U.S. eBay requirements. Rather, in US ITC actions issues relating to SEPs are often addressed as matters of the public interest. But as with the US district courts, there have been few if any ITC injunctions in SEP cases.

39 C-170/13 *Huawei Techs. Co. v. ZTE Corp*., [2015] E.C.R. 477.

40 Commission Decision in Case AT.39985 - *Motorola - Enforcement of GPRS Standard Essential Patents* C(2014) 2892 final, 29 April 2014.

41 *Id*. at recital 433 (addressing scope of license counter-offer).

42 *Id*. at recital 441 ("Apple's alleged unwillingness between 2007 and 2010 is irrelevant for the purposes of this Decision as this cannot justify Motorola's continued seeking and enforcement of an injunction against Apple in Germany on the basis of the Cudak GPRS SEP after 4 October 2011, the date of the Second Orange Book Offer.").

essential patents will be licensed in return for FRAND remuneration."[43] This essence and purpose is generally undermined by market exclusion.

On the one hand, some SEP holders claim that injunctive relief could be used to deter bad faith behaviours by potential licensees. But legal approaches that use the most extreme possible remedy (in this case, market exclusion) may also end up preventing good faith negotiations and deterring other *good-faith* behaviours that instead should be supported. In other words, in the context of FRAND-encumbered SEPs, where monetary or similar remedies are available and sufficient, injunctions (or similar *de facto* injunctive proceedings) are not necessary, and may have serious negative effects on market behaviours. Furthermore, at least in most jurisdictions, there are already various legal tools to discourage bad faith behaviours by either party without recourse to injunctions. For example, courts may award interest and other costs associated with any delay in licensing negotiations. Likewise, upon finding intentional infringement courts in some jurisdictions may sanction such conduct, such as by imposing additional fees for bad-faith infringement. There are other approaches available to compensate patent holders, and deter bad faith behaviours by either party, such as the award of attorneys' fees, costs, or other reasonable compensation to a prevailing party. These legal, monetary tools – not the heavy-handed threat of market exclusion – are readily available to courts and agencies if necessary to deter bad faith behaviour without also affecting positive behaviours, such as good-faith assertion of legal defenses.

Indeed, in assessing allegations of a licensee's alleged delay during negotiations, one court recently clarified that such actions can be fully remedied by these types of court-ordered remedies. Moreover, as the court noted, concerns about licensee misbehaviour are monetary issues that are different-in-kind than the competition-law concerns associated with patent hold up.[44]

Finally, and as noted above, even threats to *seek* injunctive relief can serve as a form of hold up, distorting negotiation leverage and results.[45] As such, threats of injunctive relief (or similar *de facto* proceedings) may themselves support claims for breach of the FRAND obligation, or for competition law violations.[46]

Accordingly, and for all of these reasons:

Core Principle 1: *A FRAND SEP holder must not threaten, seek or enforce an injunction (or similar de facto exclusion processes) except in exceptional circumstances and only where FRAND compensation cannot be addressed via adjudication, e.g. lack of jurisdiction or bankruptcy. Parties should seek to negotiate FRAND terms without any unfair "hold up" leverage associated with injunctions or other de facto market exclusion processes.*

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43 *Id*. at recital 492.

44 *In re Innovatio IP Ventures*, LLC IP Litig., MDL Dkt. No. 2303, 2013 WL 5593609, at *11 (N.D. Ill. Oct. 3, 2013) ("[T]he court is not persuaded that reverse hold-up is a significant concern in general, as it is not unique to standard-essential patents. Attempts to enforce any patent involve the risk that the alleged infringer will choose to contest some issue in court, forcing a patent holder to engage in expensive litigation. The question of whether a license offer complies with the RAND obligation merely gives the parties one more potential issue to contest. When the parties disagree over a RAND rate, they may litigate the question, just as they may litigate any issue related to liability for infringement.").

45 US Dep't of Justice, IEEE Business Review Letter, at 9 (Feb 2, 2015), https://www.justice.gov/atr/response-institute-electrical-and-electronics-engineers-incorporated.

46 U.S. Fed. Trade Comm'n, Letter to Commentators, Motorola Mobility LLC & Google Inc., Docket No. C-4410 (July 23, 2013) (restricting threats of injunction during negotiation process) available at https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724googlemotorolaletter.pdf.

5.2 Licenses to Any Willing Licensee

Another important issue to consider in evaluating FRAND licensing practices is *who* is entitled to obtain a FRAND license. On its face, the FRAND promise does not restrict licensing to any particular sub-group, but instead is applicable to all potential licensees. Rather, a FRAND commitment is a commitment to license any potential licensee that seeks a license.

This is not merely a contractual issue, but may also be required by the competition and antitrust laws. If a patent holder could "pick and choose" potential licensees, then it could control who does and does not succeed in the market. Such behaviours do not appear necessary to validate the legitimate business interests of SEP owners, whereas they may significantly harm FRAND licensing interests for companies that utilize standardized technologies and consumers that rely on those technologies.

For example, the ETSI Directives state expressly that all members and third parties have the right, under the ETSI IPR Policy, "to be granted licenses on fair, reasonable and non-discriminatory terms and conditions in respect of a standard".[47] As the European Commission has noted:

In order to ensure effective access to the standard, the IPR policy would need to require participants wishing to have their IPR included in the standard to provide an irrevocable commitment in writing to offer to license their essential IPR to ***all third parties*** *on fair, reasonable and non-discriminatory terms. [...] FRAND commitments can prevent IPR holders from making the implementation of a standard difficult by refusing to license ... after the industry has been locked-in to the standard...*[48]

This approach was supported by the ECJ, when it noted that companies committing to offer FRAND licenses created "legitimate expectations on the part of third parties" that a license would be granted, and this statement was recently reiterated in the Commission's SEP Communication.[49] European courts likewise have found a discrimination inherent in an SEP owner's choice not to offer licenses to some supply chain participants, limiting the availability of injunctions against downstream customers.[50]

Courts in the United States and other international jurisdictions have likewise found that the FRAND obligation cannot be reconciled with refusals to license to some market participants. For example, one recent U.S. federal court decision found that "ETSI's IPR policy, in fact, plainly states that any willing licensee is entitled to license [a SEP declarant's] intellectual property at a FRAND rate."[51] Or as another US appeals-level Court stated, "[t]o mitigate the risk that a SEP holder will extract more than the fair value of its patented technology, many SDOs require SEP holders to agree to license their patents on 'reasonable and non-discriminatory' or 'RAND' terms. Under these agreements, an SEP holder cannot refuse a license to a manufacturer who commits to paying the RAND rate."[52] One United States District Court, addressing contract and competition law claims, has held that, as a matter of law, a FRAND promise obligates the SEP owner to licenses its patents to companies seeking a license, including component suppliers, and that

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47 ETSI Directives, Guide on Intellectual Property Rights, at Sec. 1.4.

48 EC Horizontal Guidelines, supra, at note 12, paragraphs 285-287; see also EC Technology Transfer Guidelines, supra, at note 19, para. 261.

49 C-170/13 *Huawei Techs. Co. v. ZTE Corp.*, [2015] E.C.R. 477, para. 53; see also EC SEP Communication, supra, at note 17, ftn. 30.

50 LG Düsseldorf, Urt v 1.7.2018 - 4c O 81/17, *available at* https://www.justiz.nrw.de/nrwe/lgs/duesseldorf/lg_duesseldorf/j2018/4c_O_81_17_Urteil_20180711.html.

51 Order Den. Anti-Suit Inj. at 31, *Apple Inc. v. Qualcomm, Inc.*, Case No. 3:17-cv-00108-GPC-MDD (N.D. Cal. Sept. 7, 2017), ECF No. 141.

52 *Microsoft Corp. v. Motorola, Inc.*, 795 F. 3d 1024, 1031 (9th Cir. 2015).

such a requirement is consistent with historical industry practices.[53] Likewise, the US competition agencies have endorsed this approach in their official actions resolving pending cases.[54]

In describing the ETSI IPR Policy, ETSI's Director-General who oversaw its development, Karl-Heinz Rosenbrock, has described in detail how and why ETSI adopted its policy of requiring licensing to anyone that seeks a license and is willing to pay a FRAND rate.[55] As Mr. Rosenbrock states, "[t]he ETSI IPR Policy allows every company that requests a license to obtain one, regardless of where the prospective licensee is in the chain of production and regardless of whether the prospective licensee is active upstream or downstream." As Mr. Rosenbrock further catalogues, this willingness to license at all levels of the supply is consistent with historical practices among companies that have traditionally offered licenses to SEP technologies.[56]

In recent years, some companies announced a purported right to refuse licenses to some companies in the supply chain – usually the component or module level companies that are the most familiar with the standardized technologies. Such refusals to license are problematic for a number of reasons, and may ultimately lead to charging higher-than-FRAND royalties to downstream companies based on the value and features that those companies themselves create.

By contrast, there are clear and compelling reasons why a licensing approach focused on upstream companies may – depending on the specific circumstances – create more efficient and more fair licensing processes. From an efficiency standpoint, in many industries there may be only a handful of suppliers of standard-compliant components, as compared to hundreds or thousands of downstream companies utilizing those products. By licensing those handful of suppliers, a patent owner may be able to efficiently license a large portion of the industry. From a fairness perspective, often the upstream suppliers have the most information and experience regarding the standard and its various technologies. Downstream companies, on the other hand, may adopt more of a "plug and play" approach, purchasing standardized components that can be easily incorporated into the downstream devices they make and sell. In those circumstances, a downstream company may be substantially less prepared to evaluate the alleged essentiality or validity of the subject patents, or to evaluate appropriate FRAND licensing terms.

Accordingly, and for all of these reasons:

Core Principle 2: *A FRAND license should be made available to anybody that wants one to implement the relevant standard. Refusing to license some implementers is the antithesis of the FRAND promise. In many cases, upstream licensing can create significant efficiencies that benefit the patent holder, the licensee and the industry.*

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53 *Fed. Trade Comm'n v. Qualcomm Inc.*, No. 17-CV00220-LHK, 2018 WL 5848999 at *12-13 (N.D. Cal. Nov. 6, 2018) ("If a SEP holder could discriminate against modem chip suppliers, a SEP holder could embed its technology into a cellular standard and then prevent other modem chip suppliers from selling modem chips to cellular handset producers. Such discrimination would enable the SEP holder to achieve a monopoly in the modem chip market and limit competing implementations of those components ….") (internal citations omitted).

54 U.S. Fed. Trade Comm'n, Letter to Commentators, Motorola Mobility LLC & Google Inc., Docket No. C-4410 (July 23, 2013) ("By making a FRAND commitment, a SEP holder voluntarily chooses to license its SEPs to all implementers of the standard on fair and reasonable terms.") available at https://www.ftc.gov/sites/default/files/documents/cases/2013/07/130724googlemotorolaletter.pdf.

55 Karl Heinz Rosenbrock, Licensing At All Levels Is The Rule Under The ETSI IPR Policy (Nov. 3, 2017), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3064894; Karl Heinz Rosenbrock, Why the ETSI IPR Policy Requires Licensing to All, http://www.fair-standards.org/wp-content/uploads/2017/08/Why-the-ETSI-IPR-Policy-Requires-Licensing-to-All_Karl-Heinz-Rosenbrock_2017.pdf.

56 *See, e.g.*, Countercls. & Affirmative Defense ¶ 53, *Broadcom Corp. v. Qualcomm Inc.*, No. 05-3350 (MLC) (JJH) 2008 WL 2140801 (D.N.J. Feb. 29, 2008) ("Qualcomm, which owns a large portion of the intellectual property covering CDMA technology, operates a pro-competitive licensing model, in which it offers licenses on fair, reasonable and non-discriminatory terms to any interested company.").

5.3 FRAND Valuation Methodologies

SEPs should be valued based on their own technical merits and scope, not based on downstream values or uses. While specific licensing terms and values must always be determined on a case-by-case basis in view of the parties' particular facts and circumstances, there are some clear *methodological* approaches for FRAND valuation that have been recognized by the European Commission as well as the courts. In this subsection we will address these methodological approaches as announced by the various authorities, while emphasizing that parties should always exercise their own independent judgement (in consultation with their own attorneys and other advisors) in assessing valuation issues.

In recent guidance addressing royalty methodologies, the European Commission stated:

[T]he following IP valuation principles should be taken into account [in evaluating FRAND terms and conditions]:

— Licensing terms have to bear a clear relationship to the economic value of the patented technology. That value primarily needs to focus on the technology itself and in principle should not include any element resulting from the decision to include the technology in the standard. In cases where the technology is developed mainly for the standard and has little market value outside the standard, alternative evaluation methods, such as the relative importance of the technology in the standard compared to other contributions in the standard, should be considered.

— Determining a FRAND value should require taking into account the present value added of the patented technology.[57] That value should be irrespective of the market success of the product which is unrelated to the patented technology.

— FRAND valuation should ensure continued incentives for SEP holders to contribute their best available technology to standards.

— Finally, to avoid royalty stacking, in defining a FRAND value, an individual SEP cannot be considered in isolation. Parties need to take into account a reasonable aggregate rate for the standard, assessing the overall added value of the technology. [][58]

Taking each of these points in turn, the following observations regarding the Commission's approach can be made: (1) SEPs are to be valued on their own technical merits, *not* the merits of the standard or downstream technologies; (2) SEP value should not be tied to the market success (*e.g.*, sale price, operating system, brand, or added functionality) of a multi-component end-user product and should account for declines as a standard ages; (3) SEP valuation using these approaches honours patent holder interests in obtaining reasonable compensation, and (4) FRAND rates for any particular SEP must take into account royalty stacking (*i.e.*, be set in view of reasonable aggregate royalty for all SEPs applicable to the standard) and the patent expiration profile of SEPs within the standard.

Not surprisingly, these Commission-endorsed approaches dovetail well with the approaches taken by the national courts. In Europe, the General Court has noted that patents should be valued based on their intrinsic technical value, not based on the added value of interoperability provided by standardization.[59]

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[57] According to the SEP Communication: "The present value is the value discounted to the time of the conclusion of the license agreement. Allowing for the discounting over time is important against the backdrop of licensing agreement running over several years in sometimes technologically fast moving business enviornments." EC SEC Communication, supra, at note 17, sec. 2.1 n.29.

[58] Id at sec. 2.1.

[59] Case T-167/08, *Microsoft Corp. v Comm'n* [2012] E.C.R. 323, para. 138 ("the distinction between the strategic value and the intrinsic value of the technologies covered by the contested decision is a basic premiss of the assessment of the

Elsewhere, the requirements set forth in the SEP Communication are equally significant. "As with all patents, the royalty rate for SEPs must be apportioned to the value of the patented invention."[60] This entails that royalty calculations should not include the value derived from an SDO's decision to include the technology in the standard; "[w]hen dealing with SEPs ... the patentee's royalty must be premised on the value of the patented feature, not any value added by the standard's adoption of the patented technology."[61] In setting royalties, it is important to identify the appropriate common base that is "best suited for accurately valuing the invention [and] [t]his may often be the smallest priceable component containing the invention" or otherwise infringing the relevant patent.[62] This approach has been employed in determining that FRAND royalties must be based on the infringing component, which infringe the relevant SEPs, and thus rejecting arguments that end device values – or even wireless network values – should be considered.[63]

This further entails that royalties should take into account an overall royalty for the standard, and then evaluate the patent holder's contribution as a portion thereof.[64] For example, a good starting point for an appropriate royalty rate is the SEP holder's pro rata share of the total number of industry SEPs on the standard or standards incorporated into a product, as well as the number of SEPs for a standard that have expired.[65] A further benefit of this approach is that the value of a SEP does not vary depending on the type of company that takes the license, but rather remains focused on the value of the patented technology without seeking to include royalties based on the added value of features that others create.

Accordingly, and for all of these reasons:

Core Principle 3: *SEPs should be valued based on their own technical merits and scope, not based on downstream values or uses. In many cases this will involve focusing on the smallest component that directly or indirectly infringes the SEP, not the end product incorporating additional technologies. As noted by the European Commission, SEP valuations "should not include any element resulting from the decision to include the technology in the standard." Moreover, "[i]n defining a FRAND value, parties need to take account of a reasonable aggregate rate for the standard."* [66]

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reasonableness of any remuneration charged by Microsoft for allowing access to, and use of, the interoperability information"); Commission Decision of 12 September 2009 at para. 66, Case COMP/38.636 – *Rambus*, http://ec.europa.eu/competition/antitrust/cases/dec_docs/38636/38636_1203_1.pdf (European Commission did not accept Rambus's proposed commitments to resolve allegations of deceptive conduct at a standard-setting organization until Rambus "clarified that the royalty shall be determined on the basis of the price of an individually sold chip and not of the end-product. If they are incorporated into other products, the individual chip price remains determinative.").

60 *Ericsson, Inc. v. D-Link Sys., Inc*., 773 F.3d 1201, 1232 (Fed. Cir. 2014).

61 *Id*.

62 See U.S. Fed. Trade Comm'n, The Evolving IP Marketplace Aligning Patent Notice and Remedies with Competition 25 (2011).

63 *In re Innovatio IP Ventures, LLC Patent Litig*., MDL Dkt. No. 2303, 2013 WL 5593609, at *18 (N.D.Ill. Oct 3, 2013) (rejecting arguments that FRAND rates should be assessed based on the value of downstream technologies, and instead focusing on profit margins of Wi-Fi chips); see also GPNE Corp. v. Apple, Inc., No. 12-CV- 02885-LHK, 2014 WL 1494247, at *13 (N.D. Cal. Apr. 16, 2014) (holding "as a matter of law that for telecommunications SEPs, "the baseband processor is the proper smallest saleable patent-practicing unit.").

64 Memorandum of Findings of Fact and Conclusions of Law, *TCL Comm'n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. SACV 14-341 (C.D. Cal. Dec. 21, 2017); In re. Innovatio IP Ventures, 2013 WL 5593609.

65 *Id*.

66 EC SEP Communication, *supra*, at note 17, secs. 2.1, 2.4.

5.4 Portfolio Licensing and Treatment of Disputed Patents

Patents have always been viewed as individual assets, and as jurisdictional in nature. "Bundling" or "tying" of patents to each other or to other assets – whereby a patent holder refuses to grant licenses to one patent absent the licensee also agreeing to purchase rights to another asset owned by the patent holder – has been looked upon with great skepticism by courts and competition authorities. This same proposition has been applied in SEP situations.[67] No party should be forced to take a portfolio license. Rather, where there are disputes, traditional patent laws and burdens remain applicable.

In a SEP situation, as compared to a non-SEP situation, the only thing that has changed is that the owner of the patent has unilaterally claimed that the patent is a SEP. But such unilateral declarations do not imply that the content of the declaration cannot or should not be challenged; according to recent studies commissioned by the European Commission, between 50% and 90% of declared SEPs are not actually essential to the standard (*i.e.*, not actually SEPs).[68] So it is not at all surprising that in many cases a potential licensee might dispute whether some portion of a portfolio is essential or valid, and bristle at paying royalties for that portion that is viewed, in good faith, to be inapplicable to the licensee.

Where there are disputes over certain patents, a SEP holder cannot force the licensee to accept a portfolio license, or seek – via its unilateral claims of essentiality – to change the burden of proof so that the licensee must thereafter prove that the patent is not applicable. Allowing SEP holders to *require* (*e.g.*, only offer) a portfolio license from a potential licensee would enable the SEP holder to exploit the market power that has been conferred by the inclusion of its patent(s) into the standard, and to extract terms and conditions that are non-FRAND. SEP holders may for example seek to bundle a large number of "poor quality" patents (*e.g.*, patents that, if they were examined in detail in negotiations or an adjudication, would not be found to be valid, infringed or essential – that is, not actual SEPs) with a small number of "high quality" patents, to increase the perception of portfolio size and thus improperly drive up licensing costs – to the detriment of the entire ecosystem and eventually the consumer.

Rather, according to the established authorities, public policy requires that potential licensees not just be permitted – but *encouraged* – to mount good-faith patent challenges. For example, the United States Supreme Court has emphasized that there is an "important public interest" in patent challenges because "[i]f [challenges] are muzzled, the public may continually be required to pay tribute to [the patentee] without need or justification."[69] Likewise, it cautioned that "the holder of a patent should not be insulated from the assertion of defenses and thus allowed to exact royalties for the use of an idea that is not in fact patentable or that is beyond the scope of the patent monopoly…."[70] For similar reasons, the European Commission has argued that there should be no "safe harbour" for non-challenge clauses in license agreements.

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67 Commission Decision in Case AT.39985 – *Motorola - Enforcement of GPRS Standard Essential Patents* C(2014) 2892 final, 29 April 2014, recital 386 ("In the Der Grüne Punkt – Duales System Deutschland GmbH ("DSD") case, the Union Courts held that it was abusive for a dominant undertaking to require a royalty payment for the use of a trade mark when the licensee was not actually using the service denoted by the trade mark. In the same vein, in this case, Motorola's seeking of royalty payments for the use by the iPhone 4S of SEPs that Apple may not be infringing, amounts to Motorola requesting the payment of potentially undue royalties, without Apple being able to challenge such infringement."); Microsoft Mobile Inc. v. Interdigital, Inc., Civ. No. 15-723-RGA, 2016 WL 1464545, at *1 (D. Del. Apr. 13, 2016) (denying motion to dismiss antitrust claims where plaintiff had alleged that defendant had, inter alia, tied SEP licenses to non-essential patent licenses).

68 See in particular footnote 19 of the Commission's Communication on SEPs, which indicates that "[a] number of studies on various key technologies suggests that when rigorously tested, only between 10% and 50% of declared patents are essential (CRA, 2016 and IPlytics, 2017)". EC SEP Communication, supra, at note 17, sec. 1.2.2 n.19.

69 *Lear, Inc. v. Adkins*, 395 U.S. 653, 670 (1969).

70 *Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found.*, 402 U.S. 313, 349-50 (1971).

To avoid such concerns, a holder of a FRAND-encumbered SEP should not be able to condition the granting of a FRAND license to the SEP on a requirement for an implementer to (i) take licenses to patents that are not essential to the standard, that are invalid or not infringed by the implementer, or that are already licensed or exhausted; or (ii) grant a license to the implementer's patents that are not essential to the standard. This includes situations where parties dispute whether patents are valid / infringed / essential. A patent holder cannot simply unilaterally claim that all of its patents are SEPs, and then force a potential licensee to pay for licenses to all of them as a condition to licensing any.

As noted above, European Commission studies show that between 50% and 90% of declared SEPs are not actually SEPs. It should therefore not be assumed that a license to a particular patent is required simply because the patent owner claims that the patent is a SEP, and a putative licensee cannot be required to accept a portfolio license to all patents (including disputed patents) unless it is determined that the licensee actually needs a license to those particular disputed patents contained therein. Declaring a patent to be a SEP does not shift the relevant burdens of proof, or impact the potential licensee's rights to assert claims and defences. It follows – and the competition authorities have expressly noted – that challenging patents on the merits, *e.g.*, in terms of invalidity, non-infringement, and/or exhaustion, does not render a potential licensee "unwilling".[71]

Similarly, a SEP holder cannot require an implementer to grant a license to patents it may hold that are not essential to the standard, as a condition to grant a FRAND license to the SEP. In *Motorola*,[72] for example, the European Commission held that doing so may raise significant anti-trust concerns.[73]

Particular caution may be required in relation to patent pools, in particular when they shield invalid patents, as they may oblige licensees to pay higher royalties and prevent innovation in the field covered by an invalid patent.[74] Likewise, where a SEP holder offers licenses through a pool, it should retain the ability to also license those SEPs directly. In other words, offering licenses through a patent pool only should not be considered as sufficiently complying with the FRAND licensing obligation of the SEP owner. In some cases a potential licensee may already have license rights to some of the patents included in the pool (either directly or by virtue of licenses held by suppliers or customers), and it is important that pools readily disclose information regarding such licenses and adjust pricing to address any existing licenses.

Occasions may arise where parties are voluntarily negotiating a portfolio license but are unable to agree on the applicability of a particular patent or group of patents. For example, while agreeing that certain patents in the portfolio may be actual SEPs for which a license is needed, they may disagree that other patents are relevant to the licensee – due to good-faith invalidity or non-essentiality concerns, or for other

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71 See Decision & Order, at 8, *Motorola Mobility LLC & Google Inc.*, Dkt. No. C-4410 (F.T.C. July 23, 2013), http://www.ftc.gov/os/caselist/1210120/index.shtm ("challenging the validity, value, Infringement or Essentiality of an alleged infringing FRAND Patent does not" make an implementer of the standard an "unwilling licensee.").

72 Commission Decision, Case COMP/M.6381 – *Google/Motorola Mobility*, C(2012) 1068, 12.2.2012, http://ec.europa.eu/competition/mergers/cases/decisions/m6381_20120213_20310_2277480_EN.pdf.

73 "Another concern would be that the SEP holder may force a holder of non-SEPs to cross-license those non-SEPs to it in return for a licence of the SEPs". Id. at para. 107. It also clarified in a footnote that "[t]he Commission notes that a SEP holder is generally considered as entitled to condition a cross-licence from the counter-party to that counter-party's SEPs reading on the same standard", implying that a mandatory cross-license may not be complaint with appropriate where the cross-licensed SEPs read on a different standard. Id. at para. 107 n.57.

74 EC Technology Transfer Guidelines, supra, at note 19. One of the problems identified with regard to technology pools is the risk that they may shield invalid patents. Pooling may raise the costs/risks for a successful challenge, because the challenge might fail if only one patent in the pool is valid. The shielding of invalid patents in the pool may oblige licensees to pay higher royalties and may also prevent innovation in the field covered by an invalid patent. In this context, nonchallenge clauses, including termination clauses, in a technology transfer agreement between the pool and third parties are likely to fall within Article 101(1) of the Treaty.

reasons. In those circumstances, a SEP owner should not refuse licensing of any "agreed" patents, simply because the potential licensee disputes the applicability of other "disagreed" patents.[75]

To solve the outstanding disagreement, parties might consider to mutually agree to mediate or arbitrate the disagreed patents, or initiate litigation to determine the merits of those patents and FRAND terms for any patents that are found to actually be SEPs. In the framework of such dispute resolution, parties may seek on a voluntary basis to participate in a worldwide adjudication, or may voluntarily agree to use of a "proud list" of patents to set rates as to a full portfolio. However, given patents are jurisdictional in nature, a potential licensee should not be compelled to participate in worldwide FRAND adjudication (*i.e.*, a rate-setting exercise for a broad portfolio license), such as by being threatened with an injunction if the licensee insists on exercising its right of access to the national courts. Likewise, in the arbitration context, which may require the waiver of a party's due process rights and right of access to the national courts, seeking to compel a portfolio determination or to impose penalties if such a procedure is not agreed would be improper and counter to existing laws and rights.

One the other hand, if parties agree to voluntarily and mutually agree to negotiate a portfolio license (whether for SEPs to a particular standard, all patents relevant to a particular type of device, or to a company's entire patent portfolio) then they certainly may do so. Portfolio licensing can be an attractive, voluntary choice for companies because it can reduce costs and administrative burdens. Rather than having to license patents piecemeal, portfolio-wide licensing can provide stability and predictability and can promote "patent peace" between companies for a number of years.

However, such broader portfolio licensing should only occur if both parties *voluntarily* and *mutually* agree. Companies should not be forced to take a license to SEPs they do not need. For example, a provider of cellular phones or components likely will have no need for a license for network infrastructure SEPs. Likewise, a company that operates only in a particular country or geographic region should not be required to pay for worldwide rights that it does not need.

Accordingly, and for all of these reasons:

Core Principle 4: *While in some cases parties may mutually and voluntarily agree to a portfolio license (even including some patents subject to disagreements), no party should withhold a FRAND license to patents that are agreed to be essential based on disagreements regarding other patents within a portfolio. This approach can allow parties to identify areas of agreement within a patent portfolio despite other areas of disagreement. For patents that are not agreed upon, no party should be forced to take a portfolio license, and if there is a dispute over some patents, a SEP holder must meet its burdens of proof on the merits (e.g., to establish that the alleged SEP is infringed and requires payment, and to establish the FRAND rate).*

5.5 Transparency and Predictability

Transparency in SEP licensing begins with the standardization process. FRAND-based IPR policies may require contributors to disclose all patents, including pending applications, potentially essential to the developing specification. Contributors often are further encouraged to make general IPR declarations. These undertakings ensure that the FRAND commitment attaches to each SEP. Such transparency, as required by many SDO policies, can (1) reduce the risk of IPR constraints potentially blocking the

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[75] In *Motorola*, the Commission rejected arguments that the courts could not adequately protect a patent holder's interest in seeking monetary compensation, and found instead that damages actions focused on specific patents were sufficient to protect a patent holder's commercial interests. *See Motorola*, Case COMP/M.6381, at Recital 519; *see also In re Innovatio IP Ventures, LLC Patent Litig*., MDL Dkt. No. 2303, 2013 WL 5593609, at *18 (N.D. Ill. Oct. 32013) ("[T]he court is not persuaded that reverse hold-up is a significant concern in general, as it is not unique to standard-essential patents. Attempts to enforce any patent involve the risk that the alleged infringer will choose to contest some issue in court, forcing a patent holder to engage in expensive litigation. The question of whether a license offer complies with the RAND obligation merely gives the parties one more potential issue to contest. When the parties disagree over a RAND rate, they may litigate the question, just as they may litigate any issue related to liability for infringement.").

standardization process, (2) allow SDO participants to evaluate and select technologies during the development of the standard, and (3) help SDO participants to assess the potential risks and costs of supporting a particular standard.

Transparency interest also apply in the context of SEP licensing negotiations. In order to fairly and transparently assess whether a licensing proposal is FRAND – a potential licensee should be entitled to obtain, without any pre-conditions or demands for secrecy, details regarding the alleged basis and support for the patent holder's SEP licensing demands. While the FRAND obligation is designed to constrain and limit abuses of such power, excessive secrecy obligations may serve only to obscure information about SEP licensing practices. Such lack of transparency can make it more difficult for potential licensees to evaluate the terms on which they should consider concluding a FRAND license, and associated informational disadvantages can easily give rise to non-FRAND outcomes.[76] In addition to harming the particular licensees involved, such practices can interfere with FRAND's basic public interest function, and the goal of ensuring a robust, fair and transparent SEP licensing ecosystem.

Such confidentiality demands also can interfere with industry expectations that SEP licenses are available on terms that are demonstrably compatible with FRAND. For example, if a potential licensee cannot access basic information about a patent holder's existing licenses, it may therefore be impossible for that potential licensee to determine whether or not the license terms proposed to them by such patent holder are non-discriminatory. This problem can be particularly acute where SEPs are transferred to third parties such as PAEs subject to confidentiality obligations prohibiting sharing of license information with potential licensees. The lack of transparency and clarity may also require a potential licensee to incur costs in assessing the SEP holder's claims (either privately or in court), which can be used as leverage to force a licensee to accept a non-FRAND license. Indeed, imposing excessive secrecy requirements, or failing to provide relevant materials, may in some cases encourage licensees to pursue court resolution over private negotiation, so as to obtain the benefit of the procedures for information exchange available in court matters.

Therefore, SEP holders should be open and transparent about the rates they seek to charge for their SEPs, what patents are being licensed, and their basis for believing that the patents are actual, valid SEPs. As indicated in the CRA report commissioned by the European Commission, such "[t]ransparency would be

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[76] Secrecy terms have become a hot topic in recent litigation. There are multiple cases pending or recently settled in which the plaintiff has alleged that a particular SEP owner has violated competition law and FRAND commitments through its misuse of NDAs. See, e.g., Compl. ¶ 66, *Microsoft Mobile, Inc. v. InterDigital, Inc*., No. 15-cv-723 (D. Del. Aug. 20, 2015) ("InterDigital requires secrecy with the purpose and effect of furthering its patent hold-up and discrimination. Secrecy enables InterDigital to extract supra-competitive royalties, engage in discriminatory licensing, and to further abuse its monopoly power. Transparency in licensing of SEPs would, in contrast, enable prospective licensees to assess more effectively InterDigital's non-compliance with its FRAND commitments and expose its pattern and practice of violating its FRAND obligations."); Compl. ¶ 54, *Asus Computer Int'l v. InterDigital, Inc*., No. 15-cv-1716 (N.D. Cal. Apr. 15, 2015) ("IDC ensures its ability to engage in discrimination by conducting licensing negotiations in secret, and by keeping secret the terms of the licenses it enters. IDC requires that potential licenses enter non-disclosure agreements for all negotiations and licenses. IDC does this to ensure that only IDC knows the terms and rates obtained by its licensees. Armed with this one-sided knowledge, IDC attempts to extract supra-competitive terms and obtain discriminator terms from each licensee.") (internal citations omitted). At least one SEP owner has claimed in litigation – against a European-owned telecommunications carrier – that a prospective licensee's refusal to agree to extensive NDA obligations constitutes "unwillingness" that authorizes injunctive relief against the carrier's network. Original Compl. For Patent Infringement ¶¶ 32-33 & 90, *Huawei Tech. Co., Ltd. v. T-Mobile US, Inc*., No. 16-cv-52 (E.D. Tex. Jan. 15, 2015) (Seeking SEP injunction because "[t]o date, T-Mobile has refused to enter into a mutual non-disclosure agreement, and therefore, is unwilling to even open negotiations regarding a license. … At least in view of the foregoing, and upon information and belief, T-Mobile is an unwilling licensee to the asserted patents and is unwilling to enter into good faith negotiations."). While these issues have not been fully resolved by the courts, they raise clear red flags that some SEP owners may be taking things too far in demanding absolute secrecy to obfuscate their behaviour in FRAND negotiations.

further enhanced if royalty rates determined through arbitration were made public and if confidentiality clauses could not be unilaterally imposed by one of the contracting parties”.[77]

This point is particularly important to companies that do not have expertise or resources to fully address SEP issues, such as for SMEs that seek to embark on the development of IoT products, and who may traditionally have less reference points available to verify whether FRAND terms and conditions are complied with.

Of course, companies may *voluntarily* elect to keep certain items relating to their negotiations or licenses confidential. As part of normal commercial practice, companies may choose to exchange information that they regard as confidential. Sensitive business information may include product technical details, sales volumes, sales projections, pricing, third-party confidential items, supplier relationships or product roadmaps. Parties can (and do) voluntarily agree to more extensive confidentiality obligations on a case-by-case basis, depending on what information is to be exchanged and their mutual preferences.

Absent a *voluntary* agreement to broad confidentiality requirements, basic information that can be important to facilitate FRAND licensing negotiations, and to enable the assessment of FRAND compliance, should not require confidentiality. Examples of the type of non-confidential information that SEP holders generally should be willing to provide to prospective licensees, without secrecy requirements, include:[78]

— A listing of the patents proposed to be licensed;

— Identification of corresponding sections of the standard where each such SEP is alleged to be practiced;

— Details of the basis for allegations of essentiality and infringement, such as claim charts;

— Details of the licensing terms which can assist the implementer of the standard in evaluating whether the terms offered are FRAND or not;

— Details of the basis and methodology upon which the FRAND offer (including any royalty rate) has been calculated;

— In the case of patent pool administrators or others that may claim licensing rights to patents owned by others, written authorities from the patent owners authorizing the administrator to enter into negotiations on behalf of the patent owner (and specifying any limits to the administrator’s authority);

— Historical rate and licensing information (perhaps anonymized or otherwise limited to protect legitimate third-party confidentiality issues, and inclusive of any “side agreements”, “caps” or “rebates” as may be applicable);

— Details of any litigation, or other proceeding that is ongoing related to any asserted patents; and

— Information regarding prior licenses to suppliers or customers of the potential licensee (or potential suppliers or customers), such that the potential licensee can determine whether any of its products may already be licensed (and avoid potential double payments).

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77 Charles River Associations, Transparency, Predictability and Efficiency of SDO-based Standardization and SEP Licensing: A Report for the European Commission at 89 (Dec. 12, 2016).

78 Courts and agencies reviewing alleged misconduct by SEP licensors have required that much of the information identified below be provided to potential licensees. Examples include the European Court of Justice’s decision in the *Huawei Technologies Co. v. ZTE Corp*. case, C-170/13, [2015]E.C.R. 477, and the recent decisions by the National Development and Reform Commission (China) (Feb. 9, 2015) and the Korea Fair Trade Commission (Dec. 28, 2016) in their respective investigations of Qualcomm.

A more detailed list of information that should be provided by negotiating parties is included below as Annex B.

On the other hand, it may often be appropriate for negotiating parties to use confidentiality provisions to protect truly sensitive commercial information, such as information regarding ongoing R&D, product sales, development or pricing, or similar items. Absent mutual agreement to broader secrecy, the use of such narrow confidentiality terms can provide for an effective sharing of information without impacting public and private interests associated with transparency.

Accordingly, and for all of these reasons:

Core Principle 5: *Neither party to a FRAND negotiation should seek to force the other party into overbroad secrecy arrangements. Some information, such as patent lists, claim charts identifying relevant products, FRAND licensing terms, aspects of prior licensing history and the like are important to the evaluation of potential FRAND terms, and public availability of those materials can support the public interest in consistent and fair application of FRAND. A patent holder should not seek to exploit its information advantage regarding the patents or prior licenses to interfere with the potential licensee's ability to effectively negotiate.*

5.6 Patent Transfer and Disaggregation

If a FRAND-encumbered SEP is transferred, the initial transferee and all subsequent transferees must remain bound by the FRAND commitment. As indicated by the European Commission:

To ensure the effectiveness of the FRAND commitment, there would also need to be a requirement on all participating IPR holders who provide such a commitment to ensure that any company to which the IPR owner transfers its IPR (including the right to license that IPR) is bound by that commitment, for example through a contractual clause between buyer and seller.[79]

In recent years a practice has developed where some SEP holders divide up or 'fragment' their portfolios of patents. Transferring ownership of SEPs in principle should not present a problem in the context of SEP and FRAND licensing, and parties generally should be free to transfer patents as they see fit – provided however the recipient respects the previously committed licensing obligations.

Problems can arise if SEPs are transferred to new owners that do not abide by the FRAND commitments made by the former owner. If the licensing commitments were to not transfer with SEPs, SEP acquirers may refuse to offer FRAND terms to implementers of the relevant standards. Furthermore, the diffusion of SEP portfolios over more and more independent owners can exacerbate the problem of royalty stacking – namely that the royalties independently demanded by multiple holders of SEPs on the same standard do not account for the presence of other SEPs on the same standard and thereby lead to an inappropriately high overall royalty. Where SEP portfolios are broken up, the total royalties sought for the broken-up parts (and the remaining part of the portfolio) should not exceed the royalties that would have been found to be FRAND had the portfolio been retained by a single owner, or that were charged by the original owner.

Patent assertion entities should not be utilized as mere proxies to obscure behaviour that seeks to get around FRAND commitments and that would be more obviously abusive if pursued directly. For example, patent "privateers" should not be used to defeat otherwise-applicable reciprocal licensing approaches (*e.g.*, adjusting licensing rates to address cross-licensed patents).

[79] European Commission Horizontal Guidelines, para 285. *See also* Google/Motorola, in which the Commission indicated that: "a purchaser company acquiring a SEP portfolio from a vendor company should be bound by a FRAND commitment previously given by that vendor company".

A FRAND promise should therefore extend to a transferee if the SEP is sold. If a FRAND-encumbered SEP is transferred, the initial transferee and all subsequent transferees must remain bound by the FRAND commitment.

Accordingly, and for all of these reasons:

Core Principle 6: *FRAND obligations remain undisturbed despite patent transfers, and patent sales transactions should include express language to that effect. Patent transfers likewise should not alter value sought or obtained for particular patents. Where SEP portfolios are broken up, the total royalties charged for the broken-up parts (and the remaining part of the portfolio) should not exceed the royalties that would have been found to be FRAND had the portfolio been retained by a single owner, or that were charged by the original owner. And patent transfers should not be used to defeat a potential licensee's royalty "offset" or similar reciprocity rights.*

6 Conclusion

It is hoped that this CWA will assist both licensors and licensees in pursuing and concluding SEP negotiations, and in maintaining appropriate behaviours consistent with the FRAND obligation.

In support of this project, the CWA Participants wish to thank DIN and CEN-CENELEC for their assistance, support and encouragement. Without their support in bringing together a broad base of industry stakeholders, and in facilitating the consensus process, this CWA would not have been possible.

Annex A – Frequently Asked Questions (FAQs)

Q: What is a CWA, and what is its purpose?

A CWA is a "CEN-CENELEC Workshop Agreement". "It is an agreement, developed and approved by a CENELEC Workshop and owned by CENELEC as a publication, which reflects the consensus of identified individuals and organizations responsible for its content."[80] The current CWA concerns SEP Licensing Best Practices.

This CWA seeks to (a) provide educational and contextual information regarding SEP licensing and the application of FRAND, (b) identify and illustrate some of the key issues and problems that negotiating parties may sometimes encounter, and (c) set forth some of the key behaviors and "best practices" that parties might choose to adopt to resolve SEP licensing issues amicably and in compliance with the FRAND obligation. Our hope is that this CWA can assist both experienced and inexperienced SEP negotiators to more effectively reach fair agreements and to better promote the goals and interests of industry (including SEP owners), standardization and, ultimately, consumers. For further details, please refer to Sections 2-5 of the CWA.

Q: What is a Standard Essential Patents (SEP) and why are SEPs important?

A patent is a legally-granted right to an invention. Patents provide various rights to charge others to use the invention, and in some cases, to prevent others from using the invention.

A patent that protects technology essential to using a standard is called a Standard Essential Patent (SEP). New standardized technologies are directed to the "Internet of Things" (IoT), the "5G" suite of standards, and other next generation standardized technologies, which will be used by upcoming products, infrastructure and services to European consumers and beyond. There may be hundreds or thousands of SEPs for any given standard.

Q: What is patent hold-up?

Companies that make or use standard-compliant products necessarily must use the SEPs that are incorporated into those products. Therefore, because companies (and consumers) seeking to use the standard have no commercial alternative to but to use the SEP holder's technology, a SEP holder's bargaining power in the context of a licensing negotiation increases dramatically.

This phenomenon is referred to as "lock in". One important challenge in Standard Development Organizations (SDOs) is to guard against potential abuse of the lock-in effect. When a SEP holder refuses to license or seeks to exploit lock-in, and to extract – potentially under threat of injunction – more for a license than the patented invention would have been worth had the technology not been adopted by the SDO, the SEP holder's behavior is referred to as "hold up".

Q: What is the purpose of a FRAND commitment?

A FRAND commitment is a commitment to provide licenses on Fair, Reasonable and Non-Discriminatory (FRAND) terms. To guard against potential abuse of the lock-in effect (see also previous question), SDOs commonly adopt patent policies providing for licensing of SEPs on FRAND.

Under FRAND policies, standards participants voluntarily promise to license their patents on fair and reasonable terms to any party wishing to implement the relevant standard. This secures for patent holders an ability to obtain reasonable value for patents contributed to the standards. At the same time, when followed and enforced, the FRAND obligation also protects against SEP holders later abusing their position to extract more for a license than the patented invention would have been worth had the

[80] *See* https://www.cenelec.eu/standardsdevelopment/ourproducts/workshopagreements.html.

technology not been adopted by the SDO, or by excluding other market players from implementing the standard despite their willingness to take a license on FRAND terms.

Q: What is the role of competition law in the context of standardization?

Standards development activity can give rise to competition issues. Discussions in the context of standard setting, for example, can provide an opportunity for collusion to reduce or eliminate competition between otherwise competing technologies. FRAND obligations help to counterbalance the potential competition concerns that standardization may create. At the same time, breaches of the FRAND obligation by a SEP holder can exacerbate competition law concerns, and lead to antitrust liability.

Q: What are the public policy and consumer interests in the context of standardization?

FRAND approaches are directed to fostering economic growth, facilitating collaborative technological development, and promoting public welfare and dissemination of standardized technologies. FRAND promotes the public interest in achieving interoperable products, while protecting against unfair practices that harm competition and, ultimately, consumers.

Q: How do these discussions impact SMEs?

While the increasing use of standardized technologies will affect companies large and small, SMEs are expected to play a great role in creating the connected economy, and in the innovations to come. However, unfair licensing demands relating to SEPs covering standards needed to participate in the market ecosystem can uniquely impact and harm SME market participation. In particular, a series of factors create asymmetric risks to SMEs within the standard essential patent licensing environment, and could ultimately inhibit downstream innovation, for example in terms of resources, commercial information, technical information and market position.

Q: What are the core FRAND and SEP licensing principles that the CWA is defending?

A summary of the core principles is included in the CWA's summary and its Best Practices document, available at Section 2. Some of the relevant principles are also addressed in the following questions.

Q: What happens if you are contacted by a patent holder that claims you need to take a license?

In most cases, it is important to work with an attorney to evaluate the license and the patents, and to assist in conducting the negotiation process. It is usually wise to contact your supplier for the relevant functionality, since they may have more information on whether the patents actually apply to the standard. And it is important to understand your rights. While you (or your supplier) should be prepared to take a license on FRAND terms for applicable patents, you should not be bullied into taking a license that is not needed, or on terms that are unfair.

Q: Can a SEP holder that has provided a FRAND commitment seek an injunction?

In short, an injunction means exclusion from the market. An injunction often is viewed as an equitable remedy in the form of a court order that compels a party to do or refrain from specific acts. It can include *de facto* injunctions such customs seizures of allegedly infringing products or criminal proceedings. The impact of such measures on a user of a standard may be severe, as it will prevent the company in question from bringing (or continuing to bring) its products to market in the territory where the measure has been imposed.

In the context of FRAND negotiations, threats of injunctions (including customs seizures or criminal proceedings) should not be used. A licensor should not seek an injunction on a FRAND-encumbered SEP except in exceptional circumstances such as when the implementer is in bankruptcy or is beyond the jurisdiction of the relevant court.

Q: Who is entitled to obtain a FRAND license?

A FRAND commitment is a commitment to license any potential licensee. On its face, the FRAND promise does not restrict licensing to any particular sub-group, but instead is applicable to any potential licensee that seeks a license.

Q: Does every party in a supply chain require a license?

No. For example, if a supplier already is licensed, its customers will not require a license for the same SEP when using the supplier's licensed products in their own products or services ("patent exhaustion"). This can be a particularly efficient approach to SEP licensing for industries where there are significantly more downstream customers than upstream suppliers.

Q: Can a SEP holder who provided a FRAND commitment choose where to license in the value chain?

No. In recent years, some companies have announced a purported right to refuse licenses to some companies in the supply chain – usually the component or module level companies that are the most familiar with the standardized technologies. Such refusals to license are problematic for a number of reasons, and may ultimately lead to charging higher-than-FRAND royalties to downstream companies based on the value and features that those companies themselves create. Courts that have considered these approaches have found them to be incompatible with FRAND obligations.

Q: What methodologies should be used in assessing FRAND valuations?

SEPs should be valued based on their own technical merits and scope, not based on downstream values or uses. While specific licensing terms and values must always be determined on a case-by-case basis in view of the parties' particular facts and circumstances, there are some clear *methodological* approaches for FRAND valuation that have been recognized by various authorities, both in Europe and around the globe. Section 5.3 of the CWA addresses these methodological approaches, while emphasizing that parties should always exercise their own independent judgement (in consultation with their own attorneys and other advisors) in assessing valuation issues.

Q: As a potential licensee, am I required to take a portfolio license?

No. For example, a potential licensee that operates only in a particular country or geographic region should not be required to pay for worldwide rights that it does not need. Likewise, licensors should not be permitted to compel a potential licensee to take a license to patent(s) for which it does not need a license, *e.g.*, when they are not infringed, invalid, or exhausted. Therefore, a broader portfolio license should only occur if both parties *voluntarily* and *mutually* agree.

Q: As an owner of SEPs subject to a FRAND commitment, can I require a potential licensee to take a license to both my SEPs and non-SEPs?

Parties may voluntarily and mutually agree on a license covering both SEPs and non-SEPs. However, it is inappropriate for a licensor to "tie" or otherwise condition granting a license to the licensee's applicable SEPs to a requirement that the licensee accepts and pays for a license to another part of the licensor's patent portfolio (non-SEPs), even if those other patents are believed to be applicable to the licensee's product or to the implementation of the standard.

Q: What is the importance of transparency and predictability in the standardization and SEP licensing process?

Transparency in SEP licensing begins with the standardization process. Such transparency, as required by many SDO policies, can (1) reduce the risk of IPR constraints potentially blocking the standardization process, (2) allow SDO participants to evaluate and select technologies during the development of the standard, and (3) help SDO participants to assess the potential risks and costs of supporting a particular standard.

Transparency interests also apply in the context of SEP licensing negotiations. In order to fairly and transparently assess whether a licensing proposal is FRAND – a potential licensee should be entitled to obtain, without any pre-conditions or demands for secrecy, details regarding the alleged basis and support for the patent holder's SEP licensing demands.

Q: What are the details that should be provided by a SEP holder when offering a FRAND license?

A SEP owner should be prepared to provide a base level of information needed to assess whether the accused products infringe valid patent rights. This will typically include a list of the asserted patents, a detailed specification (*e.g.*, claim charts) describing how the patents are allegedly infringed by the products implementing the standard, as well as other relevant information needed by the potential licensee to evaluate claims of infringement, validity, and essentiality, and to assess the proposed valuation.

Q: Can this type of information only be provided under NDA?

Parties can voluntarily and mutually agree to broad confidentiality around licensing negotiations, protecting any or all aspects of their discussions. But in general, no party is required to enter into an NDA for the purpose of SEP license negotiations, and there should be no penalty to any party for choosing not to enter an NDA. For example, choosing not to enter an NDA should not make either party "unwilling".

A potential licensee should be entitled to obtain from the SEP holder, without any pre-conditions or demands for secrecy, full transparency on details regarding the alleged basis and support for the patent holder's SEP licensing demands. Specific information that should be included is addressed in Annex B to this CWA.

Q: What happens if a SEP holder transfers its patent for which it provided a FRAND commitment to a new owner?

A FRAND promise should extend to a transferee if the SEP is sold. If a FRAND-encumbered SEP is transferred, the initial transferee and all subsequent transferees must remain bound by the FRAND commitment.

Q: What are the relevant process considerations when engaged in SEP licensing negotiations?

As far as a typical SEP licensing negotiation process is concerned, there is no "one-size-fits-all". One should act in a reasonable manner and be fair and forthright in any interactions. Furthermore, there are a number of fundamentals that should be taken into account, as outlined in Section 3 of the CWA.

Q: How long does it take to negotiate a SEP license?

It can vary significantly – perhaps many months or even a matter of years. The timing of negotiation will depend on many factors, including for example the size of the relevant SEP portfolio, the complexity of the products/ technology, the diligence of the licensor in providing necessary information, and other factors. In more complex cases, substantial effort and time may be needed to review and understand the material provided. FRAND negotiations can therefore take time, and there is no "one-size-fits-all" timeline to licensing. Attempts to unilaterally pre-set unreasonable timelines in a negotiation, by either the licensor or the licensee should be avoided. As long as the parties are behaving reasonably, the timeline for negotiations should not be an issue of dispute.

Q: How to resolve a dispute between a SEP owner and potential licensee?

In case of a dispute, parties may seek to pursue traditional claims and defences in the national courts, or may mutually and voluntarily agree to Alternative Dispute Resolution ("ADR"). Any such FRAND actions, including ADR, may involve contract, patent, competition law and/or other legal claims.

Q: What are SEP patent pools, and what are the relevant considerations to take into account when being engaged with SEP patent pool licensing?

A SEP patent pool is an amalgamation of several SEPs (or alleged-SEPs) owned by different companies relevant to a particular standard, with the aim to offer one license for a group of patents. Pool licensing can be an attractive, voluntary choice for companies because it can reduce costs and administrative burdens. Rather than having to license patents separately from different companies, pool licensing can provide a single venue to license a larger number of patents. However, both licensors and licensees retain the freedom to decide whether to license through a patent pool or not. A party's refusal to join a pool, or to take a license from a pool, should not be considered as an indication of unwillingness to grant or to take a SEP license. Moreover, just because patents included in a pool are claimed to be SEPs, it cannot be concluded that they actually are SEPs. We refer to Section 3.10 and 5.4 in the CWA for further details around patent pool licensing.

Annex B – Documentation Relating to Licensing Negotiations

In order to create a level playing field, the SEP holder should be prepared to provide information allowing the negotiation between parties to proceed on a common base of information and facts. Because the SEP holder will usually have far more information regarding the relevant patents, their history, licenses and other matters relevant to evaluation of patent applicability and FRAND terms, this requires the SEP holder to make available information and documents relevant to the potential licensee's evaluations of claims and license offers. Any potential licensee should maintain a healthy skepticism and seek to verify information provided by the SEP holder by examining, amongst other sources, information that is publicly available.

This Annex provides a list of information and documents that may typically be required by a potential licensee in order to evaluate a license offer, including:

1) Basic information that should always be voluntarily and proactively provided by the SEP holder.

2) Information that should be made available upon request by the potential licensee

3) Additional information that should be made available when the asserted SEP's include patents that are, or have previously been included in a licensing program or patent pool

The list is not intended to be exhaustive; depending on the specific case at hand, additional information may be needed or helpful towards a fair negotiation.

a) The following information should always be voluntarily and proactively be shared by the SEP holder:

— A spreadsheet or similar functional summary of the patents that the SEP holder believes to be essential and is seeking to license (the "Essential Patents"), with details of:

  — Patent title;

  — patent numbers;

  — inventors;

  — original applicants;

  — territory;

  — which patents belong to which patent family;

  — priority dates; and

  — expiry dates.

— Information regarding:

  — any previously decided or ongoing relevant nullity proceedings, litigation, finding of non-infringement or antitrust or competition authority claims pertaining to the relevant patents;

  — whether patent office renewal fees for each of the Essential Patents are up to date; and

  - whether the SEP holder will negotiate the terms of any license on the basis of a durable undertaking (*i.e.*, an undertaking that survives and is not released by the concluding of any other written license) that the royalty rates being proposed comply with the SEP holder's FRAND obligations of both the patent holders and its agents, and that any agreement or license that may be reached will be in reliance on that undertaking.

- Sufficient information to enable the potential licensee to assess infringement of the asserted patents by his products. Towards that purpose, the SEP holder should make sufficiently detailed infringement claim charts available, together with:

  - details as to whether the features in the standard relating to the Essential Patents are optional or mandatory;

  - information contained in the licensing disclosure preferably integrated into a spread sheet document referred to above;

- If requested by the potential licensee, this should be complemented by:

  - the IPR policy of the relevant SDO (including the applicable versions of the IPR policy relevant to the patents under discussion); and

  - details of the FRAND commitments that have been made by the patent holder to the SDO (e.g., a copy of the filed letter of assurance or patent statement if applicable).

- Full particulars of how the proposed FRAND license fee offer has been calculated, potentially redacted only to the extent strictly necessary to observe confidentiality obligations resulting from third-party NDA obligations. Disclosure should include but not be limited to:

  - details regarding the base on which the royalty has been calculated, including the standards covered by the offer, and if there are different standards, why and how the different standards are reflected in the FRAND offer);

  - details regarding the calculation method, including why the royalty base and calculation are reasonable;

  - details of any comparable third-party license terms which the SEP holder claims are relevant comparables.

    Upon request, and based on the SEP holder's understanding, this should be complemented by information of the standard landscape, including a statement regarding the SEP holder's alleged share of that landscape.

- If previously held SEPs relevant to the standards involved in the negotiation have been transferred by the SEP owner to other entities, a list should be provided identifying any relevant SEPs previously held for the standards at issue and the currently assigned parties. Upon request, this should be complemented with information regarding

  - the identity of the buyer, assignee, transferee or exclusive licensee; and

  - whether and how the change in the current patent holder's patent portfolio is reflected in the license fee.

b) The following additional information should be made available, if requested by the potential licensee:

- Where there is a large portfolio of patents parties may agree that the SEP holder can send to the licensee an exemplary or "proud" list of patents that reflect its view of the strength and relevance of its portfolio of SEPs ("Key Patents"). In such cases, the SEP holder should provide an explanation as to why the SEP holder has chosen those Key Patents; and full and precise particulars as to why the prospective licensee's products are alleged to infringe the Key Patents, including information setting out why the Key Patents are applying to the product;
- Clarifications and information as to:
  - the chain of title leading from the original applicant to the patent owner;
  - any fact or matter that might invalidate any of the Essential Patents (such as facts that have been argued by others as invalidating or potentially invalidating);
  - whether the license agreement will provide that if the license fees change, it will offer to update the terms of the license agreement to help maintain a "level playing field" for competition among SEP licensees;
  - the identities of licensees to the patents under discussion;
  - whether the SEP holder has sought licenses from the potential licensee's direct or indirect suppliers, provided that the potential licensee discloses the respective suppliers to the SEP holder, or the SEP holder is otherwise aware of these suppliers;
  - whether the SEP holder is willing to grant licenses to the potential licensee's suppliers upon the supplier's request;
  - whether the SEP holder has sought licenses from the potential licensee's customers, provided that the potential licensee discloses the respective customers to the SEP holder, or the SEP holder is otherwise aware of these customers; and
  - whether the asserted patents currently are, or previously have been licensed or offered for licensing, by any pool licensing program or patent pool ("Patent Pool"), and if they have, the SEP holder should provide further detail, such as:
    - the identity of the Patent Pool;
    - the licensing terms of the Patent Pool.

c) The following additional information should be provided when the licensing request has been made by a Patent Pool

- Where the licensing request has been made by a licensing program or pool administrator, the administrator should always clarify the scope of its ability and authority to negotiate all of the terms of the license, and offer the following details to the potential licensee:
  - A list of the SEP holders in the Patent Pool;
  - Details of the share of patents held by each SEP holder in the Patent Pool;
  - Identities of the licensees of the licensing program to date;

— Confirmation that each SEP holder is willing to offer a direct license to the SEP's held by the SEP holder, regardless of the existence of the pool; and

— The clarification and information regarding suppliers and customers as listed in section 3.10 above.