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FRAND V. COMPULSORY LICENSING: THE LESSER OF THE TWO EVILS

SRIVIDHYA RAGAVAN, BRENDAN MURPHY, AND RAJ DAVÉ[†]

ABSTRACT

This paper focuses on two types of licenses that can best be described as outliers—FRAND and compulsory licenses. Overall, these two specific forms of licenses share the objective of producing a fair and reasonable license of a technology protected by intellectual property. The comparable objective notwithstanding, each type of license achieves this end using different mechanisms. The FRAND license emphasizes providing the licensee with reasonable terms, e.g., by preventing a standard patent holder from extracting unreasonably high royalty rates. By contrast, compulsory licenses emphasize the public benefit that flows from enabling access to an otherwise inaccessible invention. Ultimately, both forms of license attempt to create a value for the licensed product that can be remarkably different from the product's true market value. Nevertheless, both forms ultimately benefit the end-consumer who pays less to access a product subject to either of these forms of license. In comparing these two forms of licenses, the paper hopes to determine whether one form is better than the other, and if so, from whose perspective—the consumer, the licensor or the licensee. In doing so, this paper compares the different prevailing efforts to embrace such licenses as well as the impact of such licenses on the industry.

INTRODUCTION

Licenses are specific forms of contract structured as legal tools detailing the terms of a bargain to either gain or give away rights in exchange for other interests or obligations. Licenses are used in different situations and for using different technologies to create and define rights of the involved parties. Typically, a license agreement is a by-product of a bargain or negotiation between the parties. Contemporary licenses,

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which are also structured as permits, determine specified activities or create rights that would otherwise not be possible for the licensee. Corporations use licenses as a mechanism to standardize terms and conditions between vendors, consumers, competitors and other interested parties. Thus, the objective of any license is to memorialize the terms between parties—a fair license merely reflects the equal bargaining power of the parties.

This paper specifically focuses on two types of licenses that can best be described as outliers—FRAND and compulsory licenses. The term FRAND is an acronym for "Fair, Reasonable and Non-Discriminatory," which, in essence, signifies such features' presence in the license. The distinguishing feature of a FRAND license is that it is a voluntary commitment by the licensor to negotiate "fair, reasonable and non-discriminatory" terms.[1] On the other hand, compulsory licenses, as "involuntary contract[s] between a willing buyer and an unwilling seller imposed and enforced by the state,"[2] force the licensor to enter into a license arrangement. Thus, compulsory licenses can affect market exclusivity (as new licensees enter the market) and thus, the market price of the licensed product.[3] Overall, these two specific forms of licenses are outliers because both share the objective to produce a fair and reasonable license of a technology protected by intellectual property. Despite the comparable objective in FRAND and compulsory licenses, each type of license achieves this end using different mechanisms. The FRAND license emphasizes providing the licensee with reasonable terms, e.g., by preventing a standard patent holder from extracting unreasonably high royalty rates. By contrast, compulsory licenses emphasize the public benefit that flows from enabling access to an otherwise inaccessible invention. The term "fair and reasonable" takes on a slightly different meaning, depending on the type of license involved. While a product's economic value is an important consideration for both license types, in order to issue a compulsory license, the public's need for the product and failure to obtain a license under reasonable commercial terms remain important considerations. Both forms of license attempt to create a value

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[1] *See* Microsoft Corp. v. Motorola, Inc., 696 F.3d 872, 877 n.2 (9th Cir. 2012).

[2] *See* Gianna Julian-Arnold, *International Compulsory Licensing: The Rationales and the Reality*, 33 IDEA 349, 349 (1993) (quoting PAUL K. GORECKI, ECONOMIC COUNCIL OF CANADA, REGULATING THE PRICE OF PRESCRIPTION DRUGS IN CANADA: COMPULSORY LICENSING, PRODUCT SELECTION, AND GOVERNMENT REIMBURSEMENT PROGRAMMES (1981)).

[3] *See* Srividhya Ragavan, *The Jekyll and Hyde Story of International Trade: The Supreme Court in* Pharma v. Walsh *and the Trips Agreement*, 38 U. RICH. L. REV. 777, 782 (2004).

for the licensed product that can be remarkably different from the product's true market value. Nevertheless, both forms ultimately benefit the end-consumer who pays less to access a product subject to either of these forms of license.

This paper attempts to determine the advantages and disadvantages of such end-based licenses. The objective of this exercise is to determine whether one form is better than the other, and if so, from whose perspective—the consumer, the licensor or the licensee. In doing so, this paper compares the different prevailing efforts to embrace one form or the other outside of the United States.

With the above background, Part I of this paper outlines what FRAND licenses are, how they are deployed by the industry, and discusses the prevailing issues concerning these licenses. Part II highlights what compulsory licenses are and their role in securing access to technology. Part III compares the two forms of licenses to determine whether one form is superior to the other in their ability to achieving the objectives of the system. The conclusion highlights a future course of action to structure licenses that combine the best attributes of both forms to achieve the objectives of the system, i.e., providing access to technology and to the progress of science.

I. THE FRAND LICENSE

The FRAND licenses and the operational challenges they present are best understood from the use of such licenses in the software industry. In fact, the proliferation of software patents is an issue that has been the subject of much debate recently.[4] Information and communications technology (ICT) patents can be best represented as a myriad of overlapping "patent thickets." An interested party must navigate these patent thickets to commercialize the technology covered by such patents.[5] Indeed, Adam Jaffe defines it as "an overlapping set of

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[4] *See generally* Andrés Guadamuz González, *The Software Patent Debate*, JOURNAL OF INTELL. PROP. LAW & PRAC., 1 (Jan. 10, 2006), *available at* http://www.wipo.int/edocs/mdocs/sme/en/wipo_unido_smes_msk_07/wipo_unido_smes_msk_07_www_73624.pdf; Rosa Maria Ballardini, *The Software Patent Thicket: A Matter of Disclosure*, 6:2 SCRIP*Ted* 207, 221 (2009), *available at* http://www2.law.ed.ac.uk/ahrc/script-ed/vol6-2/ballardini.pdf; Eugenia Georgiades, *Falling Through the Cracks: The Problem of Granting Software Patents*, 7:3 SCRIPT*ed* 474, 475 (2010), *available at* http://www2.law.ed.ac.uk/ahrc/script-ed/vol7-3/georgiades.pdf.

[5] Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard Setting*, 1 INNOVATION POLICY AND THE ECONOMY 119, 119 (2000), *available at* http://www.jstor.org/stable/25056143.

patent rights" which causes interested licensees to obtain licenses on several patents from multiple sources.[6] Patent holders and potential licensees have found them difficult to navigate for two reasons: the prevalence of several patents, and the need for compatibility between products. The need for compatibility is commonly called "product interoperability," which describes the ability of two or more products to work with each other smoothly.[7]

Products involving the ICT technology are typically covered by several patents that must allow the products to be interoperable to create the desired outcome. Contemporary ICT products are generally covered by multiple patents from various inventors working together on a common platform. For example, in the mobile phone and cellular network industry, the phones are not actually connected with one another. Rather, cellular networks provide the connectivity by transferring data between two (or more) handsets. For this purpose, cellular networks must conform to established industry standards. One such standard is the fourth generation long-term evolution (4G LTE) network.[8] Such established standards facilitate interoperability – or, compatibility between products. Thus, interoperability is not merely a user-friendly mechanism, but can also reduce costs because it is simpler for phone companies to acquire technical and design information pertaining to the networks when there is a standard in place. Interoperability typically results in each technology being covered by several patents – some, if not all, of which is essential to the further development of the technology. In many cases these patents overlap making it difficult for a single patent owner would find it difficult to operate in a space delineated from other, often competing patents. Sometimes, patents may read on each other's products or processes, thereby necessitating cross-licensing and resulting in both owners competing in the same market. Realizing the interdependence of competition and its importance to their businesses, patent owners whose patents deal with standards that bear interoperable features can have such patents designated as a standard. Specifically, patent owners may submit

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[6] *Id.*

[7] *See* URS GASSER & JOHN PALFREY, BREAKING DOWN DIGITAL BARRIERS: WHEN AND HOW ICT INTEROPERABILITY DRIVES INNOVATION 4 (2007), *available at* http://cyber.law.harvard.edu/interop/pdfs/interop-breaking-barriers.pdf (defining information and communications technologies interoperability as "the ability to transfer and render useful data and other useful information across systems . . . applications, or components").

[8] *See generally* Stephan Dorn, *Who Owns LTE Patents?*, IPEG, http://www.ipeg.com/who-owns-lte-patents/ (last visited June 4, 2015).

such a patent to a standards-setting organizations ("SSO"),[9] which can elevate its designation to that of a standards-essential patent ("SEP"), subject to the patent meeting the qualifying requirements. Further, at the time of submission of the patent, the SSOs require the patent owner to agree to standard declarations or commitments.[10] As part of the commitments, the patent owner makes the patent available for licensing on FRAND terms if it is elevated as a standard.

The following part discusses the process of FRAND licensing with particular emphasis on issues that affect the patent owners and the industry from the SEPs. This discussion begins with an introduction to SSOs, outlines the issues they face with the FRAND licenses, and ends with a discussion of the available remedies while specifically highlighting the unresolved issues therefrom.

A. Introduction to SSOs

SSOs are industry groups that set common standards in significant areas of invention to facilitate mediation between intellectual property ("IP") owners and users.[11] A standard is a set of technical specifications providing for a common design for a product or process.[12] As such, the SSOs are essentially membership organizations to which leaders of that particular industry belong. For instance, the International Organization for Standardization (ISO) is the world's largest international standard development organization.[13] Other independent standard setting organizations like the Institute of Electrical and Electronics Engineering (IEEE) and the Internet Engineering Task Force (IETF) publish standards and aim to foster "technological innovation and excellence for the benefit of humanity."[14]

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[9] These are also known as standards-developing organizations ("SDOs").

[10] David Long, *Federal Circuit Gives Guidance on Litigating RAND Royalty* (Ericsson v. D-Link), ESSENTIAL PATENT BLOG (Dec. 5, 2014), http://www.essentialpatentblog.com/2014/12/federal-circuit-gives-guidance-on-litigating-rand-obligation-ericsson-v-d-link/.

[11] *See* Mark A. Lemley, *Intellectual Property Rights & Standards-Setting Organizations*, 90 CALIF. L. REV. 1889, 1892 (2002).

[12] JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS AND LAWYERS PUT INNOVATORS AT RISK 8 (2008).

[13] *About ISO*, ISO, http://www.iso.org/iso/home/about.htm (last visited June 4, 2015).

[14] *IEEE's Mission & Vision*, IEEE, http://www.ieee.org/about/vision_mission.html (last visited June 4, 2015); *Mission Statement*, IETF, http://www.ietf.org/about/mission.html (last visited June 4, 2015).

Standards tend to harmonize various operational aspects of the industry, and thus create a broad, uniform platform to interact effectively. For example, when an industry in Timbuktu is certified by the ISO for accounting practices, it signifies conformance to certain practices that are the norm to the accounting industry in the rest of the world. In a globalized world, standards evolve into a language distinct to a particular industry and set a minimum bar. Thus, for industries located in different parts of the world, conformity to standards can be status defining, and thus help to create business opportunities.

When SSOs set standards, they take the form of a set of technical specifications that provide, or attempt to provide, a common design for a product or process in a given sector.[15] If a standard cannot be implemented without infringing on a particular patent, then that patent is said to be standards-essential.[16] When the SSOs declare a standard, companies owning patents covering the standard should declare the patent, especially if they have participated in the standards setting process.[17] Where the patent covers an essential aspect of that standard, the patent owner may enter into negotiations with the SSO to adopt the patent as a SEP. If it is designated a SEP, the patent owner can license it for free or for a reasonable royalty rate to implementers of the standard. Otherwise, the owner could refuse to license its SEPs forcing the SSO to design its standards around the patents.

Generally, it is in the patent owners' best interest to have their patents adopted as a standard. The reasons are explained in-depth later in this article. In short, this is because an SSO's licensing terms greatly increase the market power of a standards-essential patent, which is appealing to patent owners in the standards-setting environment. Notably, outside the SSO framework, many of these standards essential

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[15] *See* NAT'L RESEARCH COUNCIL OF THE NAT'L ACADS., PATENT CHALLENGES FOR STANDARD-SETTING IN THE GLOBAL ECONOMY: LESSONS FROM INFORMATION AND COMMUNICATION TECHNOLOGY 31–50 (2013).

[16] *See* JANICE M. MUELLER, POTENTIAL ANTITRUST LIABILITY BASED ON A PATENT OWNER'S MANIPULATION OF INDUSTRY STANDARDS SETTING 36 (2003), *available at* http://apps.americanbar.org/antitrust/at-committees/at-exemc/pdf/liability.pdf.

[17] *See* Andrew Updegrove, *Everything You Always Wanted to Know About FRAND (But Didn't Know Who to Ask)*, CONSORTIUMINFO.ORG (Feb. 21, 2012), http://www.consortiuminfo.org/standardsblog/article.php?story=20120221074826486 ("Standards setting organizations (SSOs) require those that help create a standard (and sometimes all of the members of the SSO) to state before a standard is approved for implementation whether they have any patent claims that would be unavoidably infringed by someone implementing the standard . . . .").

patents will likely compete with one another. The SSO framework minimizes issues related to delay on product manufacturing that result from competition between patent owners.[18] The SSO framework is also meant to function to minimize patent hold-up, a situation where the patent owner can delay the product development by demanding unreasonable or discriminatory royalties after a patent becomes a widely adopted standard. [19] The alternative for the patent owner failing to negotiate an agreement with the SSO, is to enter into licensing agreements with interested licensees individually or not to license the patent at all.

In negotiations that involve adopting a patent as an SEP, the rules of the SSO define the licensing terms. SSOs can sometimes require licensing assurances, or a disclaimer specifying that claims of an SEP will not be enforced against members.[20] The SSO policies generally specify that SEPs must be licensed on "fair, reasonable and non-discriminatory," or FRAND terms.[21] For example, the European Telecommunications Standards Institute (ETSI) is a SSO for the telecommunications industry in Europe.[22] The ETSI has an outlined procedure for adopting patents as standards. Where a patent owner believes itself to hold essential patents with regards to an ETSI standard, e.g. the 4G and 4G LTE cellular networks, the ETSI provides a licensing

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[18] *See* Kai-Uwe Kühn et al., *Standard Setting Organizations Can Help Solve the Standard Essential Patents Licensing Problem*, CPI ANTITRUST CHRON., 1, 2-3 (Mar. 2013), *available at* https://www.competitionpolicyinternational.com/assets/Free/ScottMortonetalMar-13Special.pdf (explaining that SSOs could set up policies that would limit hold-up more effectively).

[19] Andy Updegrove, *FTC Seeks Input on Patent Holdup in Standards Development*, CONSORTIUMINFO.ORG (May 16, 2011), http://www.consortiuminfo.org/standardsblog/article.php?story=20110514112823379.

[20] Nutter McClennen & Fish LLP, *What Does Reasonable and Non-Discriminatory Mean, Anyway?*, LEXOLOGY (May 22, 2013), http://www.lexology.com/library/detail.aspx?g=bf462132-5ec3-4b41-a7ab-52e27236a8ab.

[21] *See generally* European Telecommunications Standards Institute, ETSI DIRECTIVES 36 (2013), *available at* http://portal.etsi.org/directives/home.asp; *see also* ETSI Rules of Procedure, Annex 6: ETSI Intellectual Property Policy, 2014 at 6.1 ("When an essential IPR relating to a particular standard or technical specification is brought to the attention of the ETSI, the Director-General of ETSI shall immediately request the owner to give within three months an irrevocable undertaking in writing that it is prepared to grant irrevocable licenses on fair, reasonable and non-discriminatory ("FRAND") terms and conditions under such IPR . . . ."). Generally, an entity that joins an SSO does so voluntarily; however, it is (usually) obligatory that the joining entity agree to license their patents on FRAND terms. *See id.*

[22] *About ETSI*, ETSI, http://www.etsi.org/about (last visited June 20, 2015).

declaration form to be completed by the patent owner.[23] The declaration form includes a general undertaking that the patent owner will license its patents under FRAND terms and conditions, so long as these patents are, or become, essential to a new or existing ETSI standard. Once the patent owner completes the licensing formalities, the patents become standards-essential subject to other qualifying requirements. Consequently, the owner may either become an institute member or simply a third party affiliated to the ETSI, each entailing certain rights under the ETSI Policy.[24]

B. The Mechanism of FRAND Licensing

Essentially, the FRAND licensing mechanism enables users of an SEP to negotiate and pay a royalty to a patent owner who has already undertaken to be reasonable and fair to the SSO when the patent was designated an SEP [25] At its core, FRAND licensing should offer the same or similar terms to all users or licensees (sometimes called "developers") on a given patent. This is meant to minimize or prevent licensing abuses and post-standardization hold-ups by the patent owner, such as refusing to license the patent or setting exorbitant royalty rates.[26]

Notably, while the general requirement is to be fair and reasonable, these terms are left undefined. Hence, one of the most difficult issues that pervades this area relates to the definitions of the

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[23] *See* ETSI Rules of Procedure, *supra* note 21, at 6bis ("MEMBERS shall use one of the ETSI IPR Licensing Declaration Forms . . . to make their IPR licensing declarations."); *see also* Internet Engineering Task Force, *The Internet Standards Process I,* 10.3.2(C) (1996), http://www.ietf.org/rfc/rfc2026.txt (noting that "[w]here the IESG knows of rights, … the IETF Executive Director shall attempt to obtain from the claimant of such rights, a written assurance that upon approval by the IESG of the relevant Internet standards track specification(s), any party will be able to obtain the right to implement, use and distribute the technology or works when implementing, using or distributing technology based upon the specific specification(s) under openly specified, reasonable, nondiscriminatoryterms").

[24] *See* Updegrove, *supra* note 17.

[25] *See generally* Janice M. Mueller, *Patent Misuse Through the Capture of Industry Standards*, 17 BERKELEY TECH. L.J. 623, 624 (2002).

[26] *See* Jonathan Radcliffe & Gillian Sproul, *FRAND and the Smartphone Wars*, INTELL. PROP. MAG., 45–46 (Dec. 2011), *available at* http://www.mayerbrown.com/Files/Publication/477a076f-dd7e-408c-8321-64edf33c190e/Presentation/PublicationAttachment/5b202a76-bc80-4467-b286-7a3b8e90e06d/Frand_Smartphone_Sproul.pdf (discussing how FRAND licenses impact competition in the smart-phone market).

FRAND terms.[27] Generally, the term "fair" relates to the underlying licensing terms, and describes them as not being anti-competitive, and not unlawful.[28] Similarly, the term "reasonable" relates to licensing rates that do not result in unreasonable aggregate rates.[29] A negotiations for reasonable royalty rate, for instance, tends to be based on several factors most of which would be hypothetical at the point of negotiation and it ought to reflect consideration to factors such as the presence of patents held by others, competition (ex ante), technological alternatives, ability of the industry to evolve newer alternatives, the need and ability of the technology to cater to product interoperability requirements and such.[30]

Thus, reasonableness is computed based on several factors including the value of the patent pre and post standardization. Nevertheless, negotiating a reasonable royalty rate will not only help the licensee but should also address to mitigate serious industry problems like royalty-stacking, which happens when a product potentially involves or infringes many patents, and hence, bears multiple royalty

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[27] *Id.* at 45; *see also* Kesan & Hayes, *FRAND's Forever: Standards, Patent Transfers, and Licensing Commitments*, 89 IND. L.J. 231, 239 (2014) ("One of the most pervasive issues in the SSO context is that FRAND is rarely if ever defined in advance of a conflict."); Roger G. Brooks & Damien Geradin, *Taking Contracts Seriously: The Meaning of the Voluntary Commitment to License Essential Patens on "Fair and Reasonable" Terms*, SOC. SCI. RES. NETWORK, Mar. 12, 2010, *available at* http://www.cravath.com /files/Uploads/Documents/Publications/3233990_1.pdf (last visited Mar. 30, 2014).

[28] *See, e.g.*, Saumya Srivastava, *Standard Essential Patents and Competition Law*, COMPETITION COMMISSION OF INDIA, 15–16 (2013) (noting that "fair" terms refrain from "bundling" (whereby buyers purchase several products as one combined product on more advantageous terms), from providing free grant backs (by which the licensor can incorporate the improvements of the licensee's R&D in its own products free of charge), and from granting mandatory exclusivity agreements (which outline the grounds for the exclusion of an entity from practicing the IP or patent rights of a given product, or from practicing the standard of an SSO)).

[29] *See* Radcliffe & Sproul, *supra* note 26, at 46 (asserting that reasonable royalty would be close to the sum that parties would have reached in a hypothetical arms-length negotiation); *cf. Srivatsava, supra* note 28 (explaining that "reasonable" is a controversial matter when defining RAND terms due to the difficulty in deciding whether effects from the technology's wide use in light of SSO adoption should be factored into its value).

[30] *See generally* Mark A. Lemley & Carl Shapiro, *A Simple Approach to Setting Reasonable Royalties for Standards-Essential Patents*, 28 BERKELEY TECH. L.J. 1146–49 (2013), *available at* http://faculty.haas.berkeley.edu/shapiro/frand.pdf.

burdens.[31] The reference to "non-discriminatory" terms also relate to the underlying licensing condition (rates and terms). This requirement is meant to ensure that new entrants to the market are free to enter into licensing relationship on the same basis as existing competitors, which will help to maintain a level playing field in the industry. In other words, a "non-discriminatory" clause should ensure that, a licensor's rates and terms must be the same for all licensees. In every case, it is the licensor's responsibility to ensure that every potential licensee receives the same FRAND contract. Additionally patent owners generally tend to grant users the rights to implement the standard of the SSO in their products along with other patents declared "essential" or "necessary" by the SSO.[32]

Importantly, patent owners who agree to make their patents SEPs and make them available on FRAND terms enjoy several benefits. For instance, they can influence the technological development of a standard.[33] Members of the SSO, particularly those who are also patent owners, are positioned to influence not only the technical aspect of the standards but also strategic aspects such as identifying areas where standards will be created, the order of prioritization for standards creation, and the ends or markets that these standards will serve. This results in considerable authority over the development of the future standards and become influential in the industry. [34] Other benefits from FRAND licensing include certification and branding for standards-compliant products, which may further result in both shared costs and early access to information regarding a related but evolving standard.[35]

By agreeing to license its SEPs on FRAND terms, however, the patent owner forfeits certain rights. The patent owner cannot block

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[31] *Id at* 1149, 1150; *see also* Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1993 (2007), *available at* http://faculty.haas.berkeley.edu/shapiro/stacking.pdf (discussing issues and problems that arise in working reasonable royalties and highlighting the courts responses to such problems).

[32] *See* ETSI, *supra* note 23; John Cassels, *UK: What is FRAND?*, MONDAQ.COM (Aug. 29, 2013), http://www.mondaq.com/x/260184/Patent/What+Is+FRAND (noting that when licensees are discriminated, there should be an objective reason for doing so).

[33] Andrew Updegrove, *The Essential Guide to Standards*, CONSORTIUMINFO.ORG, http://www.consortiuminfo.org/essentialguide/participating1.php (last visited Mar. 30, 2014).

[34] *See id* ("Those that participate in the governing bodies of SSOs decide which standards will be created, in what order, and to serve what purposes.").

[35] *Id.*

implementation of a standard by licensing at exorbitant prices.[36] Additionally, the owner cannot prevent noncompliant implementation of the standard. They are, however, able to sue and seek an injunction in the event of such implementation.[37] Similarly, restricted disagreements over the terms of the FRAND commitment cannot serve as an excuse for patent owners to refuse to license or to disclose the patents.[38] Any refusal to license could be treated as a violation of the agreement with the SSO, constituting a breach of the patent owner's contract.[39] And refusal by the patent owner to adhere to the negotiated terms with licensees or to disclose the patent will also be subject to contractual remedies.[40]

Ultimately, FRAND licenses are third party contracts involving patent rights. Therefore, the patent owner's refusal to license can cause the potential licensee to sue the owner as a third party beneficiary without affecting the SSO's separate claim against the owner for a breach of contract claim. The contract claim arises from the fact that a patent holder voluntarily submits to the SSO's licensing policy, which typically include a commitment to license in FRAND terms, thus creating an enforceable contract.[41] Indeed, where the patent owner accuses a third party of infringement, the accused can defend the infringement suit on the grounds that the patent was not offered on fair and reasonable terms. Similarly, the licensee -the implementer of the standards – can offensively sue the patent owner because the agreement does not conform to FRAND terms. These are very different situations.

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[36] *See* Roger G. Brooks & Damien Geradin, *Interpreting and Enforcing the Voluntary FRAND Commitment*, 9 INT'L J. OF IT STANDARDS AND STANDARIZATION RES. 1, 2 (2011) (explaining that under FRAND terms a patent holder must not charge more than "the incremental value of his invention over the next best technical alternative").

[37] *See* Jonathan Radcliffe & Gillian Sproul, *FRAND and the smartphone wars*, INTELLECTUAL PROPERTY MAGAZINE, 47 (Dec. 2011/Jan. 2012) (explaining a permanent injunction on noncompliant implementation may be granted after succeeding at trial if there is "any sign of equivocation by the competitor that it will not pay FRAND royalties").

[38] *See* Brooks, *supra* note 36, at 11 ("In agreeing to license on FRAND terms, the IP owner has not agreed to constrain its licensing terms more tightly than the 'range of reasonableness.'").

[39] *See id.* (explaining that in the event of disagreement over terms, the implementer could "seek a determination through breach of contract action that FRAND terms have not been offered").

[40] *See id.* ("[I]f an offer has been made and refused, then the only contractual question to be adjudicated is whether the terms offered . . . fall outside the *range* of reasonableness contemplated by the FRAND commitment.").

[41] Lemley & Shapiro, *supra* note 31, at 1991–96.

As to the first scenario, the licensee's position relative to the SSO enables him to seek FRAND terms in the capacity of the intended beneficiary of the patent owner and the SSO's agreement with the SSO.[42] As for the second, the patent licensee asserts a breach of contract on the grounds that the patent was not offered on FRAND terms. Where the licensee asserts a breach of FRAND terms, the prevailing reasoning is that a FRAND licensee cannot "negotiate and sign a license, enjoy the benefit of that license for as long as it pleases, and then collaterally attack the license as unenforceable . . . on the theory that the license terms violated the preceding contractual commitment."[43] Importantly, the contractual nature of the FRAND commitment creates rights and obligations that work with the rights and obligations associated with the patent. As such, licensees are also bound by the FRAND agreement with the same amount of care as the patent owner.

The FRAND agreements being enforceable contracts, suffer from the same benefits and detriments as that of every other contract.[44] The scope for potential disagreements and disputes from the contractual terms increases. For instance, while the patent owner undertakes with the SSO to negotiate reasonable royalties, questions such as what is reasonable, or, who determines whether a term is reasonableness are all subjective and hence, potentially contentious. The differences in perceiving what a reasonable royalty is can lead to disputes and disagreements that block the effective use of the technology. Thus, the practical advice for potential licensees and patent owners is to thoroughly investigate the SSO's bylaws before the technology is licensed.[45] However, in the event of a dispute, the confluence of contractual issues with the associated IP rights does provide diverse remedies, as discussed in detail later. Although it increases the parties' options for remedies, it simultaneously creates issues that may undermine the flow of the arrangement's intended benefits. The following section addresses some

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[42] *See generally* Damien Geradin & Miguel Rato, *Can Standard-Setting Lead to Exploitative Abuse? A Dissonant View on Patent Hold-up, Royalty-Stacking and the Meaning of FRAND*, 3 EUR. COMPETITION J. 101 (2007).

[43] *See* Roger G. Brooks & Damien Geradin, *Interpreting and Enforcing the Voluntary FRAND Commitment*, 9 INT'L J. OF IT STANDARDS AND STANDARDIZATION RES. 1, 12 (2011), *available at* http://www.cravath.com /files/uploads/documents/publications/3285864_1.pdf (last visited Mar. 30, 2014).

[44] *See id.*

[45] *See* Kraig A Jakobsen, *Revisiting Standard-Setting Organizations' Patent Policies*, 3 NW. J. TECH. & INTELL. PROP. 43, 50 (2004), *available at* http://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=102 7&context=njtip.

of the remedies available when there is a dispute over a FRAND commitment, with a view to highlight the various options and their associated issues.

C. Available Remedies

The above discussion highlighted that a FRAND license implicates patents licenses, the law of contracts, property laws and reliance interest. The choice of remedies available and that can be deployed in the event of a dispute over the FRAND agreements are best determined on a case-by-case basis, depending on the facts and circumstances of the situation. The discussion of the various remedies that have been used in FRAND disputes serves as a precursor to the subsequent section, which will question whether some of these issues are better dealt with by using compulsory licenses.

1. Injunctive Relieve Under the Patent Statute

The first form of remedy is for injunctive relief. A patent owner believing his SEP to be infringed can seek injunctive relief under Title 35. [46] If a court denies the injunctive relief, it will cause the parties to renegotiate the terms, as in every other contract. The factors considered by a court in determining whether an injunction for the patent owner is warranted are outlined in *eBay Inc. v. MercExchange, L.L.C.*[47] The U.S. Supreme Court unanimously opined that an injunction should not be automatically issued in every instance of alleged patent infringement.[48] In essence, the party filing for injunctive relief should show its entitlement to an injunction by providing evidence of four factors: (1) the plaintiff has suffered an irreparable injury; (2) remedies available at law are inadequate to compensate for that injury; (3) the balance of hardships between the plaintiff and defendant warrants a remedy in equity; and (4) public interest will not be disserved by a permanent injunction.[49]

In a standards-setting environment, especially considering the pace of the technology's development, issuance of an injunction can tilt the balance towards the patent owner and create a hold-up problem.

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[46] 35 U.S.C. § 283 (1952); *see also* JONES DAY, STANDARDS ESSENTIAL PATENTS AND INJUNCTIVE RELIEF, (2013), *available at* http://www.jonesday.com/files/Publication/77a53dff-786c-442d-8028-906e1297060b/Presentation/PublicationAttachment/270fc132-6369-4063-951b-294ca647c5ed/Standards-Essential%20Patents.pdf.

[47] 547 U.S. 388 (2006).

[48] *See id.* at 392–93 ("[T]his Court has consistently rejected invitations to replace traditional equitable considerations with a rule that an injunction automatically follows a determination that a copyright has been infringed.").

[49] *Id.* at 391.

Specifically, an injunction in favor of the owner prevents the use and development of that technology and stalls further development over that technology. This forces potential licensees to the negotiating table while at the same time significantly increasing the bargaining power of the patent owner.[50] Even though an injunction theoretically maintains the *status quo* in restraining one party from practicing another's patent, when an SEP patent is involved, the availability of a guaranteed injunctive relief like in the pre-eBay era results in empowering patent-owners to use the threat of injunction to demand more royalties. Considering the high rate of product interoperability prevailing in the ICT sector, injunctions effectively either force renegotiations or ensure due dispensation of royalties.[51] Basically, the guarantee of automatic injunctions for patent infringement empowers the patent owner to stall a competitor by strategically using the SEP. Thus, the biggest change with *eBay* is that by taking away the guaranteed injunctive relief in the event of an alleged infringement, it has made the field more equitable. Even the Federal Circuit, traditionally patent friendly, has arguably shown a tendency to be cautious when an SEP patent is involved.[52] For instance, when considering whether Apple would suffer irreparable harm absent an injunction against Samsung's Galaxy Nexus, the Court held that the patentee must establish that the claimed feature is the cause of consumer demand for the product being sold ("causal nexus") in order to prove irreparable harm from a finding of loss of sales/market share for the product.[53] That is, the court required that the causal nexus requirement should establish that the patentee is indeed harmed by the infringement.[54]

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[50] *See, e.g.,* Colleen V. Chien & Mark A. Lemley, *Patent Holdup, the ITC, and the Public Interest,* 98 CORNELL L. REV. 1, 2 (2012) (hereinafter, Chien & Lemley) (discussing the effects of a threat of injunction).

[51] *See* U.S. DEP'T OF JUSTICE and U.S. PATENT & TRADEMARK OFFICE, POLICY STATEMENT ON REMEDIES FOR STANDARDS-ESSENTIALPATENTS SUBJECT TO VOLUNTARY F/RAND COMMITMENTS 4 (2013) [hereinafter POLICY STATEMENT], *available at* http://www.justice.gov/atr/public/guidelines/290994.pdf (explaining the patent-holdup problem).

[52] *See, e.g.*, Apple Inc. v. Samsung Elecs. Co., 695 F.3d 1370, 1374–75 (Fed. Cir. 2012); *but see* Ericsson, Inc., v. D-Link Sys., Inc., 773 F. 3d. 1201, 1227 (Fed. Cir. 2014) (favoring patentee in ruling that there is no set *Georgia Pacific* like factors for assessment of damages).

[53] *Apple*, 695 F.3d at 1374–75.

[54] Apple Inc. v. Samsung Elecs. Co., 735 F.3d 1352, 1359–60 (Fed. Cir. 2013); *see also* Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1363 (Fed. Cir. 2014) (discussing the district court's finding that Apple failed to show causal nexus between harm and patent infringement).

The *eBay* decision has important implications for SEP patents. In essence, the patent owner's agreement with the SSO presumptively signifies the competitor's need for the patent in exchange for a license on FRAND terms, thus implying that a provision of royalty or monetary damages would fit better than an injunction as an adequate remedy.[55] Indeed, when Motorola sought an injunction to prevent Apple from using its UMTS telecommunications capability on cell phones, Judge Posner refused to issue an injunction on the grounds that Apple cannot be enjoined from using the patent unless it refuses to pay a royalty on FRAND terms.[56] The district court noted that Apple had not, as Motorola claimed, refused to pay for Motorola's SEPs outright; Apple had only refused to pay more than what Motorola would charge any other potential licensee for its SEPs.[57] The court reasoned that Motorola's commitment to license its patents to anyone willing to pay FRAND royalties amounts to an acknowledgement that royalties would be an adequate remedy.[58] Further, the court opined that an injunction would result in Motorola enjoying the benefits of the higher hold-up value generated by withholding the technology from Apple.[59] The court specifically highlighted the harm that the resulting holding-up of SEP patents would cause to consumers.[60] Basically, the court determined that SEP patent-owner plaintiffs cannot block potential licensees from using a SEP patent and indirectly, inflate its value.[61] Further, the court added that a suit for declaratory relief in federal court should be entertained only if either the party or its opponent could bring a federal suit for injunctive or monetary relief.

On appeal, a divided majority of a three member panel of the Federal Circuit agreed with Judge Posner and affirmed the denial of injunctive relief on the grounds that money damages are adequate compensation where an SEP patent is involved, but the court clarified

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[55] *See, e.g.*, Apple, Inc. v. Motorola, Inc., 869 F. Supp. 2d 901, 914 (N.D. Ill. 2012) *aff'd in part, rev'd in part and remanded*, 757 F.3d 1286 (Fed. Cir. 2014) (refusing to enjoin infringement of the patent unless the infringer refuses to pay royalties).
[56] *Id.*
[57] Geoff Duncan, *Judge Dismisses Apple-Motorola Cases with Prejudice*, DIGITAL TRENDS, (June 24, 2012), http://www.digitaltrends.com/mobile/judge-dismisses-apple-motorola-cases-with-prejudice/.
[58] *Apple*, 869 F. Supp. 2d at 8, 9.
[59] *Id.*
[60] *Id.* at 16.
[61] *Id.* at 17.

that there was no *per se* rule that injunctions are unavailable for SEPs.[62] Thus, for FRAND licenses, injunction is not an automatic option but a remedy where the plaintiff can prove harm beyond failure of royalty negotiation.

2. Breach of Contract

The second form of remedy is for a breach of the FRAND contract. This form of remedy is most likely to be pursued by the licensee rather than the patent owner when, on account of a dispute, the licensee is unable to use the SEP. That is, licensees of the SEPs, as third party beneficiaries, can sue the patent owner for the breach of FRAND contract involving the SEPs in question. Similarly, licensees, acting as "standard-users"—that is, a party using the SEPs in question in their products already— can use breach of contract as a mechanism to sue the patent owner and seek a remedy when they believe that the patent owner has breached the FRAND obligations. Such breach of contract suits may ensue even with potential licensees who are members of the SSO stand to lose when patent owners seemingly do not abide by their FRAND commitments. For instance, in 2010, Motorola sent an offer to Microsoft outlining its willingness to license its patents that concerned the IEEE WiFi 802.11 (The Wifi or WLAN), which is the wireless networking SEP and ITU H.264, the video coding SEPs at a rate of 2.25% of the end-product price.[63] The offer from Motorola prompted Microsoft, in November 2010, to file a complaint against Motorola alleging a breach of contract and seek a declaratory judgment on the grounds that Motorola failed to meet the FRAND commitments set by the IEEE on account of having sought an unreasonable royalty rate for such SEPs.[64] Microsoft asserted that Motorola's terms violated its FRAND undertaking with the SSOs because the expected royalties were unreasonable.[65] Microsoft

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[62] *See* Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1332 (Fed. Cir. 2014) ("[T]he legal principles for an injunction . . . supply no per se rule either favoring or proscribing injunctions for patents in any setting, let alone the heightened complexity of standardized technology.").

[63] Microsoft Corp. v. Motorola, Inc., No. C10-1823JLR, 2013 WL 2111217, at *2 (W.D. Wash. Apr. 25, 2013); Microsoft v. Motorola, 871 F. Supp. 2d 1089, 1098 (W.D. Wash. 2013); Microsoft Corp. v. Motorola Inc., No. C10-1823JLR, 2012 WL 1669676, at *2 (W.D. Wash. May 14, 2012); Microsoft Corp. v. Motorola, Inc., 696 F.3d 872, 877 (9th Cir. 2012) (discussing issues arising from the discussed license).

[64] *Microsoft Corp.*, 871 F. Supp. 2d at 1095.

[65] *Id.*

asserted these grounds as a third party beneficiary.[66] The complaint from Microsoft caused Motorola to file a suit against Microsoft alleging patent infringement.[67]

In March 2013, Judge Robart of the District Court for the Western District of Washington dismissed Motorola's claim for an injunction and ruled that Motorola's FRAND commitments created an enforceable contract, and Microsoft, being a third-party beneficiary, had the right to sue for a breach of that contract.[68] After refusing to issue an injunction, Judge Robart reset the royalty rates Motorola was charging for their SEPs, rather than force Motorola to settle on a new FRAND agreement.[69] The new rates, issued by Judge Robart in April 2013, remain one of the first examples of a calculation of FRAND royalty rates for a SEP by the court, and will provide guidance for other SEP holders and their potential licensees when it comes to negotiating FRAND rates and terms.

The court's decision is distinctive in that it left the FRAND commitments unaltered while tailoring the payable royalty rates. In arriving at an acceptable rate of royalty, the court used the factors enunciated in the *Georgia Pacific* decision which enumerates a non-exhaustive list of fifteen factors in the context of assessment of damages for patent infringement.[70] Such factors include the royalty already received by the patentee, the rates that the licensee paid for other patents, the nature and scope of the license, the parties' commercial relationship, the duration, the term of the patent, the advantage of using the patent, the profit proportion from the use of the patent, etc.[71]

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[66] *See id.* (Microsoft asserted that it was a third party on the basis of its contract with the standard setting organization); *see also* Microsoft Corp v. Motorola Inc., No. C10-1823JLR, 2013 WL 2111217, at *2 (discussing lower court's decision holding that Microsoft could sue as third party beneficiary).

[67] On November 9, 2010, Motorola initiated an action in the Western District of Wisconsin, which was subsequently transferred, wherein Motorola alleged that Microsoft infringed Motorola-owned U.S. Patent Nos. 7,310,374; 7,310,375; and 7,310,376. *See Microsoft Corp.*, 871 F. Supp. 2d at 1095.

[68] *Id.*

[69] *See* Microsoft Corp. v. Motorola, Inc., 864 F. Supp. 2d 1023, 1039 (W.D. Wash. 2012) (denying summary judgment for both parties); *see also* Microsoft Corp. v. Motorola, Inc., No. C10-1823, 2013 WL 2111217, at *101 (W.D. Wash. Apr. 25, 2013) (resetting royalty rates).

[70] Georgia-Pacific Corp. v US. U.S. Plywood Corp, 318 F.Supp. 1116, 1120 (S.D.N.Y. 1970).

[71] *Id.* at 1120; *see also* Florian Mueller, *A Closer Look at the 207-Page, Landmark FRAND Rate-Setting Decision in* Microsoft v. Motorola, FOSS

Using these factors, Judge Robart's court determined the amount Microsoft would pay for all SEPs, and then proceeded by comparing this amount to the portion of it attributable to Motorola's patents.[72] In this analysis, Judge Robart confronted the possibility of royalty stacking which happens when there are several SEPs owners in play.[73] Hence, Judge Robart determined the royalty rate and range with reference to comparable licenses concerning pooled patents in a single package. The new FRAND rates that were set by the court for Motorola's SEPs were notably lower than the royalty rates initially offered to Microsoft. Motorola originally offered to license the SEPs to Microsoft at a rate of 2.25% of the end-product price, which translated into a range that fell between $3.00 and $5.13 per unit.[74] Judge Robart's calculations set a FRAND range between 0.555 and 16.389 cents per unit for video coding SEPs, and a range of 0.8 to 19.5 cents per unit for wireless networking SEPs.[75]

After the district court's judgment, Microsoft sought a summary judgment on the grounds that Motorola breached the implied duty of good faith and fair dealing, which is part of the RAND commitment.[76] In response, the court pointed out that when a patentee's interest in merely seeks injunctive relief *per se* does not as "[a] matter of law violate[] the duty of good faith.[77] "Whether seeking injunctive relief for a SEP frustrates the purpose of the contract is based on the specific circumstances of the case, and here [licensee] has failed to carry its burden on summary judgment to demonstrate that a specific action by [ ]

PATENTS (April 28, 2013), http://www.fosspatents.com/2013/04/a-closer-look-at-207-page-landmark.html (discussing the impact of *Microsoft Corp. v. Motorola*).

[72] *See Microsoft Corp.*, No. C10-1823 JLR , 2013 WL 2111217 (W.D. Wash, Apr. 25, 2013), at *95.

[73] *Id.* at *72. The concept of royalty stacking occurs when a single product infringes on many patents or requires licenses from multiple patent holders. Such "royalty stacking" can result in a hold-up on the patent and prevent the patent from being manufactured and sold.

[74] *See* Microsoft Corp. v. Motorola, Inc., 864 F. Supp. 2d 1023, 1039 (W.D. Wash. 2012); *see also* David Long, *Ninth Circuit affirms Judge Robart's RAND decision (Microsoft v. Motorola)*, ESSENTIAL PATENT BLOG (July 31, 2015), *available at* http://www.essentialpatentblog.com/2015/07/ninth-circuit-affirms-judge-robarts-rand-decision-microsoft-v-motorola/ (July 31, 2015).

[75] *See* Microsoft Corp. v. Motorola, Inc., No. C10-1823JLR, 2013 WL 2111217, at p. 207 (W.D. Wash. Apr. 25, 2013) (resetting royalty rates).

[76] Microsoft Corp. v. Motorola, Inc., 963 F. Supp. 2d 1176, 1179 (W.D. Wash. 2013).

[77] *Id.* at 1187.

in seeking injunctive relief violated its duty of good faith."[78] When the motion was denied, the case proceeded to the jury. [79] Later, a federal jury in Seattle ruled that Motorola owed Microsoft $14.5 million in damages for breaching its FRAND obligation on the SEPs in question.[80]

Meanwhile, the *Georgia-Pacific* factors have been cited in other cases as an important guide-post, when duly modified, to calculate FRAND royalty rates.[81] The final word on the use of these factors for SEP patents has come from the Federal Circuit as part of its decision in *Ericsson v. D-Link*, wherein Ericsson accused D-Link, in 2010, of infringing a set of its 802.11 SEPs which were essential for the Wi-Fi standard.[82] At the outset the court held that there is no *Georgia-Pacific*-like list of factors that district courts can "parrot" for every case involving RAND-encumbered patents.[83] Instead, the court held that district courts must carefully ensure to instruct the jury only on factors that are relevant to the specific case at issue. [84] Thus, jury instructions from the district court to consider damages for RAND commitments should be specifically tied to the RAND commitment that is at issue. Further, courts must be cautious not to instruct the jury on factors that are irrelevant to the question presented at trial.[85] Further, the appellate court held that it is the duty of district courts to clarify to the jury that any royalty award must be based on the incremental value of the invention and it cannot be based on the value of the standard as a whole or any increased value the patented feature gains from its inclusion in the standard.[86] The court also concluded that, if an accused infringer wants an instruction on patent hold-up and royalty stacking, it must provide adequate evidence to that effect in relation to both the RAND

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[78] *Id.* (internal citations omitted).

[79] *See, e.g.*, *Microsoft v. Motorola, Inc.*, ESSENTIAL PATENT BLOG, http://www.essentialpatentblog.com/lawsuit/microsoft-v-motorola-inc-2/ (last visited June 4, 2015).

[80] Steven Musil, *Microsoft Awarded $14.5M in Motorola Patent Licensing Suit*, CNET (Sept. 4, 2013, 6:35 PM), http://www.cnet.com/news/microsoft-awarded-14-5m-in-motorola-patent-licensing-suit/.

[81] *See e.g.,* Ericsson Inc., v. D-Link Systems, 773 F. 3d. 1201, 1227 (Fed. Cir. 2014); Univ. of Pittsburgh of Commonwealth Sys. of Higher Educ. v. Varian Medical Sys., 561 Fed. App'x. 934, 958 (Fed. Cir. 2014); Whiteserve, LLC v. Computer Packages, Inc., 694 F.3d 10, 27-29 (Fed. Cir. 2012).

[82] Ericsson, Inc. v. D-Link Sys., Inc., 773 F.3d 1201, 1227 (Fed. Cir. 2014) (discussing the *Georgia-Pacific* factors).

[83] *Id.* at 1230.

[84] *Id.* at 1231.

[85] *Id.*at 1226 (emphasis omitted).

[86] *Id.*

commitment at issue as well as the specific technology referenced therein.[87] This decision is in line with the Federal Circuit's general hesitancy to adopt *per se* rules for RAND commitments reflected earlier in the *Apple v. Motorola* ruling discussed in the following pages.[88] In avoiding a *per se* rule, the decision tends to favor the patentee[89] and will become a guidepost for SEP holders and possible licensees to use when negotiating licensing and royalty rates on FRAND terms.[90]

These cases demonstrate that royalty rates can be (re)set through judicial intervention rather than forcing a renegotiation of FRAND terms.[91] Further, they also demonstrate the successful use of a breach of contract claim by interested licensees when a FRAND agreement is involved.[92]

3. Award of Money Damages

The restitutionary remedy for a breach of a FRAND contract is the awarding of monetary damages with a view to ensure that the party in breach returns whatever he received from the non-breaching party.[93] This remedy has its roots as a breach of contract claim and in the FRAND context its operation is unlike an injunction which can force parties to re-negotiate.[94] Without meaning to comment on the parameters used to calculate the damages, it is suffice to state that monetary damages are meant as restore the benefit of the breach to the plaintiff. Basically, when the presence of an injury has been established, courts award monetary

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[87] *Id.*

[88] *See generally* Apple Inc. v. Motorola, Inc., 757 F.3d 1286 (Fed. Cir. 2014).

[89] Long, *supra* note 10.

[90] *See, e.g.,* Daniel A. DeVito et al., *US District Court Issues First Decision Calculating a FRAND Royalty for Standards-Essential Patents*, SKADDEN (Apr. 29, 2013), http://www.skadden.com/insights/us-district-court-issues-first-decision-calculating-frand-royalty-standard-essential-patent (discussing the impact of *Microsoft Corp. v. Motorola Inc.*).

[91] *See, e.g.*, Microsoft Corp. v. Motorola, Inc., No. C10-1823JLR, 2013 WL 2111217, at *101 (W.D. Wash. Apr. 25, 2013) (resetting royalty rates).

[92] *See, e.g.*, CLAUDE M. STERN, IMPACT OF MICROSOFT V. MOTOROLA ON FRAND LICENSING IN THE US, (2013), *available at* http://doritkorine.livecity.me/image/users/256043/ftp/my_files/Presentations/claude%20Stern_pdf.pdf?id=13904618 (discussing the impact of *Microsoft v. Motorola* as well as the use of breach of contract claim).

[93] *See* Richard A. Epsteini & David J. Kappos, *Legal Remedies For Patent Infringement: From General Principles To FRAND Obligations For Standard Essential Patents,* 9(2) COMPETITION POL'Y INT'L, 68 at 71 (2013).

[94] *See id.* at 72 (highlighting that injunctions, when combined with damages, can overstate the extent of plaintiff's losses and discussing the competing interest that are considered to determine the type of damages when there is a breach).

damages to the injured party as a matter of restitution.[95] For instance, 35 U.S.C. § 284 provides that "upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court."[96]

The mechanism of calculation of damages notwithstanding, the question with respect to monetary damages is whether harm to the patent owner has to be specifically proved.[97] In other words, the issue is whether a patentee can be entitled to monetary relief or royalty—which is much more than nominal damages—if the patentee is able to prove infringement but unable to prove harm.[98] For instance, Motorola, as part of its dispute with Apple, filed a complaint with the International Trade Commission (ITC) alleging patent infringement by Apple of six Motorola SEPs.[99] Motorola petitioned to the ITC to prevent Apple from importing infringing products into the United States.[100] In response, Apple filed a counterclaim and sued Motorola for failing to offer its SEPs on FRAND terms, and additionally claimed that Motorola infringed some of Apple's patents.[101] That is, Apple claimed that Motorola's Android phones are copies of the iPhone "as a whole."[102] Judge Posner, sitting by designation on the U.S. District Court for the Northern District of Illinois,[103] determined that neither party was able to show incurrence of damages or of infringement.[104] The court noted that "Motorola's desire to sell products that compete with the iPhone is a separate harm—and a perfectly legal one—from any harm caused by patent infringement."[105] In essence, he asserted that Apple had failed to

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[95] *See id.* (discussing the issues relating to calculating damages in the FRAND context).
[96] 35 U.S.C § 284 (2012).
[97] *See, e.g.*, Apple, Inc. v. Motorola, Inc., 869 F. Supp. 2d 901 (N.D. Ill. 2012)).
[98] *Id.*
[99] *See* Motorola Mobility, LLC v. Int'l Trade Comm'n, 553 Fed. Appx. 971(Fed. Cir. 2014).
[100] *See id.* at 972 (discussing the Commission's decision to deny Motorola's petition).
[101] *Apple*, 869 F. Supp. 2d. at 920.
[102] *Id.*
[103] *Id.* at 904.
[104] *See* Philip Elmer-DeWitt, *Why Judge Posner Pulled the Pug on* Apple v. Motorola, FORTUNE (June 23, 2012), http://tech.fortune.cnn.com/2012/06/23/why-judge-posner-pulled-the-plug-on-apple-v-motorola/ (discussing Posner's decision in *Apple v. Motorola*).
[105] *Apple*, 869 F. Supp. 2d at 920.

show incurrence of damages, as Motorola's actions amounted to healthy competition in the ICT market and was not a direct infringement of a SEP owned by Apple. Similarly, Motorola was also unable to prove that Apple violated its SEP patents. [106] Given this, the court noted that both parties are seeking "substantial royalty predicated on no showing of harm."[107] The court specifically "disp[elled] any impression that such relief—substantial 'compensatory' damages for no tangible injury—would be proper…"[108] Conversely, the court held that monetary damages would be a proper remedy when there is clear proof of infringement with harm.[109] On appeal the Federal Circuit, in a split panel, established that a "fact finder may award no damages only when the record supports a zero royalty award"[110] and added that if the record does not include details of either party's royalty estimate, the district-court as the fact-finder has a duty to consider what a reasonable royalty would be.[111]

4. The International Trade Commission as an Alternate Forum

Protecting the borders of a country against counterfeit goods is not only an important aspect of national IP law but also of trade law. Among other things, section 337 of the Tariff Act of 1930[112] prohibits unfair competition from importation of foreign products that infringe valid U.S. IP rights, including patents, into the United States.[113] To prevent importation of counterfeit goods and to adjudicate disputes arising therefrom, the Tariff Act of 1930 establishes the International Trade Commission (ITC).[114] The ITC is an administrative body and a quasi-judicial federal agency with the power to investigate complaints of violations of section 337 of the Tariff Act. [115]This section bans the importation of articles that infringe a valid United States patent, copyright, trademark, mask work, or design.[116] Similarly, non-manufacturing sectors are also protected if they are engaged in licensing

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[106] *Id.*
[107] *Id.* at 909.
[108] *Id.*
[109] *See id.* at 909–10 (stating that reasonable royalties may be awarded when infringement is proved).
[110] *See* Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1328 (Fed. Cir. 2014) *overruled by* Williamson v. Citrix Online, LLC, 792 F.3d 1339 (Fed. Cir. 2015).
[111] *Id.* at 1328. *See also SmithKline Diagnostics, Inc. v. Helena Labs. Corp.,* 926 F.2d 1161, 1167–68 (Fed.Cir.1991).
[112] 19 U.S.C. § 1337 (2012).
[113] *Id.* § 1337(a)(1)(A).
[114] *See id.* (giving the international trade commission the authority to investigate violations of the Tariff Act).
[115] *Id.*
[116] *Id.* § 1337(a)(2).

and research.[117] Termed as a "domestic industry" requirement, the provision protects intellectual property owners if the *threat or effect* of importation of a product into the United States can destroy or substantially injure a domestic industry, or, prevent the establishment of an industry, or restrain or monopolize trade and commerce in the United States.[118] When the ITC determines that the importation affects or can affect a domestic industry in the United States, it issues an exclusion order.[119]

In the context of FRAND agreements, the patent owner has the option of approaching the ITC to obtain an exclusionary order preventing an alleged infringer from importing his product into the United States on the grounds that "domestic industries" are affected by the importation.[120] This order stands until resolution of any breach of contract claims or patent infringement suits concerning the importation.[121] The exclusionary order creates the same effect as an injunction by pushing the alleged infringer to negotiate with the patent owner. Further, it is important to note that the status of the ITC as an administrative body frees it from the bounds of judicial prescriptions like the tests outlined in the *eBay* decision.[122] This position has been upheld by the Federal Circuit in *Spansion, Inc. v. ITC*.[123] Consequently, it is relatively easy to get an exclusionary order from the ITC—a process that Professors Chien and Lemley assert is being extensively used by patent owners.[124] The ITC, however, may refuse to grant an exclusionary order by considering consumer interest in the product at issue, as well as other public interest

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[117] *Id.* § 1337(a)(3)(C).
[118] *Id.* § 1337(a)(1)(A).
[119] *Id.* § 1337(d)(2).
[120] Brian T. Yeh, *Availability of Injunctive Relief for Standard-Essential Patent Holders,* CONGRESSIONAL RESEARCH SERVICE, 7-5700 at 7.
[121] Gary M. Hanth, *General Exclusion Orders Under Section 337,* 25 NW. J. INT'L L. & BUS. 349, 361 (2005); *see also* VastFame Camera, Ltd. v. Int'l Trade Comm'n, 386 F.3d 1108, 1111 (Fed. Cir. 2004) (rejecting the notion that the ITC exclusion order cannot be subject to collateral attack).
[122] *See Understanding Investigations Of Intellectual Property Infringement And Other Unfair Practices In Import Trade (Section 337)*, USITC, *available at* http://www.usitc.gov/press_room/us337.htm ("Section 337 investigations require formal evidentiary hearings in accordance with the Administrative Procedure Act (5 U.S.C. 551 et seq.). The hearings are held before an administrative law judge (ALJ)."); *see also Standards, FRAND, NPEs & Injunctions Conference: Final Part*, IPKAT (Nov. 7, 2013) *available at* http://ipkitten.blogspot.in/2013/11/standards-frand-npes-injunctions_7.html.
[123] Spansion, Inc. v. Int'l Trade Comm'n, 629 F.3d 1331 (Fed. Cir. 2010).
[124] Chein & Lemley, *supra* note 50, at 3–4.

factors.[125] Nevertheless, Professors Chein and Lemley claim that "[T]he ITC views enforcing patents as in the public interest, resulting in a thumb on the scale in favor of the patentee in public interest analyses" "[126]

In a recently released report, the Department of Justice along with the United States Patent and Trademarks Office ("USPTO ") urges the ITC to reconsider its use of exclusionary orders for SEPs whose owners have agreed to abide by FRAND licensing requirements.[127] After all, a royalty negotiation that occurs under threat of an exclusionary order would skew in favor of the patentee in a manner inapposite to the patentee's FRAND commitment.

5. Other Considerations Outside the U.S.

The European Union presents an interesting study of how they deal with FRAND licensing and infringement issues. In May 2009, for example, the Federal Court of Justice of Germany (BGH) oversaw a case regarding CD-Rs.[128] It held that an entity that infringes a patent only because it cannot obtain a license from the patent owner may defend itself by invoking the "abuse of dominant market position" defense.[129] In effect, the BGH allowed an alleged infringer to defend itself by arguing that it is entitled a FRAND license under antitrust law.[130]

Similarly, a FRAND defense was considered by a Japanese court in *Apple, Inc. v. Samsung Electronics*.[131] In Japan's Tokyo District Court, Samsung sued Apple for two cases of infringements on SEPs related to a wireless data packet system. The Tokyo District Court rejected Samsung's claims on the grounds that Samsung had failed to comply

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[125] *See* POLICY STATEMENT, *supra* note 51.
[126] Chien & Lemley, *supra* note 50, at 20.
[127] POLICY STATEMENT, *supra* note 51.
[128] BGHZ KZR 39/06 (May 6, 2009). *See also* Rob Harrison, *The Orange Book: The Relationship Between Patents and Standards*, TANGIBLE IP (Jun. 11, 2009), http://www.tangible-ip.com/2009/the-orange-book-the-relationship-between-patents-and-standards.htm.
[129] BGHZ KZR 39/06 (May 6, 2009). This decision has gained importance in the rest of EU as well. Article 82 of the European Commission Treaty deals with abuse of dominant market position.
[130] *See, e.g.,* Anette Gartner & Thorsten Vormann, *Federal Supreme Court Rules in Orange Book Standard*, INT'L LAW OFFICE (May 26, 2009) *available at* http://www.internationallawoffice.com/newsletters/detail.aspx?g=abc44bef-50b0-4b0b-8c70-a28d7fa5502a (last visited Mar. 30, 2014).
[131] Heisei 23 (WA) 27941 (Tokyo Dist. Ct., Aug. 2012); *see also Tokyo High Court Publishes* Apple v. Samsung *Ruling*, WORLD INTELL. PROP. REV. (Mar. 30, 2014) http://www.worldipreview.com/news/tokyo-high-court-publishes-apple-v-samsung-ruling.

with an agreement requiring it to license their SEPs on FRAND terms. Before the suit, the two parties had been negotiating a licensing agreement on a set of Samsung SEPs, and Samsung had offered a royalty rate of 5%. Apple argued that this was unreasonable and took the matter to court. When the court agreed with Apple, both parties renegotiated the FRAND agreement.[132]

The interesting aspect of this decision is that the intellectual property policy of the European Telecommunications Standards Institute ETSI was used as a guideline in holding that Samsung had abused its market power, based on evidence of Samsung's failure to fulfill its FRAND obligations pertaining to the SEPs. Additionally, the court acknowledged that Samsung, in maintaining its petition for a preliminary injunction, was abusing the legal process by delaying the disclosure of standards-essential patents to potential licensees. In the final ruling, the Japanese court also found that Samsung's SEPs were unenforceable, and so Samsung could not claim monetary damages or injunctive relief.[133]

C. The FRAND State of Affairs

Currently, the diversity of remedies and the differences in the outcome that the choice of remedy can result in remains a concern. Using the court process to establish FRAND terms can cause a hold–up that increases the cost of a license, resulting in reduced efficiency. The alternative of raising a breach of contract claim is not necessarily a quick solution either. In any event, FRAND commitments differ on a case-by-case basis, and hence, there are no standard terms or royalty rates for these contracts. Further, what may be a reasonable royalty rate in one case may be unreasonable in another. Given this, the target seems to be to generate a workable royalty *range.* Such a FRAND range may be applicable to any case regarding the same kind of device or standard. Working within a set range makes remedies easier to calculate, and can potentially lead to fewer disputes. In conclusion, although SSOs and FRAND licensing have the potential to be positive forces, they currently use up court time and result in muddied water for all parties involved, more so as FRAND licenses implicate more than one area of law such as patent infringement, antitrust and contractual issues. Further, as Judge Posner's decision in *Apple v. Motorola* suggests, the cumbersome nature

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[132] *Id.*

[133] *See, e.g., Japanese Courts Rule Samsung Abusing FRAND Patent Process*, ELECTRONISTA (Mar. 31, 2014), http://www.electronista.com/articles/13/03/05/filing.made.public.by.apple.submission.of.ruling.to.itc/.

of litigation in our patent system is exacerbated by the current lack of a universal definition for the cost of patent infringement.[134]

And then there is compulsory licensing. Compulsory licensing bypasses the issues of FRAND licensing because the Government establishes a rate. That rate becomes the standard for licensing that invention. Although that rate may not be ideal, the benefit is that the rate is clearly defined up front. Further, the upfront determination of rates gives the parties information to take into consideration before implementing the standard in their products. The primary issue with compulsory licensing, however, arises when a patent owner that does not want to license its patent is forced to license. With this as the background, the next section discusses whether the compulsory license can be a solution to the problem presented by the FRAND license.

II. AN INTRODUCTION TO COMPULSORY LICENSING

The monopoly component of any patent consists of the right to prevent competition and to charge a maximum market price. As a mechanism, compulsory licenses are meant to balance the patent owner's right with the societal need for the product, and operate where public interest concerns outweigh the patent holders' rights.[135] Hence, such licenses affect the patentee's monopoly. However, these licenses also represent a compromise between the complete revocation of patents on the one hand, and patentee's absolute property rights over the invention on the other.[136] Operationally, compulsory licenses can force an unwilling patentee to license the patent during the term of the patent.[137] They are therefore effectively involuntary contract[s] that are imposed by the state to achieve larger public objectives.[138] Such licenses affect

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[134] *See supra* notes 55-62 and accompanying text.

[135] Rafael V. Baca, *Compulsory Patent Licensing in Mexico in the 1990's: The Aftermath of NAFTA and the 1991 Industrial Property Law*, 35 IDEA 183, 184–85 (1994); *see also* David J. Henry, *MultiNational Practice in Determining Provisions in Compulsory Patent Licenses*, 11J. INT'L L. & ECON. 325, 326-7 (1977).

[136] Baca, *supra* note 135, at 184 (noting that compulsory licenses allow governments "to compensate for the economic shortcomings associated with not establishing a domestic industrial base when not working an invention within its borders)." *Id*. at 187.

[137] *See generally* Sara M. Ford*, Compulsory Licensing Provisions Under the TRIPS Agreement: Balancing Pills and Patents*, 15 AM. U. INT'L. L. REV. 941, 945, 953–55 (2000).

[138] Gianna Julian-Arnold, *International Compulsory Licensing: The Rationales and the Reality*, 33 IDEA 349, 349 (1993) (quoting PAUL K. GORECKI, REGULATING THE PRICE OF PRESCRIPTION DRUGS IN CANADA: COMPULSORY

market exclusivity and consequently, the market price.[139] In theory, the incentive for encouraging innovation, which forms the central tenet of the patenting process, dictates that the price of a patented product cannot be controlled by a third party, including the government, unless licensed compulsorily.

A. The Effects of Compulsory Licensing

1. Access to consumers

The issuance of a compulsory license has important effects. First, it ensures that consumers have access to the licensed products before the end of the patent term and at a price that makes it more accessible and less privileged. The issuance of a compulsory license usually is a rare occurrence in almost all countries. Most common instances of compulsory licensing are found in areas that are critical to public interest like energy sectors and pharmaceutical patents. A compulsory license involving a technology signifies an overwhelming need of the public for that patent to address an important issue that concerns the public. If there is a benefit from the compulsory license, it is the increased access that these types of licenses create.

2. Effect on the rights of the patentee

Next, it is presumed that the impact of the compulsory license is adversely felt by the patentee. Given this, compulsory licenses are viewed as disincentives adversely affecting inventors and patent holders.[140] That is, patents serve as market incentives enabling patentees

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LICENSING, PRODUCT SELECTION, AND GOVERNMENT REIMBURSEMENT PROGRAMMES (Economic Council of Canada 1981)).

[139] *See* Mary T. Griffin, *AIDS Drugs & the Pharmaceutical Industry: A Need for Reform*, 17 AM. J.L. & MED. 363, 402 n.260 (discussing the Department of Health and Human Services Reimbursement Board's establishment of price limits at the lowest prices at which the drug is available).

[140] *See* Joseph A. Yosick, *Compulsory Patent Licensing for Efficient Use of Inventions*, 2001 U. ILL. L. REV. 1275, 1291–92 (2001). For an example of judicial treatment of compulsory licensing, see *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405 (1908), in which the Court outlined the traditional American posture on compulsory licensing. In considering whether the rights of a patent owner included the right not to put his inventions to manufacturing use, the Court recognized that exclusivity characterizes the absoluteness of the inventor's property rights. *Id.* at 424. The patent in question, the Liddell patent, related to a paper bag machine. *Id.* at 406. After the patent was issued in 1896, the owner neither manufactured nor licensed the patent. *Id.* at 408. In 1908, the patent owner sued the defendant for infringement for manufacturing the patent. *Id.* at 406. The defendant alleged that the owner of an

to derive maximum economic efficiency from the market and this is irrespective of maximization of consumer welfare. The market incentive component is derived from the conception of patents as a private property that is gained in return for certain conditions, one of which is disclosure.[141] That is, the inventor, among other things, reveals the invention in return for the government's promise of a specified statutory monopoly on the production of the idea.[142] Since competition is curtailed during the monopoly period, patent owners charge the highest price that the market can bear, typically far exceeding the marginal cost.[143] Presumably, the increased cost covers the investor's past and future investments on research and development. Consumers, in turn, associate the higher cost for patented products with the privilege of using the invention.[144] Hence developed nations, particularly the United States, believe that patent owners with valuable products will market them and discourage government interference with patent monopolies.[145] In essence, the compulsory license is presumed to adversely affect the patentee in two ways. The first is the dismissal of the patentee's right to refuse to license the patent; and the second is the reduced economic incentive for the patentee from the forced nature of these licenses.

3. Government use of compulsory licenses

While the general rule is that the patentees enjoy total monopoly during the patent term, proponents of compulsory licenses assert that the overall objective of the system is to serve the public, and that this is only satisfied when these licenses are appropriately deployed.[146]

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unused patent was limited in law from alleging infringement. *Id.* at 428.

[141] *See Cole M. Fauver, Compulsory Patent Licensing in the United States: An Idea Whose Time Has Come,* 8 NW. J. INT'L. L. & BUS. 666, 674–76, 680–81 (1998).

[142] *Id.* at 681.

[143] *See* Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law,* 75 TEX. L. REV. 989, 1065–66 (1997) ("[P]roducers will price at marginal cost only if they are forced to by the existence of competition. A producer who controls a market will cut output and raise prices, increasing its profits but reducing both consumer and aggregate social welfare.").

[144] *Id*. at 996 (discussing the privilege issue).

[145] *See id*; *see also* Fauver, *supra* note 142, at 677–78. Scholars have argued that compulsory licenses are unconstitutional since the grant of the exclusive patent right is unconditional. *Id.* at 678. Others have compared compulsory licenses to government appropriation under the takings jurisdiction, implying that patent rights cannot be restricted by compulsory licenses without just compensation. *Id.*

[146] Comment, *Theft of Trade Secrets: The Need for a Statutory Solution*, 120 U. PA. L. REV. 378, 400 (1972); *see also* Fauver, *supra* note 142, at 681 (discussing why the United States views compulsory licenses as unnecessary).

Consequently, even countries like the United States that traditionally shun compulsory licenses use the mechanism where appropriate to achieve the overall goals of the system. Thus, provisions on compulsory licenses are not alien to the United States. For example, 28 USC § 1498 empowers the United States government, or those authorized by it, to make any use or manufacture of a patented product or process "without license." While the patent holder is entitled to "compensation," he cannot enjoin the government from using it.[147] Similarly, the Bayh-Dole Act[148] requires patent holders to use their invention for public benefit if the underlying research was funded by federal agencies. Under this Act, the federal government retains a non-exclusive, non-transferable, royalty-free license to use the invention, and the federal agency that funded the research retains a "*march in*" right to compel a license. This includes the right to "alleviate health or safety needs which are not reasonably satisfied by the contractor, assignee, or their licensees."[149] Similarly, the Clean Air Act allows compulsorily licensing of a technology funded by U.S. government grants in certain circumstances.[150]

Further, U.S. law also allows compulsory licenses for promoting domestic economic objectives. For instance, the Energy Storage Competitiveness Act allows the government to require licensing of patents to "advance the capability of the United States to successfully compete in global energy storage markets."[151] This arises when the public's need for the technology overweighs the need for the patentee's monopoly right. The fact that such provisions relate to several technologies demonstrates that public interest issues can arise in different situations concerning those technologies.

4. Economic incentive and compulsory licenses

As for the concern that compulsory licenses serves as a disincentive, while the patentee loses the right to determine the price of the product for the market, the assumption that it results in an economic loss or even a real loss of revenue is a not always correct. Recent

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[147] 28 U.S.C § 1498 (2012).
[148] 35 U.S.C § 200.
[149] *Id*.
[150] There are other examples of limitations and exceptions to patent rights in U.S. law including the Bolar provision outlined in 35 U.S.C. § 271(e)(1), which states that "[i]t shall not be an act of infringement to make, use, offer to sell, or sell within the United States or import into the United States a patented invention … solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use, or sale of drugs or veterinary biological products."
[151] 42 U.S.C. § 17231(h)(7).

instances have demonstrated that the patentee can actually enjoy greater profits from the increased sales following the licensing of the product. For instance, when Bayer's patent on Nexavir was subject to a compulsory license in India, it resulted in much higher volume sales of the drug in the country generating higher revenue and increased access.[152] The increased sales volume offset any revenue losses that Bayer suffered from the license.[153] Compulsory licensing the patent resulted in a steady stream of revenue given the wider access that becomes possible when these licenses are deployed.

Additionally, the effect of compulsory licensing on the concept of incentivization is changing as property rights become more widely acknowledged in several countries. That is, globalization has caused newer markets to open for companies with critical technologies. This market expansion increases the volume of sales of such technologies, and may lead to sufficient profits for the companies despite the lower price the compulsory license commands. As the sales for the patent increases, it tends to compensate for the reduction in the sale price of each unit. In all, despite the compulsory license, the presence of a bigger market can preserve the patentee's incentive component. Further, it can serve as a way to provide needed technology to those markets that are otherwise unable to access such technologies.

B. Examples of Historical and Contemporary Use of Compulsory Licensing Outside the United States

Historically, compulsory licensing has been used by different governments to address various national issues. The origin of compulsory licensing precedents can be traced to the French law of 1791 which was later adopted by many European countries as a mechanism to encourage local working of inventions.[154] Similarly, the British government appointed the Sir Edward Fry Committee in 1901 to analyze the link between compulsory licensing and industrial production.[155] In 1907, Mr. Lloyd George, President of the Board of Trade, successfully introduced a bill incorporating compulsory licensing provisions in the House of Commons by highlighting that foreigners owned 6500 out of

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[152] Bayer Corp. v. Union of India, (2009) LPA 443 (India).

[153] *See, e.g.*, Representation by Mr. D.G. Shah, Trade, Investment and Industrial Policies in India: Effects of the US Economy, Inv. No. 332-543, USITC Pub. [4501 2] (Jan. 2014) (Final) *available at* http://www.usitc.gov/publications/332/pub4501_2.pdf.

[154] N. RAJAGOPALA AYYANGAR, REPORT ON THE REVISION OF THE PATENTS LAW 50 (1959).

[155] *Id.*

14,700 patents issued in 1906 and worked them outside of England.[156] Consequently, compulsory licensing provisions were introduced in the British patents legislation.[157]

In contemporary times, India's compulsory licensing provisions have been the focus of attention. Under the Indian patent legislation, the government could, in the public interest, interfere with patent rights and compulsorily license the patent.[158] Patented inventions that were either not reasonably priced or were not worked to satisfy the reasonable requirements of the public could be subject to compulsory licensing.[159] In turn, the reasonable requirements of the public were deemed unsatisfied if the invention was not worked in India, if an existing or proposed trade was prejudiced, if the demand for the product was not adequately met, or if the local working of the invention was prejudiced due to importation.[160] Of these grounds, the local working requirement has been the most contentious on the grounds that it discriminates against foreign manufacturers, especially in the context of pharmaceuticals. The same requirement has been present in Article 68 of Brazil's patent law, under which anti-competitive practices, failure to locally manufacture, and intentionally failing to satisfy the demands of the market can all serve as a basis for compulsory licensing. [161]

Recently, India has been one of the few countries that have taken the bold step of working the compulsory licensing provision to create access to patented medication. In India, Cipla, a generic drug company asserted that the reasonable needs of the Indian public were not being satisfied because a certain patented drug, Sorenefib,[162] was priced out of access of the several thousand patients living in the country.[163] Cipla, the generic drug company, filed a petition to have Soranefib covered by a compulsory license. When the Controller General of the Indian patent

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[156] *Id.* at 53.
[157] *Id.*
[158] Indian Patents Act, 1970 (as amended in 2005), 27 India A.I.R. Manual 450, § 84, 90 (1979). The controller of patents compulsorily licenses the patent considering the nature of the invention and the applicant's ability to work the invention to the public's advantage. *Id.*
[159] *Id.*
[160] *Id.* § 90(a).
[161] INDUSTRIAL PROPERTY LAW, Lei No. 9.279/96, de 14 de maia de 1996, DIARIO OFICIAL D de 15.05.1996 (1996), *available at* http://www.sice.oas.org/int_prop/nat_leg/Brazil/ENG/L9279eA.asp [hereinafter IPLB].
[162] Soranefib is manufactured by Bayer, Inc. *See Bayer Corp.*Corporation Order No. 223 of 2012 IPAB, Chennai, (2012).
[163] *Id.* at ¶ 3.

office examined the petition, it was found that although India contained approximately 20,000 patients with liver cancer and about 9,000 patients with kidney cancer in the years 2008 to 2010, a negligible amount of Sorafenib was imported into India for sale by Bayer. In fact, no importation ensued in 2008 – a year when Bayer recorded a worldwide profit of over $678 million dollars in the rest of the world.

To the Controller concluded that the patentee was not catering to the demands of the market, which is an important statutory criterion to avoid a compulsory license, and further, that the reasonable expectations of the public was not being met. Further, the Controller concluded that the drug was unreasonably priced at Rs. 2,000,000 ($ 5,000 approximately) per month in a country where the World Bank reported that more than 25% of the population earned less than a dollar a day. Consequently, the Controller granted the request for compulsory license. On appeal, this license was sustained by the Intellectual Property Appellate Board of India. Importantly, the appellate body raised the rate of royalty that was originally set by the Controller.

One important feature of this license was that the government negotiated the rate and access was made available immediately once the appeal process was completed. Interestingly, the concern over economic cost of litigation and the associated costs of the patent holder pursuing a variety of remedies remains less with a compulsory license with compared with the FRAND regime. Additionally, the ends of the system, being access and the duty of the patentee to meet the societal expectation in return for the benefitting from the monopoly rights are predominant considerations in a compulsory licensing regime – a consideration that the FRAND regime is now being accused of allegedly lacking.

C. Compulsory Licensing in International Agreements

Internationally, the Trade Related Intellectual Property Agreement (TRIPS) incorporates the Paris Convention on Industrial Property and expressly authorizes the use of compulsory licenses as a limitation of the rights of the patent owner under certain terms and conditions.[164] TRIPS outlines the use of the compulsory licenses under

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[164] Annex IC to the General Agreement on Tariffs and Trade, Uruguay Round, World Trade Organization, *done at* Marrakesh, Apr. 15, 1994, 33 I.L.M 1981 (1994), *reprinted in* WORLD TRADE ORGANIZATION, THE RESULTS OF THE URUGUAY ROUND OF MULTILATERAL TRADE NEGOTIATIONS 365 (1995) at Art. 31 (hereinafter, TRIPS Agreement). *See also* Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, 21 U.S.T. 1583, 1630, 828 U.N.T.S. 305, 307 (last revised July 14, 1967) [hereinafter Paris Convention].

Article 31.[165] Most importantly, the compulsory licensing of a patent shall be authorized by the government or third parties authorized by the government. Further, each compulsory license shall be individually authorized based on need for the country and by following proper procedures.

One such procedure is for the government to attempt to negotiate with the patent holder for licensing the patent on commercially reasonable terms. The term commercial reasonableness is to be weighed in the context of national need and not a reference to the highest marketable price. Indeed, Article 31 (h) requires that the adequacy of the remuneration be measured by taking into account the economic value of the authorization. Similarly, the compulsory license will cease once the need ceases to exist. The need for prior negotiations with a view to compulsorily license ("prior negotiations") can be dispensed with under Article 31(b), "[i]n the case of national emergency or other circumstances of extreme urgency or in cases of public non-commercial use."[166] Similarly, prior negotiations are waived where such licenses are required to cure judicially determined anti-competitive practices under Article 31(k).[167]

It is also worth noting that under the TRIPS Agreement such licenses should be non-exclusive and should be non-assignable. Essentially, this will allow the patent owner to continue to use the patent and will also prevent governments from misusing the patent. Other interesting aspects are that TRIPS pre-supposes that a compulsorily licensed use of the patent will be made predominantly for the supply of domestic market. Similarly, the agreement also subjects such licenses to judicial and other appropriate review mechanism to provide relief to aggrieved patentees. Other than these enumerated criteria, the TRIPS agreement does not detail the reasons or the basis for issuing compulsory licenses.

III. A COMPARISON BETWEEN COMPULSORY LICENSES AND FRAND LICENSES

The following section compares the two types of licenses with a view to determine whether some of the disadvantages of the FRAND licenses can be remedied by the use of either the compulsory license or a hybrid of both of these types of licenses.

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[165] TRIPS Agreement, *supra* note 165 at Art. 31.
[166] *See* TRIPS Agreement, *supra* note 165 at Art 31 (b).
[167] *Id.* at Art 31 (k).

Of the two types of licenses, operationally compulsory licensing is much more efficient once the government determines the need for the license because the price negotiations cannot be contentious beyond a point. That said, the larger question is whether the compulsory nature of such licenses can work to discourage patent owners. The benefit is that the mere presence of compulsory licensing options will and can ensure that the patentee cannot use pricing or other strategies as a mechanism to hoard the product and create artificial demand. This benefit is important considering that FRAND licenses in the SEP context has remained inefficient because patentees tend to deploy pricing and other strategies to gain more market power and slow the pace of competition.

One of the obvious big differences between the two types of license is the issuing authority. In the case of FRAND licenses, the certifying organizations determine that certain patents are essential to the technology and then the patent owner voluntarily commits to a FRAND license. In the case of a compulsory license, the government determines that the need of the public for the patent overweighs the patentee's rights to exploit it commercially, and then the government dictates the market price. With the ICT patents, the SSO determines that a patent should be licensed as an SEP just like how the government determines that a patent is critical to public welfare. But once it is determined that the patent is critical to public welfare, compulsory licenses become more of a regulatory mechanism where the government interferes to make corrections. However, with FRAND licenses, it is the owner who determines the price and thus, the market mechanism defines the licensing price of the patent. That said, both of these types of license achieve the same result of directly or indirectly prevailing on the owner to license the patent to third parties. In the case of compulsory licensing, having the governments negotiate the value may also be perceived as being disadvantageous to the patent owner in that the bargaining parities may be pitted against the patent owner.

Compulsory licenses though remove the biggest debilitating factor of the FRAND license: the royalty negotiation. The rates are pre-set in the case of compulsory licenses and most often, these rates are determined after negotiation with the patent owner. The determination of rates at the beginning of the process leads to a certain level of stability for users of the technology. In software patent terms, once a patent is deemed essential, having a negotiated rate will not only help the potential licensees but also the end-users of the technology. It reduces the cost and inefficiencies involved with litigation. Similarly, it reduces the opportunities to engage in protracted negotiations to arrive at a royalty range or rate, which improves the efficiency of the system by allowing parties to come to terms more quickly. The possibility of creating patent

hold-up becomes minimal with compulsory licenses. Hopefully, the possibility of increased returns from the market will minimize the barrier to innovate further over the technology and contributes to the progressive goals of the system. Interestingly, in early 2015, the IEEE is now in the process of revising its policies pertaining to the assessment of royalties. That is, the standard setting body is essentially revising its policies such that the royalty for an SEP that is used in a device will be determined based on the SEP's value to the component as opposed to the whole product, which is the norm.[168] Interestingly, the Justice Department has found this to have the potential to be pro-competitive.[169] This development takes the form of FRAND licenses even closer to a hybrid of compulsory licenses, which this paper ultimately proposes. Instead of the government, the SSO as the standards body imposes rules that pre-set the royalty range thereby imposing some limits but increasing the clarity for the patent owner as well as the licensee. This is indeed closer to what Judge Robart sought to accomplish in the decision discussed above. One of the biggest criticisms with the FRAND licenses is that it has resulted in SEPs becoming a tool to gain business strength between competitors rather than a tool to innovate. For example, Google's purchase of the Motorola mobility's patents is cited as a defensive acquisition. That is, Google was accused of using Oracle's Java in an infringing manner in its android technology. Motorola's patent portfolio, which Google acquired, consisted of patents on networking and video encoding which created a defense for Google to counter-allege that Oracle was infringing on some of Google's patents. When Google acquired Motorola's patents similar suspicions caused the Justice Department to announce an investigation to determine the presence of any prevailing abuse of the involved SEPs.[170] A compulsory license regime will largely eliminate such issues that plague the SEPs by being more consumer friendly.

While the above narrative compared both of these forms of licenses, this paper asserts that a more workable model would be a hybrid of these licenses that operates to eliminate some of the debilitating constraints of FRAND licenses. The authors are mindful that the structure presented may be a bit simplistic.

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[168] Susan Decker & Ian King, *Wi-Fi Inventors' Cut of iPhone 6 Sales to Shrink in Vote*, BLOOMBERGBUSINESS (Feb. 2, 2015), http://www.bloomberg.com/news/articles/2015-02-02/wi-fi-inventors-cut-of-iphone-6-sales-to-shrink-in-patent-vote.

[169] *Id.*

[170] *See* POLICY STATEMENT, *supra* note 51.

1. The SSOs should continue to determine what type of patents represent a standard with respect to ICT patents.

   Once a patent becomes a standard, the patent owner should be able to license it on FRAND terms which, in turn, will become applicable to all licensees involved.

2. In setting the FRAND terms, a standard royalty-range should be negotiated with the patent owner by the SSOs. Such negotiation should resolve questions such as grant-back from the licensees, the patent owner's right to seek an injunction and the circumstances for which such injunction can be sought and situations where dispute settlement can disrupt the licensee's use of the technology. Thus, each of the SSOs should create standard FRAND licensing terms applicable to SEP licenses. Operationally, standardization of the FRAND licenses are not a new phenomenon; several organizations including the International Telecommunication Union, the Department of Justice, USPTO, Competition Policy International have already attempted standardization of FRAND licenses to reduce litigations.[171] That of course, will take it closer to compulsory licensing, where the patentee has limited room to negotiate the terms of the license. Interestingly, at the time of this paper going to print, the IEEE was considering a proposal to change its intellectual property policy to streamline royalty determination. The new policy states the value of the patent holder's royalty will be calculated from the value that the SEP adds to the "smallest saleable compliant implementation." Thus the calculation of *reasonable royalties* will be based on the value of the SEP over the a) value of the

[171] *See* William New, *ITU Undertakes Work on Standards Essential Patents,* INTELL. PROP. WATCH (Oct 12, 2012), http://www.ip-watch.org/2012/10/12/itu-undertakes-work-on-standard-essential-patents/; *see also* Kühn *et al*., *supra* note 18; Florian Mueller, *UN Agency ITU to Hold High-Level Talks on Standard-Essential Patent Litigation in October*, FOSS PATENTS (July 9, 2012), http://www.fosspatents.com/2012/07/un-agency-itu-to-hold-high-level-talks.html.

functionality of the smallest saleable compliant implementation that uses the patent; b) in light of the value of the contributions of other SEPs and c) value of existing licenses, if any.[172] Currently, we use the entire sale value of the product to calculate the royalty while this advocates a calculation based on the smallest saleable component.[173] Allowing companies to limit the license to part of the SEP may also reduce litigations as patent owners cannot block the implementation of the product which can also leave patent-licensees with alternatives. [174]A three to six month period should be allocated for potential licensees or interested parties to submit reasons to SSOs as to why a particular patent should benefit from a term that is different from the standard term or range. A resolution with SSO should result in the term becoming a part of the SSO agreement with the patent holder.

3. In gist, an SEP patent should be offered by the SSO to various licensees on the same terms and conditions. Where a patent owner reneges on the standard terms and conditions, the SSO should have the ability to conduct a review of the patent as an SEP. Where the owner acts egregiously, the SSO should have the ability to seek patents from other members to create compatible standards. The last suggestion would require a complete overhaul of the SSO system.

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[172] David W. Long, *IEEE's Controversial Proposed Intellectual Property Rights ("IPR") Policy Amendments*, LEXOLOGY (Feb. 3, 2015), http://www.lexology.com/library/detail.aspx?g=2532ee11-365e-4161-8c2c-69c0253badbf.

[173] The concept of Smallest Saleable patent component is a principle of evidence to avoid undue prejudice and confusion of jurors in jury trials. *See* Alexander L. Clemons, *Beyond the Smallest Salable Unit*, LANDSLIDE, 1–2 (2013), *available at* http://webcache.googleusercontent.com/search?q=cache:kHGEO8ignlMJ:www.americanbar.org/content/dam/aba/publications/landslide/2014_may_june/ABA_LAND_v006n05_beyond_the_smallest_salable_unit.pdf+&cd=2&hl=en&ct=clnk&gl=us (explaining courts use the smallest salable patent-practicing unit as an efficient way to value the patented feature in contrast to the unpatented features so as to calculate an appropriate royalty base, and that the evidence must be reliable and tangible, not conjectural or speculative).

[174] Decker & King, *supra* note 168.

CONCLUSION

It is important to have an appropriate form of license that minimizes the technology hold-ups that are created when parties attempt to resolve differences. From a broader perspective, access to technology is an important element of the trade regime. In most nations, especially poorer nations, access to technology is important to achieve the objectives of the international trade regime outlined in Article 7 and 8 of the TRIPS agreement.[175] For instance, Article 7 of TRIPS asserts the importance of "protection and enforcement of IP rights" to "national social and economic welfare of members."[176] The principles under which the objectives will be satisfied are outlined in Article 8, which recognizes members' rights to adopt public interest or public health measures consistent with the TRIPS provisions.

Indeed, lack of uniform access to technology creates the digital divide about which much has been written. Most literature on the digital divide highlights how such a lack of access exacerbates class divisions in countries like India and South Africa. This is because technological devices both increase connections between people, and provide opportunities to enhance one's knowledge. Technologies have the ability to create power for the marginalized in a class based-society. Where access to such technology is limited to certain classes, it perpetuates and reinforces the class-based system that has caused much social and economic malaise. This is exactly what the international trade agreements hope to prevent.

While we do not suggest that governments jump in and compulsorily license such technology, governments need not be bystanders while corporations use such technology as political tools to the detriment of its electorate. In poorer nations, a hybrid of FRAND and compulsory licenses that standardizes the royalty-ranges and other terms of the SEP license would not only lead to more technological access, it would also lead to more resources directed toward innovation. This would result in a more informed electorate and a more efficient system generally. While it is understandable that SSOs have limited authority over a patent owner with respect to the patent, a hybrid license that incorporates a component of standardized rates could eliminate some of these issues that are currently plaguing the FRAND licenses.

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[175] *See* TRIPS Agreement, *supra* note 165, at arts. 7, 8 (1994).
[176] *Id.*