

The Next Battle Over FRAND: The Definition of FRAND

Terms and Multi-Level Licensing

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Most judicial opinions discussing FRAND (“Fair, Reasonable and Non-discriminatory”)² have focused on the calculation of a FRAND royalty or the availability of injunctive relief. The courts have yet to turn their attention to the issue of whether FRAND also imposes limits on the license *terms* imposed by holders of standards-essential patents (“SEP”). The first big battle on that front may be whether FRAND compels a patent holder to grant a fully exhausting license to the maker of a chip or other component used in multi-component products. Under patent exhaustion, one who purchases from a patentee or licensee in an *authorized* sale obtains the patented product free and clear of patent rights.³ The question will be, to what extent can a patentee granting a FRAND license restrict or condition the chip or component maker’s freedom to re-sell?

The issue is significant for holders of cellular, WiFi, and similar standards-essential patents that are normally embodied in chips. Chip prices have fallen dramatically, which means the royalties that can be extracted at the chip level are also getting lower. Patentees are responding by pushing the licensing obligation down the distribution chain to manufacturers of end-user equipment that incorporates these chips, where the total product cost is much higher.

Can a patentee offer to license *only* at the end-user equipment level? Or (as the functional equivalent), can the patentee offer to license to a chipmaker or component maker on condition that it sells only to end-user equipment makers who have themselves paid for a license (a practice referred to as “multi-level licensing”)? Either practice makes the lives of chip and component makers more difficult, complicating their commercial relationships with their customers. Can a chipmaker or component maker resist this trend by arguing that FRAND entitles it to a license that authorizes resale to downstream customers free of patent claims? Below we survey some of the arguments parties may raise when these issues reach the courts.

Licensing only at the end-user product level and multi-level licensing are not rare, but there is a paucity of judicial authority as to how those strategies should be viewed under

FRAND. The lack of guidance on this issue was highlighted in the fall of 2013 in *Microsoft v. Motorola*,⁴ when Microsoft argued, in a pre-trial motion, that it was harmed by Motorola's failure to grant a FRAND license to chipmaker Marvell, because any license to Marvell would have eliminated patent claims against its customer, Microsoft, under patent exhaustion. The parties' letter briefs were revealing for the lack of authority either side could muster regarding FRAND limitations on license terms.⁵

Motorola asserted that a FRAND license would not necessarily authorize unrestricted sales by Marvell to end-user equipment makers like Microsoft, citing well-established authorities that allow a patent holder to separately license the right to "make," "sell," or "use" a patented technology. It argued, more generally, that any license would be subject to negotiation, so it would be speculative to say what specific terms a FRAND license would have, however the only examples it gave of possible scope-limiting terms were geographical "field of use" restrictions, or a clause voiding the license in the event the licensee challenged the patent's validity. Neither Microsoft nor Motorola cited any FRAND authority directly relevant to multi-level licensing. On the very limited record before it, the court could not find that FRAND would necessarily have required Motorola to grant Marvell a fully exhausting license, so that argument was not presented to the jury.⁶ The issue was raised on the eve of trial and was tangential to the main issues in the case.

Patent Policies of Standard Setting Organizations

The IEEE, ETSI, and ITU⁷ are prominent standard-setting organizations ("SSOs") in the cellular and WiFi space whose patent policies require their members who are SEP holders to confirm that they will grant a license that is "fair, reasonable and non-discriminatory," however, those policies do not otherwise specify the precise terms of such a license.⁸ The ETSI Directives refer to a license to "manufacture," "sell," or "use" "equipment," which provides some support to those who would argue that licensing at the end-user equipment level (as opposed to the chip or component level) is not, by itself, inconsistent with FRAND. But the policies also require that a license be given to anyone who asks for one, which has to include chip and component makers as well. And the broad scope of the rights promised to be licensed in the FRAND commitment, including the complete make, sell and use rights, would appear to include all the elements necessary for a fully exhausting license at that level.

One might view the “non-discriminatory” component of FRAND as most directly relevant. After all, the main impetus for multi-level licensing is to engage in price discrimination based on the utility of the patented technology (or standard) to end users (or, more crudely, their ability to pay). Outside the FRAND context, price discrimination by patentees has not been considered suspect; indeed, it is generally viewed as economically efficient, allowing patentees to recoup the maximum royalties while still promoting the greatest number of transactions in the patented technology.⁹

In 2008, Qualcomm’s amicus brief to the Supreme Court in *Quanta Computer v. LG Electronics* urged the Court not to enter a sweeping pro-patent exhaustion ruling precisely because economic efficiency required price discrimination based on the utility of the technology to the end user.¹⁰ In the end, the *Quanta* court issued a narrow ruling that left unanswered all the interesting questions regarding how, and to what extent, a patent holder can extend its control of patented technology beyond the first purchaser or licensee by means of such measures as conditional sales or licenses. It stated that an “authorized sale” would trigger patent exhaustion, and indicated that any limitations on authorization need to be clearly stated in the license agreement, but beyond that it provided no guidance as to how far patentees can go. The opinion was followed by a raft of practitioner newsletters and blogs encouraging patentees to explore creative ways to avoid having their license agreements read as “authorizing” uncontrolled sales to downstream parties, which would trigger patent exhaustion, including multi-level licensing, licensing only at the end-user level, or retaining title to the patented good as far down the distribution chain as possible, even to the ultimate consumer (akin to the way cable companies lease, but do not sell, home cable boxes).

The *Quanta* opinion also left open the possibility that patentees can impose price-discrimination schemes by contractually committing their licensees to pay a differential royalty based on the use made of the technology by licensee’s customers, or a penalty if an unsanctioned use is made of it.¹¹ But *Quanta* was not a FRAND case.

Discrimination and FRAND

Does FRAND answer the question left open by the Supreme Court in *Quanta*? Unfortunately, there is little precedent as to what “discrimination” means in the FRAND context. The 2007 court of appeal opinion in *Broadcom v. Qualcomm*¹² dealt squarely with discrimination, but in that case the facts were so extreme that the court did not explore the outer

boundaries of discrimination. Qualcomm was accused of charging higher royalties to entities that purchased chips from its competitors than it charged to similarly situated entities that purchased Qualcomm chips, all as part of a scheme to monopolize the chip market.

Beyond that, the meaning of “discrimination” has remained largely unexplored.¹³ The SSOs themselves have resisted any temptation to supplement or clarify their FRAND policies. Whenever they have tried to do so, it has resulted in controversy within the organizations themselves.¹⁴ After all, the SSOs are made up of chip and end-user product makers as well as SEP holders, with the same entities often playing multiple roles.

The obvious meaning of “nondiscriminatory” would be that like things must be treated alike. Not surprisingly, the few courts that have so far tackled the issue of calculating a FRAND royalty have tried to find “comparable” licenses to guide their analysis. They have looked at the royalties charged for similar patents or by patent pools that are organized around a specific standard.¹⁵ However, the use of comparables can be fully explained as part of the attempt to calculate a “fair” and “reasonable” rate; the word “non-discriminatory” has added little independent explanatory power to the analysis of FRAND royalties.

The patent pools apparently do not believe that “non-discriminatory” means that everyone has to be charged the same rate in percentage or dollar terms. Pools containing patents relevant to a specific standard may charge rates that vary considerably based on the volume purchased, fixed fees, capped fees, and licenses calculated as a percentage of the end-product selling price.¹⁶ Those are all forms of price discrimination, however they have not been tested against the FRAND commitment in court.

Patent litigators are familiar with the fifteen *Georgia Pacific* factors used to assess patent infringement damages in court.¹⁷ It is worth noting that those factors can be read to allow price discrimination, to the extent that a patented technology adds more value to one end user than another.¹⁸ Judge Robart applied and modified the *Georgia Pacific* factors in his massive FRAND opinion in April 2013 to take into account FRAND concerns.¹⁹ Someone defending multi-level licensing might point to those sources as encouragement for the continued validity of price discrimination through multi-level licensing in a FRAND world.

However, there are other doctrines hovering around the FRAND jurisprudence that call into question whether price discrimination remains a legitimate licensing goal for those entities that have made a FRAND commitment, especially with respect to standards embodied in chips

or components of multi-component products. Such doctrines fall under the rubric of the “patent hold-up,” the “entire market value rule” and the related concept of the “smallest saleable unit.”

One purpose behind the FRAND process is to avoid a situation in which an SSO establishes a standard only to have its widespread adoption compromised by the assertion of exorbitant royalty demands by the numerous entities whose patents have been “locked into” the standard and who are, therefore, in a position to hold the entire standard “hostage.” The practical problem is obvious when you consider that a single cellular or WiFi standard may incorporate hundreds or even thousands of different patents whose owners all claim they are “standards essential.”²⁰ When it comes to consumer electronics and telecommunications, we are well past the days when a single inventor could invent an entire product on his or her own and shout, “Eureka.” The idea that every one of those patents is entitled to a substantial royalty because of its individual significance is questionable. (If they are, then consumers will pay substantially more for electronics.) And those who argue that low royalties will create a disincentive to innovate must consider the rising flood of new patent filings each year.²¹

Patent Hold-up

The concept of “patent holdup” informs a great deal of the writing about how FRAND royalties should be calculated and has resulted in the pronouncement that, when setting a FRAND royalty, one should look at the value of the patent to the standard before the standard was adopted, i.e., at a time when the SSO still had the flexibility to adopt an alternative technology. Thus the hypothetical negotiation which is central to the calculation of patent damages should be deemed to take place “*ex ante*,” at a time when the patented technology was, at least hypothetically, competing with alternate technologies for inclusion in the standard, not “*ex post*,” or after the patent was locked into the standard.²² Judge Robart, in his April 2013 FRAND royalty opinion, noted that there are practical difficulties in actually doing an *ex ante* analysis, not the least of which is the fact that SSOs do not actually conduct those kinds of negotiations as part of the standard setting process.²³ Regardless of whether a historically valid *ex ante* negotiation can be reconstructed, the hypothetical negotiation between patentee and alleged infringer should at least be viewed as if it had taken place before the patent was locked into the standard, i.e., when other alternatives were available to achieve the same purposes within the standard.²⁴

The *ex ante* principle seeks to prevent patentees from collecting inflated damages based on the value of the entire standard. It shifts the focus back to what the cost would have been to work around any specific patent to make the standard function. It is hard to see how the calculation of those *ex ante* avoided costs would be markedly different from one standard-using end product to another, even where one end product is much more expensive than another, as long as the end products employ the standard to achieve roughly the same functionality. The *ex ante* principle therefore inevitably tends to undermine the legitimacy of price discrimination for SEP patents under FRAND.

Entire Market Value Rule and the Smallest Saleable Unit

The “entire market value rule” establishes a similar limit on damages at the end-product level of the distribution chain. In an infringement case involving a patent that applies to only one component of a multi-component product, plaintiff is barred from seeking damages based on the entire end-product price. Instead, plaintiff’s proof must focus on the value of the patent to the “smallest saleable patent-practicing unit” (i.e., component) within the product.²⁵ Under the entire market value rule, the price of the entire end product is only relevant if the patented technology drives demand for the whole product, as opposed to merely contributing one feature among many. Thus, a plaintiff is prohibited from supporting a damage number by arguing that it amounts to only a small percentage of the ultimate product cost,²⁶ or a small percentage of the alleged infringer’s revenues.²⁷

The obvious argument for chipmakers and component makers is that they are entitled to a license at the level of the “smallest saleable unit” (i.e., the chip or component) for largely the same reasons that support the use of the entire market value rule in the computation of patent damages. Viewed through the lens of the entire market value rule, a refusal to license at the chip and component level, as part of an overall strategy of price discrimination, is merely a disguised attempt by the patentee to obtain a patent royalty in excess of what the patent, considered by itself, is worth. Thus, the entire market value rule, and the principle of the smallest saleable unit, will tend to undermine the legitimacy of any strategy of refusing to license at the chip and component level.

Chip and component makers will also argue that, under the SSO policies, the license they get must include the full make, sell and use rights which, they will then contend, make their sales to downstream customers fully exhausting of the patentees’ rights. Patentees may react by

agreeing to license at the chip or component level, but reserve the right to set differential royalties based on the type of end-product into which the chip or component will be incorporated. This would still allow the patentee to charge a differential royalty based on the end-product price, or end-user's ability to pay, but the different royalties would be paid up-front by the chip and component makers, not the end customers. The chip or component makers would retort that this is inconsistent with the spirit of the entire market value/smallest saleable unit rule, the whole point of which is to prevent the royalty number awarded as damages from being a function of the end-product price, rather than the true value of the patent itself, because the end product price sweeps into the calculation many product features unrelated to the patent.

To the extent the entire market value rule sheds any light on what "discriminatory" means in the FRAND context, it has to weigh against allowing a "license only to the end user" strategy, or multi-level licensing, or any other practice intended to promote price discrimination based on end-product price or end-user ability to pay.

Contractual Restrictions

Finally, it remains to be seen whether making a FRAND commitment will be interpreted as limiting a patentee's flexibility to impose contractual, as opposed to patent law, restrictions on licensees to achieve price discrimination. Outside the FRAND context, the tendency has been to judge contractual limitations on the basis of contract or antitrust law, or any other applicable law (including state fraud and unfair competition laws), but to restrict patent law principles to the enforcement of rights granted by the patent laws (with patent law enjoying the extra heft of the infringement principle, which can result in liability even for parties who have no contractual relationship with the patentee).

The question is whether FRAND will be read to encompass the entire relationship between patentee and licensee or only rights conferred under patent law, narrowly construed. At first blush, it would seem to exalt form over substance to require SEP holders to license on non-discriminatory terms, but then allow them to bring discrimination in through the back door in the form of contractual restrictions on the licensee.

One way for courts to approach the issue would be to consider the nature of the FRAND commitment made by SEP holders. The FRAND commitment is generally seen as a contract between SEP holder and SSO, with technology users and product makers playing the role of third party beneficiaries.²⁸ As such, the nature of the FRAND commitment itself is not a

question of patent law, but contract law, with the applicable law governed by conflict of law rules. For example, the ETSI Directives state that the FRAND commitment is governed by the law of France, where ETSI is headquartered.²⁹ Viewed from that perspective, contract law doctrines such as the implied covenant of good faith may provide a basis to hold that contractual provisions or other conduct outside the four corners of the license should also be judged against the yardstick of the FRAND commitment.

Finally, those arguing that FRAND principles should be construed broadly enough to limit non-patent contract rights may ponder the inconsistency latent in the Supreme Court's *Quanta* opinion. Justice Thomas's majority opinion refused to carve out method patents from normal exhaustion rules, noting that to do so would invite patentees to avoid patent exhaustion by drafting their claims to describe a method rather than an apparatus.³⁰ But this concern with nipping "end around" strategies in the bud apparently did not extend to contract law. In footnote 7, Justice Thomas stated that the Court's exhaustion ruling did not preclude an argument by LG that its contract rights were violated by Intel's sale to Quanta, a question that was not before the Court, thereby encouraging practitioners to seek ways to contractually limit the restrictions that a strict exhaustion regime would otherwise impose on patentees.³¹ In any event, as noted above, *Quanta* was not a FRAND opinion, so the issue remains unanswered.

Conclusion

As patentees continue to look for ways to extract royalties from all levels of the distribution chain, and chip and component makers push back, one can expect courts to address the flexibility of patentees to control, or extract royalties from, downstream manufacturers and their customers. In the context of standards embodied in chips, such as WiFi and cellular technology, and the multi-component products that use those standards, the courts will have to consider whether the FRAND commitments made by patentees as members of standard setting organizations constitute a limitation on patentees' freedom to devise new and flexible licensing schemes in support of their goal of price discrimination.

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² FRAND refers to the commitment to license on "fair, reasonable and non-discriminatory" terms pursuant to the patent policies of various standard-setting organizations. *See infra* note 7.

³ *See generally, Quanta Computer, Inc. v. LG Electronics, Inc.*, 553 U.S. 617 (2008) (finding patentee's attempt to restrict the scope of authorized re-sale ineffectual).

⁴ A later stage of the same case that gave rise to Judge Robart’s lengthy opinion on how to calculate a FRAND royalty. *Microsoft Corp. v. Motorola, Inc.*, 2013 WL 2111217 (W.D. Wash. April 25, 2013).

⁵ Letter brief for Motorola, *Microsoft Corp. v. Motorola, Inc.*, No. 10-cv-1823 (W.D. Wash., August 16, 2013) (Document 851); letter brief for Microsoft (August 16, 2013) (Document 854).

⁶ *Microsoft Corp. v. Motorola, Inc.*, No. 10-cv-1823, slip op. 5-6 (W.D. Wash., August 26, 2013) (Document 873).

⁷ Institute of Electrical and Electronics Engineers, the European Telecommunications Standards Institute, and the European Telecommunication Union, respectively.

⁸ See Section 6 of the IEEE Standards Association Bylaws, which contains that organization’s Patent Policy. <http://standards.ieee.org/develop/policies/bylaws/sect6-7.html> (last visited April 9, 2014); ETSI Intellectual Property Rights Policy, 20 March 2013, Annex 6 to the ETSI Directives, October 2013, <http://portal.etsi.org/Directives/32directives/oct2013r.pdf>; Common Patent Policy for ITU-T/ITU-R/ISO/IEC, <http://itu.int/en/ITU-T/ipr/Pages/policyi.aspx> (last visited February 11, 2014).

⁹ *USM Corporation v. SPS Technologies, Inc.*, 694 F.2d 505, 512-13 (7th Cir. 1982)(Posner, J.). The basic concept is that if each end user is required to pay only an amount that reflects what the technology is worth to him/her, the maximum number of users will take advantage of it while at the same time generating the largest revenue for the patent holder.

¹⁰ Brief for Qualcomm Inc. as Amicus Curiae in Support of Respondent, p. 20-23, *Quanta Computer, Inc. v. LG Electronics, Inc.*, 553 U.S. 617 (2008) (No. 06-937). Qualcomm’s current licensing policy also maintains that price discrimination through multi-level licensing is appropriate, for the same reasons. See LTE/WiMax Patent Licensing Statement (December 2008), <http://www.qualcomm.com/media/documents/ltewimax-patent-licensing-statement> (last visited March 12, 2014).

¹¹ *Quanta Computer*, 553 U.S. at 637, n. 7.

¹² *Broadcom Corporation v. Qualcomm Incorporated*, 501 F.3d 297 (3rd Cir. 2008).

¹³ By analogy one might consider the Shrimp Peeler antitrust cases: *In re Grand Caillou Packing Co.*, 65 F.T.C. 799, *6 (June 4, 1964); *LaPeyre v. F.T.C.*, 366 F.2d 117 (5th Cir. 1966); *Peelers Co. v. Wendt*, 260 F. Supp. 193 (W.D. Wash. 1966); *Laitram Corp. v. King Crab, Inc.*, 244 F. Supp. 9 (D. Alaska 1965). Those cases generally held that royalty schedules involving volume or seasonal discounts were not necessarily discriminatory, but on the facts presented, price discrimination was being used for anticompetitive purposes, to favor shrimp peelers in one area over another.

¹⁴ Roger C. Brooks and Damien Geradin, *Interpreting and Enforcing the Voluntary FRAND Commitment*, 9 INT’L J. IT STANDARDS AND STANDARDIZATION RESEARCH, No. 1, p. 1, 15-17 (2011).

¹⁵ See, e.g., Judge Robart’s opinion on calculation of a FRAND royalty, in which he made comparisons to royalty rates charged by patent pools. *Microsoft Corp. v. Motorola, Inc.*, 2013 WL 2111217 at *79-82 (W.D. Wash. April 25, 2013).

¹⁶ Richard J. Gilbert, *Deal or No Deal? Licensing Negotiations in Standard-Setting Organizations*, 77 ANTITRUST L. J. 855, 873-75 (2011).

¹⁷ *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970).

¹⁸ *Id.* at 1120 (e.g., factor 8, “The established profitability of the product made under the patent; its commercial success; and its current popularity.” See also factors 10, 11 and 13).

¹⁹ *Microsoft Corp. v. Motorola, Inc.*, 2013 WL 2111217 at *16-20.

²⁰ By 2012, patent holders had declared over 13,600 patents essential to the 4G LTE cellular standard. *Patent & Landscape Analysis of 4G-LTE Technology*, IRUNWAY, 7 (2012), <http://www.irunway.com/images/pdf/iRunway%20-%20Patent%20&%20Landscape%20Analysis%20of%204G-LTE.pdf>.

²¹ The U.S. Patent and Trademark Office reports that it received 576,763 patent applications in 2012, with the number trending steadily upward over the past thirty years. *U.S. Patent Statistics Chart Calendar Years 1963 – 2013*, U.S. Patent and Trademark Office (Feb. 3, 2014), http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm.

²² *Microsoft v. Motorola*, 2103 W.L. 2111217 at *13.

²³ *Id.*

²⁴ Judge Posner (siting by designation as a district court judge) cancelled a pending trial between Motorola and Apple because, among other reasons, Motorola had not presented a damage theory based on the cost to license its patent prior to the patent being declared essential to the standard in question. *Apple, Inc. v. Motorola, Inc.*, 869 F. Supp. 2d 901, 913 (N.D. Ill. 2012).

²⁵ *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 67 (Fed. Cir. 2012) (damage theory based on entire laptop price improper where patented technology related only to one component); *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292 (Fed. Cir. 2011) (expert’s comparison of damages under his model to total Microsoft revenues of \$19 billion supported trial court’s order of a new trial on damages).

²⁶ *LaserDynamics*, 694 F.3d at 70.

²⁷ *Uniloc*, 632 F.3d at 1318-20.

²⁸ *Microsoft v. Motorola*, 2013 WL 2111217 at *2.

²⁹ The ETSI Intellectual Rights Policy, Article 12, states that “The POLICY shall be governed by the laws of France.” *Supra* note 8.

³⁰ *Quanta Computer, Inc. v. LG Electronics, Inc.*, 553 U.S. 617, 629-30 (2008).

³¹ *Id.* at 637, n. 7.