

The IEEE's New IPR Policy: Did the IEEE Shoot Itself in the Foot and Harm Innovation?

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A. INTRODUCTION

In February 2015, following the receipt of a favorable “Business Review Letter” from the Antitrust Division of the Justice Department of the United States, the Institute of Electrical and Electronics Engineers (“the IEEE”), a major standards setting organization (“SSO”), adopted controversial changes to its Intellectual Property Rights (“IPR”) policies that provide some details as to what the IEEE now means by “fair, reasonable and non-discriminatory” (“FRAND”) licensing of standards-essential patents (“SEPs”).

In this note, we analyze and comment upon certain economic and public policy aspects of the recent policy changes. We had serious misgivings about the IEEE’s policy changes and believe there has been (i) damage to the IEEE’s independent even handed posture and now there is (ii) emerging evidence of harm to innovation

In evaluating and commenting on the IEEE IPR policy changes and their aftermath, we believe that context is critical. Accordingly, we will first discuss the standards setting process and its role in promoting innovation and technical progress. We will then discuss the role that SSO’s IPR policies play in the standards setting process more generally.

The importance of standards setting became amplified thirty years ago with the arrival of digital electronics, allowing and requiring a plethora of new standards. The public policy issue is to set governance and policies so as to support a properly functioning independent standard setting system that encourages the development, implementation, and widespread adoption of technology to support standards which in turn facilitate downstream innovation.

The success of standard setting has been amply demonstrated. It is particularly evident in the cellphone/smartphone world where standards have been developed and adopted which have enabled a global mobile communications revolution. We are not aware of complaints that innovation in that sector has been too rapid, except perhaps by certain incumbent providers who have had their market positions significantly eroded. The overwhelming sentiment of consumers and policy makers has been that this development has been very beneficial to society, especially in the developing world. The revolution has been enabled by various entities, including infrastructure providers and network service providers. While it may be device innovation which captures the public’s attention, behind device innovation has been billions of dollars of investment in R&D to develop supporting and enabling technologies across the entire phone ecosystem.

Thus, review and assessment of the standard setting process must recognize the importance of technological platforms which create the opportunities for new systems, products, and process that deliver economic and social benefits to society. To the extent that SSOs became involved in platform development, through supporting and/or shaping business practices (including licensing business practices) then the goal ought to be to ensure that the business practices supported by the SSOs are consistent with maintaining a regime of rapid technological innovation in all the relevant domains of the ecosystem, *i.e.* upstream and downstream, lateral and horizontal. But in order to maintain such a vibrant regime, it is necessary to ensure that successful innovators (including the developers of patented technology incorporated in new technological standards) can receive a return adequate to encourage them both to develop the technology in the first place and to make it available to be incorporated into standards, rather than being kept for the innovator’s own private use.

With this in mind, we focus in particular on FRAND and FRAND licensing. It follows from the framework outlined above that the “Fair” and “Reasonable” criterion should mesh with society’s (and the SSOs’) industrial and public policy objectives. Assuming this includes maintaining or accelerating innovation, then FRAND/RAND necessarily translates, at least conceptually, to setting royalties on SEPs sufficient to draw forth the investment required to sustain innovation at the levels that policy makers deem are appropriate to meet society’s goals. This in turn implies that IPR policies that are likely to reduce returns to innovation should be viewed with skepticism.

Framed this way, FRAND rate determination is best left for negotiation amongst the parties; but if the SSO deems it necessary and desirable through its policies to provide guidance on rates (or principles for rate determination) it should do so paying close attention to the above criteria. The issues are broader than many seem to recognize.

B. IMPORTANCE OF STANDARDIZATION AND IPR POLICIES

Numerous commentators have noted that the IPR policies of many SSOs have historically provided very little in the way of guidance as to what FRAND means. As noted above, we are aware that the IEEE has recently adopted controversial changes to its IPR policies that provide some details as to what the IEEE now means by FRAND. In particular, the IEEE has made a number of specific changes which in our opinion amount to a substantial change in its IPR Policy.³ They include:

1. The provision that “*Reasonable Rate*” shall mean “appropriate compensation to the patent holder for the practice of an Essential Patent Claim *excluding the value*, if any, resulting from the inclusion of that Essential Patent Claim’s technology in the IEEE Standard.” (emphasis added)
2. The provision that the assessment of “Reasonable Rates” “should include, but need not be limited to, the consideration of:
 - a. The value that the functionality of the claimed invention or inventive feature within the Essential Patent Claim contributes to the value of the relevant functionality of the *smallest saleable Compliant Implementation* [of the standard] that practices the Essential Patent Claim,” (emphasis added), coupled with the assertion that a “Compliant Implementation” can be a “component” or “sub-assembly” that practices the standard.”
 - b. The value that the Essential Patent Claim contributes to the smallest saleable Compliant Implementation that practices that claim, *in light of the value* contributed by *all* Essential Patent Claims for the same IEEE Standard practiced in that Compliant Implementation (emphasis added).
 - c. Existing licenses covering use of the Essential Patent Claim, *where such licenses were not obtained under the explicit or implicit threat of a Prohibitive Order*, and where the circumstances and resulting licenses are otherwise sufficiently comparable to the circumstances of the contemplated license.” (emphasis added)

³ The revised IEEE IPR policy (in redline format, showing changes from the prior IPR policy) is available at http://grouper.ieee.org/groups/pp-dialog/drafts_comments/SBBylaws_100614_redline_current.pdf.

3. The provision that “*Reciprocal Licensing*” “shall mean that the Submitter of an [Letter of Authorization, aka a FRAND commitment] has conditioned its granting of a license for its Essential Patent Claims upon the Applicant’s agreement to grant a license to the Submitter with Reasonable Rates and other reasonable licensing terms and conditions to the Applicant’s Essential Patent Claims, if any, for the referenced IEEE Standard, including any amendments, corrigenda, editions, and revisions.” In other words, a FRAND commitment may be made conditional on the licensee agreeing to “reciprocate” by making licenses available for its own essential patented technology, but only for the *same* IEEE standard.
4. The provision that the IEEE “shall provide procedures stating when and the extent to which patent licensing terms may be discussed.” To my knowledge, no such “procedures” have yet been articulated.
5. The provision that an accepted ... [RAND licensing commitment] ... *precludes seeking, or seeking to enforce, a prohibitive order* except as provided in this policy.” (emphasis added), where “as provided in this policy” means:

"The submitter of ... [a RAND licensing commitment]... agrees that *it shall neither seek nor seek to enforce a prohibitive order ...unless the implementer fails to participate in, or to comply with the outcome of an adjudication, including an affirming first-level appellate review, if sought by any party within applicable deadlines, in that jurisdiction by one or more courts that have the authority to ... determine Reasonable Rates and other reasonable terms and conditions; adjudicate patent validity, enforceability, essentiality, and infringement; award monetary damages; and resolve any defenses and counterclaims.*" (emphasis added).

6. A suggestion made by the IEEE’s Patent Committee (“PatCom”), in response to a submission, that it is a “mistake” to believe that patent holders that have made RAND commitments are permitted to license on a portfolio basis, rather than on a patent-claim-by-patent-claim basis.

C. THE DOJ’S ANTITRUST DIVISION APPROVES THE RULE CHANGES

Before adopting the new IPR policy, the IEEE sought a Business Review Letter (BRL) from the Antitrust Division of the U.S. Department of Justice (DOJ). The DOJ provided such a Letter on February 2, 2015,⁴ approving the proposed new IPR policy,⁵ which was subsequently adopted by the IEEE on February 8, 2015.

In our opinion, the Antitrust Division’s analysis was incomplete and its conclusions unwarranted. The primary problem is that the DOJ seemed more concerned with the prospect of “hold up” by owners of

⁴ The BRL is available on the DOJ website at <https://www.justice.gov/atr/response-institute-electrical-and-electronics-engineers-incorporated>.

⁵ The DOJ said “it does not intend presently to challenge the Update if it goes into effect.” DOJ BRL.

SEPs than it was with the prospect of “reverse hold up” (or “hold out”) by implementers who seek to use patented technology without paying fair consideration for it. The IEEE policy change was widely criticized for reducing the royalties paid by implementers and received by patent holders whose technology was incorporated into the standards, without any empirical demonstration that holders of SEPs were being systematically overcompensated. Other commentators have criticized the DOJ’s BRL on similar grounds.⁶

D. TEN CONCERNS

We have been concerned that the recent changes have upset the delicate balance of interests in favor of implementers of standards and against the interests of patent holders who have contributed their technology for use in standards. We are concerned that the changes will reduce the returns that patent holders are likely to be able to earn on their patented inventions that are incorporated into standards. Given the importance of innovation as a key driver of economic growth and given empirical studies that patent holders receive only a small fraction of the social benefits associated with their innovations, any proposal that would have the effect of reducing the returns to innovation would risk adversely affecting the innovation ecosystem in societally-undesirable ways.

We are also concerned that the changes will reduce the economic incentives to contribute technology to standardization efforts and may reduce the incentives to develop the technology in the first place, to the detriment of technological progress and of society as a whole. In our opinion, given the success of the historical standardization efforts of the IEEE, the new policy represents a significant backward step, by reducing innovators’ incentives both to invest in the effort to develop technology in the first place and to contribute their technology for use in standards.

D.1 Seeking Injunctive Relief

Patent holders generally have the right to *seek* (not necessarily *receive*) injunctive relief against those that are using their patented technology without permission. (In the U.S., courts apply a four-factor test, laid out in *eBay v. MercExchange*, in order to decide whether or not to *grant* such relief.) The new policy that patent holders that have made FRAND commitments shall “neither seek nor seek to enforce” injunctive relief (including exclusion orders) unless the prospective licensee refuses to participate in a “full” court-centered litigation (including a first-level appeal) ignores the fundamental role that injunctive relief plays in inducing recalcitrant licensees to “come to the table” to settle patent disputes.

The IEEE’s new policy also amounts to eliminating the possibility of seeking streamlined enforcement (such as an ITC Section 337 exclusion order, which does not fall within the IEEE’s proposed exception, as the ITC is not a “court” and does not have jurisdiction to resolve various issues, such as damages). The IEEE provides no explanation why firms that have made FRAND commitments should be precluded from seeking such expedited relief, given that it is part of the U.S. patent enforcement system.

⁶ See, e.g., Sidak, “The Antitrust Division’s Devaluation of Standard Essential Patents,” 104 *Geo. L.J. Online* 48, 49 (2015). available at <https://www.criterioneconomics.com/docs/antitrust-divisions-devaluation-of-standard-essential-patents.pdf>.

It is worth emphasizing that, unlike suppliers of tangible inputs, patent holders cannot physically withhold their technology from those who are using it without permission. Instead, they have to rely on the legal process to enforce their rights. Litigation is costly, time-consuming and risky. Allowing implementers to continue to use patented technology without paying for it unless and until forced to do so not only deprives patent holders of compensation during the interim (potentially at least partially offset by an award of prejudgment interest), but puts their licensees at a competitive disadvantage vis-à-vis such unlicensed users, discouraging others from taking licenses. Implementers may be able to play a “heads I win, tails I break even” game: if they litigate and are not found to infringe one or more valid claims of the patents in suit, they pay nothing (the “heads I win” aspect); if they litigate and lose, they may have to pay only the rates that others who agreed to take licenses pay (the “tails I break even” aspect). The IEEE’s new policy amounts to ignoring the possibility that an implementer will engage in what some have termed “hold out,” refusing to pay royalties and possibly even refusing to negotiate in good faith for a license until forced by an expensive, time consuming and risky litigation process to take a license. That creates a strong economic incentive to litigate rather than license, exacerbating the “hold out” problem.

D.2 Gains from Standardization

But the IEEE’s suggestion that “reasonable rates” should “*exclud[e] the value, if any, resulting from the inclusion of that Essential Patent Claim’s technology in the IEEE Standard*” amounts to the proposal that patent holders should not receive any of the gains from standardization in the form of a “price effect” on the “reasonable royalty” *rate*. This essentially amounts to the proposition that *all* of the gains from standardization should flow to implementers and/or consumers, and none (except via the volume effect) to patent holders whose technology is incorporated into the standard. It effectively limits patent holders to the rates that would have been negotiated *ex ante*, prior to the technology being incorporated into the standard.

From an economic perspective, this is seriously questionable. There is no *a priori* reason why the gains from standardization (other than the volume effect) should all flow to implementers, and none to patent holders, given the collaborative cooperative welfare-enhancing nature of the standards setting process. Admittedly, limiting patent holders to *ex ante* royalty rates would reduce the prospect of “hold-up.” But to insist that patent holders should receive *none* of “the value, if any, resulting from the inclusion of that Essential Patent Claim’s technology in the IEEE Standard” essentially amounts to denying patent holders from receiving any share of the gains from standardization (other than via the volume effect). In effect, the proposal amounts to a “slippery slope”-type argument that the only way to avoid going down the “slippery slope” toward hold-up is to prevent patent holders from receiving any of the gains from standardization (other than the volume effect), and denying them even a “fair share” of such gains.

D.3 Reliance on Licenses

The IEEE’s new provision that other licenses can be considered in setting “Reasonable Rates” *only* if they were “not obtained under the explicit or implicit threat of a Prohibitive Order” (i.e., an injunction or an exclusion order) ignores the fact that *all* licenses are negotiated “in the shadow of the law” and thus under at least an *implicit* threat of injunctive relief if the implementer does not take a license, but continues to use the patented technology without paying for it. The IEEE’s new policy to disregard the terms of

licenses that were “obtained under the explicit or implicit threat of a Prohibitive Order” essentially amounts to disregarding *all* licenses, despite their clear value in assessing reasonable royalties. It amounts to throwing away clearly relevant information, with no explanation of what information might replace it. A more nuanced response would be to acknowledge that the interpretation of terms in existing licenses could recognize the fact that such licenses were entered into under different circumstances.

D.4 “Smallest Saleable Unit”⁷

The “smallest saleable unit” language derives from a legal doctrine developed in a number of U.S. patent infringement damages cases starting with *Cornell vs. Hewlett-Packard*,⁸ in which the court determined that “reasonable royalty” patent infringement *damages* should be calculated using a *damages* base calculated *as though* all of the infringer’s sales had been made of the “smallest saleable patent practicing unit,” which in that case the judge determined was the “processors” used in “CPU bricks” that were in turn used in large computers. (The defendant’s actual sales were predominantly made at the computer level, not the “processor” level.” Indeed, the defendant did not have either list or transaction prices for the majority of the different processors that it provided; the prices for the others had to be estimated using statistical techniques.)

The IEEE’s new policy is unclear in this regard. They may be suggesting (as the language appears to indicate) that the royalty *rate* should be assessed “as if” the implementer sold the products only at the “smallest saleable unit” level. Or they may be suggesting that both the rate *and* the base (in negotiated licenses) should be based on the “smallest saleable unit.” (Some of the existing case law says that the damages base should be calculated as if the infringer sold all of its units at the “smallest saleable unit” level – *i.e.*, the case law goes to the damages base – but as we read the case law, it is not clear whether the rate should be set on the same premise.) This potential discrepancy between U.S. case law and the new IEEE IPR policy needs to be clarified.

D.5 A “Smallest Saleable Unit” Approach Ignores Values Due To Synergies

It would be one thing if the use of the “smallest saleable unit” fully captured the value that the implementer receives from using the patented technology. But it is a commonplace that the parties to a license negotiation are bargaining over the value to the implementer of being able to use the patented technology. And that value can differ as between the “smallest saleable unit” and other compliant implementation. [Clearly the implementer’s revenues and profits differ as between the products as sold and the “smallest scalable unit.”] Focusing on the “smallest saleable unit” ignores that.

Consider, for example, a patent on cellular communication technology. Suppose that technology can be used in two different products: a basic cellphone that does not contain a digital camera, and a camera phone that does. The camera feature is technologically unrelated to the patented cellular technology. It might be argued that the “smallest saleable unit” is the basic cellphone without the camera technology.

⁷ For a lengthy (and, in my view, persuasive) critique of the “smallest saleable unit” principle in patent infringement damages law, see Sidak, “The Proper Royalty Base for Patent Infringement Damages,” *J. Compet. Law and Econ.*

⁸ 609 F. Supp. 2d 279 (N.D. N.Y., 2009).

But the value to consumers of the camera phone, and thus the value to them of the cellular capability, is enhanced by the ability to share pictures taken with the camera in the phone over the cellular network with others. And conversely the value of the camera capability is enhanced by the ability to send photos via the cellular network. That is, there is a *value synergy* between the camera feature and the cellular capability. Focusing only on the “smallest saleable unit” ignores this source of synergistic value. If, as the IEEE policy now provides, a “reasonable royalty” should be based on the “smallest saleable unit” – *i.e.*, the basic phone – even if the implementer actually sells (and may even predominantly sell) the camera phone containing both features, that denies the patent holder any share of that synergistic value, which can be considerable. In our view, that is not “reasonable” in the sense of “commercially reasonable,” and fails to “adequately compensate” the patent holder for that aspect of the infringement.

D.6 “Smallest Saleable Unit” and the “Value Chain”

In the cellular communications field, as in many other industries, there is a “value chain” consisting of a number of distinct but interrelated levels/markets, with the output of one level in the “value chain” being used as an input into the next level. For example, cellular chipsets are made by chipset manufacturers and sold to cellular handset manufacturers, who incorporate the chipsets into cellular handsets. The handsets are sold either to consumers (indirectly, through retailers) or to cellular service providers, and are used by cellular service providers together with other equipment (cellular base stations, switching equipment, land lines) to provide cellular service. Firms at different levels of the value chain each receive value from being able to use patented technology. The values are different at different levels in the value chain. The total benefit is the sum of the benefits at different levels in the value chain.

The new IEEE policy that a “reasonable royalty” should be measured at the chipset (“component”) level ignores the fact that both handset manufacturers and cellular service providers are also using the patented technology to sell products/services, and that the value that they receive from using the patented technology is unlikely to be reflected in actual chipset prices/profit margins. [It would be one thing if one were to show that chipset manufacturers were able to set the prices of chipsets so as to extract *all* of the value that those “downstream” from them in the “value chain” received from using the patented technology, but that is unlikely given competition at the chipset level, and the IEEE’s analysis does not support such an empirical claim.] Simply put, there is no reason to believe that a royalty assessed at the chipset (“component”) level, especially one assessed with reference to chipset prices and chipset profits, adequately captures the value to those at *other* levels in the value chain – such as handset manufacturers and cellular service providers – of using patented cellular technology. Such royalties are not likely to be “adequate to compensate” for infringement at the handset or cellular service level.

Given the “patent exhaustion” doctrine – a legal proposition that provides, to simplify somewhat, that, once a patent holder has licensed an entity at one level in the value chain, it cannot obtain further royalties from those “downstream” from its licensees in the value chain that buy and use licensed components – saying that a “reasonable royalty” should be assessed at the chipset (component) level implies that the compensation that the patent holder receives is likely to (significantly) underestimate the total value at all stages in the value chain from using the patented technology. [In the absence of the patent exhaustion doctrine, a patent holder could in theory collect royalties at multiple levels in the value chain, reflecting the value associated with using its patented technology at different levels.]

As Chief Judge Davis said in *Commonwealth Scientific & Industrial Research Organization v. Cisco Systems*, a case involving WiLan (802.11) cellular technology: “the benefit of the patent lies in the [technological] idea, not in the small amount of silicon that happens to be where that idea is physically implemented. Basing a royalty solely on chip price is like valuing a copyrighted book based only on the costs of the binding, paper and ink needed to actually produce the physical product. While such a calculation captures the cost of the physical product, it provides no indication of its actual value.”⁹ Similarly, because chipset prices and profits are driven by competition and costs at the chipset level, which are in turn driven by factors such as Moore’s law, there is no reason to believe that royalties based on chipset prices and/or profits will be “adequate to compensate” the patent holder for use of its technology at the handset or cellular service level, especially if chipset manufacturers have not built adequate royalties into the prices they charge for chipsets (as would be the case, for example, if there were widespread infringement).

D.7 “Smallest Saleable Unit” and Existing Licenses

Another problem with appealing to the “smallest saleable unit” is that royalties in real-world licenses, which are the best information about prices actually agreed to for the use of the same or “comparable” technology, are overwhelmingly based, not on the “smallest saleable unit,” but on the products actually sold by the licensee. Above and beyond the concerns expressed above about the IEEE’s rejection of the use of license terms entered into in light of an “explicit or implied” threat of injunctive relief, the current proposed emphasis on the “smallest saleable unit” risks ignoring clearly relevant information.

As such, if one interprets “reasonable” to mean “commercially reasonable” -- consistent with common industry practice – the IEEE’s “smallest saleable unit” policy is not “reasonable” in that sense.

D.8 “Smallest Saleable Patent Practicing Unit” Issues

The IEEE’s reference to the “smallest saleable Compliant Implementation that *practices* that [patent] claim” raises other issues. Patent claims can be written in many ways. Determining whether a particular product does or does not “practice” a given claim is often a disputed issue, turning as it does, not merely on the language of the patent claim and on how that language is construed, but also on the characteristics of the product. It is not uncommon for patent claims to be written at the device level or even at the system level (e.g., a cellular communications system that has certain features) so that the “smallest saleable Compliant Implementation that practices the claim” may require the use of multiple components (e.g., at least a system with multiple cellular handsets and a group of base stations). In such a situation, the chipsets may not themselves infringe the claim, but their suppliers may be found liable for inducement to infringe and/or contributory infringement if their products are used as intended in an infringing fashion. Whether such components would qualify as a “smallest saleable Compliant Implementation that practices the claim” is unclear.

D.9 Reciprocity

The provision that “Reciprocity” be limited to the other party’s “essential” patent claims for the same standard ignores the fact that it is a “reasonable” business practice to seek a broad cross-license allowing both “design freedom” and “freedom to operate,” and those goals may require licenses to (1) non-

⁹ *Commonwealth Scientific & Industrial Research Organization v. Cisco Systems*, No. 6-11-cv-00343, 2014 WL 3805817, at 11 (E.D. Tex, July 23, 2014).

essential patents and (2) patents that are essential for other standards. The obvious antitrust concern is with “tying” standards-essential patents (“SEPs”) for one standard to non-SEPs and/or to SEPs for a different standard. The IEEE apparently has no problem with “tying” SEPs for one standard to cross-licenses for SEPs for the same standard. Its stated rationale¹⁰ for rejecting the possibility that a patent holder might legitimately want to condition and out-license for tis SEPs on the availability of an in-license for the other party’s non-IEEE-standards-related patents makes no economic sense as an *affirmative* justification for the recent change.

D.10 Patent-Claim-By-Patent- Claim Licensing

The revised IEEE IPR policy is silent on the issue of whether patent holders can elect only to license on a portfolio basis, or whether they have an obligation to make licenses available on a patent-by-patent or patent-claim-by-patent claim basis. [The new policy specifies that parties can choose to license on a portfolio basis if they mutually *agree* to do so, but that does not resolve the question. The issue is whether a patent holder has an obligation to make licenses available on a patent-by-patent or patent-claim-by-patent-claim basis if the implementer insists it wishes such a license, and if the patent holder desires a portfolio cross-license.]

The administrative difficulties associated with implementing and administering such patent-claim-by-patent-claim licenses in practice would be formidable. Would the patent holder have to show that particular licensee products satisfy the limitations of a given licensed patent claim in order to be able to collect royalties under such a license? What where the parties dispute patent claim construction, or dispute validity or infringement? [This is one reason why licenses typically call for the licensee to pay royalties based on its sales of “Licensed Products,” a defined term, and why the licensee’s contractual obligations to pay royalties are typically not reduced if certain patent claims are found invalid and/or not infringed. A patent claim-by-patent-claim license would presumably change that.] Given that one common purpose of patent licenses is to achieve “patent peace” and avoid disputes as to whether particular products are or are not licensed under particular patent claims, requiring such a showing would be a major step backward and would be a recipe for contractual disputes over whether or not royalties were owed.

¹⁰ “Regulators and various commenters have suggested that some limitations on reciprocity are appropriate. The draft policy is consistent with those suggestions.”

E. EMERGING CONSEQUENCES OF THE NEW POLICY

In light of the above, it is not surprising that some industry participants – including firms with major patent portfolios related to cellular communications – have already indicated that they do not intend to comply with certain aspects of the new IEEE IPR rules. News stories indicate that Qualcomm,¹¹ InterDigital,¹² Ericsson and Nokia¹³ have already told the IEEE that they do not intend to comply with certain aspects of the new IPR policy, though they have indicated their willingness to continue to submit LOAs that do not comply with new policy and to comply with (honor their commitments made under) the old IEEE IPR policy. It remains to be seen how the IEEE will respond to these statements. In particular, it remains to be seen whether the IEEE will adopt technology from firms that have indicated that they will *not* submit LOAs compliant with the new IPR policy but *will* submit LOAs compliant with the old IPR policy. There clearly is a possibility for “brinkmanship” and/or inefficiency (avoiding the use of societally-beneficial patented technology) if the IEEE does not accept LOAs that do not comport with the new IPR policy.

In an earlier article, we discussed the issue that SSOs must tread warily when adopting and enforcing IPR policies, because of the prospect that, if they adopt rules that some participants see as too onerous, those participants will elect not to participate in the SSO, or will declare that their participation is subject to certain limitations.¹⁴ Such “participation constraints” have now come to the fore.

The chart constructed by Ron D. Katznelson (below) gives tangible expression to our concerns. The IEEE policy change occurred February 2015. What one observes is a quite dramatic decline post March 2015 in the numbers of letters of assurance (LOA’s). LOA’s appear to be cut from 25-45 per quarter to approximately 10 per quarter. Moreover, there were many actual refusals to offer LOA’s, a major break with historical experience. This is direct evidence that some patent holders are, for the first time in history, refusing to grant LOA’s, suggesting very troubled waters for the IEEE and for licensing more generally. This is an unfortunate development but an entirely predictable response to the IEEE policy change. We fear the IEEE shot itself in the foot and harmed standard setting and innovation in this process, all with encouragement from the US Department of Justice.

¹¹ Bloomberg Technology, “Qualcomm Says It Won’t Follow New Wi-Fi Rules on Patents,” <http://www.bloomberg.com/news/articles/2015-02-11/qualcomm-says-new-wi-fi-standard-rules-unfair-may-not-take-part>

¹² IAM, “InterDigital reveals that, like Qualcomm, it is reworking relationship with IEEE after introduction of new patent policy,” <http://www.iam-media.com/Blog/Detail.aspx?g=8c9676dd-6bbd-4d6c-b3e5-9a5ddeb36581>. See also <http://wpuploads.interdigital.com.s3.amazonaws.com/uploads/2015/03/Letter-to-IEEE-SA-PatCom.pdf> (InterDigital letter to IEEE).

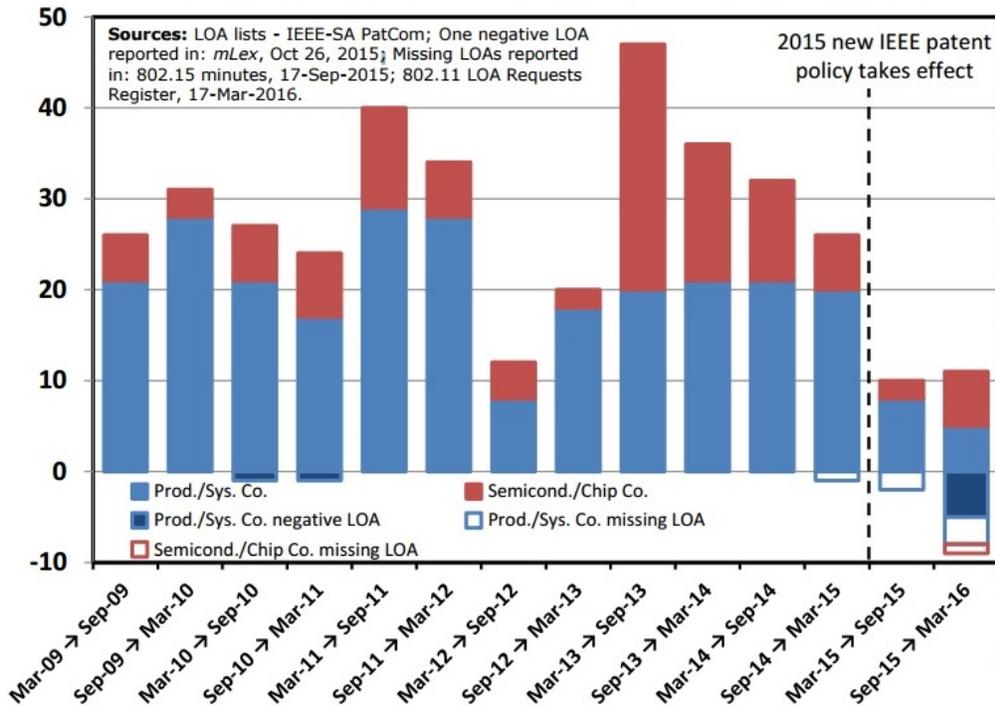
¹³ IAM, “Ericsson and Nokia the latest to confirm that they will not license under the new IEEE patent policy,” <http://www.iam-media.com/blog/detail.aspx?g=d07d0bde-ebd6-495a-aa72-4eecb9dac67d>

¹⁴ Teece and Sherry, “Standards Setting and Antitrust,” 87 Minn. L. Rev 1913 (2003).

Decline in non-duplicate licensing Letters of Assurance (LOAs) from Product/System companies for IEEE standards

LOAs

Presentation of Dr. Ron Katznelson, IEEE GLOBECOM, San Diego, December 2015, corrected and updated for submitted and missing LOAs up to March 30, 2016



Notes:

1. Duplicate LOAs not counted are LOA restatements filed for standards, amendments, or revisions for which a specific or blanket LOA was previously accepted from the same patent holder.
2. "Negative LOA," shown as negative numbers, means LOA in which the patent holder declines to license under the new IEEE patent policy.
3. "Missing LOA," shown as negative numbers, means a disclosed essential patent claim holder from whom IEEE sought but did not receive an Accepted LOA as of March 30, 2016.

Katznelson, Ron D, "Decline in non-duplicate licensing Letters of Assurance (LOAs) from roduct/System companies for IEEE standards", <http://bit.ly/IEEE-LOAs> (May, 2016).

F. OVERALL CONCLUSION

From an economic and public policy perspective, the changes to the IEEE IPR policy have a number of disquieting characteristics. They amount to a substantial substantive change in what is meant by FRAND, in ways that favor implementers at the expense of patent holders. The provision that "reasonable rates" should "exclude" any value associated with incorporating the patented technology into the standard is the most objectionable aspect of the proposed changes, implying as it does that patent holders should not share in the gains from standardization (other than via the volume effect). The emphasis on the "smallest saleable unit" – especially at the "component" level – is also seriously problematic, as it ignores industry practice, "value synergies" between the patented feature and other unpatented features and the value at other levels in the value chain. The provision that firms that have made FRAND commitments should not seek nor enforce injunctive relief amounts to stripping away a useful technique for encouraging recalcitrant implementers from taking broad licenses and achieving "patent peace," "design freedom" and

“freedom to operate,” and significantly restricts the rights that patent holders would otherwise have to *seek* (not necessarily *receive*) injunctive relief, in particular by denying access to certain expedited proceedings (such as an ITC Section 337 exclusion order). The suggestion that patent holders that have made FRAND commitments have an obligation to make licenses available on a patent-claim-by-patent-claim basis would wreak havoc with existing licensing practices in many high-technology industries, would increase transaction costs, and would reduce economic efficiency. In my opinion, the changes will adversely affect the innovation ecosystem, to the detriment of patent holders in the short run and of implementers, consumers and society in the longer run. Finally, concerns about an apparent lack of accepted input from firms that one would have thought would or should have been key participants in the process of developing the proposals raise troubling issues. Announcements by major technology players such as Qualcomm, InterDigital, Ericsson and Nokia that they will not follow the new rules indicates that the IEEE did not give proper consideration to an important constituent... the technology enablers. The result is damage to the innovation process. FRAND system and the standards development process. All in all, we believe that the IEEE’s new rules represent a step backward.