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WHAT HAVE YOU DONE FOR ME LATELY?
HOW THE ‘VALUE OF A STANDARD’ SHOULD BE
APPORTIONED IN FRAND LICENSING ROYALTIES

❖ NOTE ❖

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I. INTRODUCTION

The Northern District of Illinois has been at odds with other circuit courts on how to best deal with FRAND licensing, and how to best constrain the intellectual property rights of inventors whose patents have been unduly empowered by their adoption into industry standards.¹ Most courts have now held that a FRAND royalty “must be premised on the value of the patented feature, not any value added by the standard’s adoption of the patented technology.”² Although well-intentioned to mitigate patent holdup risks, this rule of law misses the mark on how a standard adds value to a technology and vice versa. Indeed, there is good reason to believe both the former and the latter occur, but limited discussion has gone into delineating the two. Considering that technologies are not arbitrarily selected, the value of a standard is likely to have been enriched by the inherent properties of its adopted technologies, justifying the standard’s inclusion within the technologies’ royalties. The inclusion of a standard’s value thus does not necessarily factor in any wrongful holdup value and would, to the contrary, mitigate any patent holdout concerns.

Part II of this note will layout the general framework of how technologies come to be adopted within a standard. Part III of this note will apply the framework of part II to explain how technologies contribute to the value of a standard and justify the standard’s inclusion in a FRAND royalty rate. Part IV of this note will show how the actual contribution of SSOs to a standard’s value can be distinguished to justify a lower FRAND royalty rate.

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1. *In re Innovatio IP Ventures, LLC Patent Litig.*, No. 11 C 9308, 2013 WL 5593609, at *1 (N.D. Ill. Oct. 3, 2013).
 2. *Ericsson, Inc. v. D-Link Sys.*, 773 F.3d 1201, 1232 (Fed. Cir. 2014).

II. BACKGROUND

A. How Standardization Occurs

Industries gain significant advantages when they standardize their practices.³ However, the administrative costs to facilitate the cooperation among many firms to do things a certain way may be too high to justify obtaining the benefits of interoperability, utility, and network effects. Standard Setting Organizations (SSOs) attempt to reduce these administrative costs by acting as the standard instituting body of their respective industry.⁴ The institution of a standard through an SSO is an example of *de jure* standardization. SSO Standards are usually determined through industry members voting and ultimately collectively selecting a standard, including all the technologies to be adopted by the standard.⁵ An SSO then enforces its standard by applying obligatory forces onto its members.

In the absence of *de jure* standardization, standards are still instituted *de facto*. Standards arise spontaneously from competitive forces that compel firms to voluntarily adhere to a specific way of doing things. The strongest force bringing about *de facto* standardization is dominance.⁶ The market may be so loyal to or familiar with a dominant firm's design, process, or strategy that other firms are compelled to follow the dominant firm's lead to survive. *De facto* standardization therefore differs from SSO standardization in that the former selects a standard on the basis of market response, while the latter determines a standard based on voting among industry members.

B. FRAND Apportionment and the Value of the Standard

The difference between *de jure* and *de facto* standardization reflects a distinction that is important but not yet captured in current FRAND analysis. Among the many considerations of FRAND analysis is the question of whether the standard's value should make up part of the FRAND royalty. District Courts have issued different rulings on this matter,⁷ and there is further contention on the international stage.⁸ These FRAND analysis cases have adopted an all or nothing approach to this question, holding either that the value of a standard should be included or not at all. This dualistic approach reflects the broader question of whether to look at FRAND licensing at a time before the standard was instituted (*ex-ante*) or after (*ex-post*).⁹

The argument against including the value of a standard is motivated in part by the higher level objective of FRAND licensing to reverse the higher royalties SEP owners are purported

3. Knut Blind, *The Economics of Standards: Theory, Evidence, Policy* (2004).

4. Wang Ping, *A Brief History of Standards and Standardization Organizations: A Chinese Perspective*, East-West Center Working Papers, Econ. Series, 117.

5. *Id.*

6. Ping, *supra* note 4.

7. See Judge Holderman, holding "a court should consider the importance of the patent portfolio to the standard, considering both the proportion of all patents essential to the standard that are in the portfolio, and also the technical contribution of the patent portfolio as a whole to the standard." in *In re Innovatio IP Ventures, LLC Patent Litig.*, *supra* note 1, eventually held to the contrary in Ericsson.

8. *Unwired Planet v. Huawei*, High Court of Justice Chancery Division Patents Court (2017).

9. Joseph Farrell et al., *Standard Setting, Patents and Hold-Up*, 74 ANTITRUST L.J. 603 (2007).

to command by virtue of patent holdup.¹⁰ The existence of a standard provides systemic structures that help exclude technologies that are not within the standard. As such, including the value of the standard – to the ex-ante proponent – would reflect the wrongful circumstances that FRAND licensing is attempting to correct.¹¹

In spite of holding true to the motivations behind FRAND, the ex-ante approach overlooks any possibility that a patented technology may have very well added value to a standard or contributed to the standard's success. Without any action from SSOs, technologies can intrinsically add value to a standard through superior interoperability,¹² being the preferred technology of consumers, and increasing a standard's adoption.¹³ Examples of non-SSO contributions to the value of a standard can be seen in incremental improvements to a pre-existing standard, such as the IEEE's transition from 2G to 4G networks;¹⁴ as well as through de facto standardization, where technologies partly become standardized due to being the technical preference of consumers.¹⁵ Conversely, the ex-post perspective overvalues what a patented technology does for a standard's value. Here, the contributions of an SSO in suppressing design diversity, and the marketing that goes into increasing a standard's adoption, are all unjustly included in an ex-post FRAND royalty.¹⁶

Because a FRAND licensing agreement should reflect the incremental value added by the patented technology, both ex-ante and ex-post approaches do not serve FRAND royalty calculations well. Patented technologies non-arbitrarily add value to a standard based on aspects of their technical superiority. Still, it is important to note that technologies are not the sole contributor to a standard's value in light of the contributions of design diversity suppression and non-technological factors. The following parts will elaborate on how exactly technologies contribute to a standard's value and how SSOs may still command lower FRAND royalties in spite of this.

III. ANALYSIS

The selection phase is not the genesis of a standard. Standards are akin to customary codes of behavior and expectations that come about through collectivized establishment.¹⁷ Before any selection occurs, a set of options must be created. It is likely that certain technological options that may be adopted into a standard are superior to others. It is also likely that the very prospect of instituting a standard may not have arisen until a technological option presented itself. As a result, there should be some scrutiny when asking if the very act of selecting and instituting a standard – whether they be de jure SSOs or de facto end users – wholly contributes to instituting and adding value to a standard. As such, technologies themselves probably have more of a hand

10. Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991 (2007).

11. *Supra* note 9.

12. Gregory Sidak, *Apportionment, FRAND Royalties, and Comparable Licenses after Ericsson v. D-Link*, 2016 U. Ill. L. Rev. 1809.

13. James M. Utterback and William J. Abernathy, *A Dynamic Model of Product and Process Innovation*, Omega 3(6) (1975) 639-656.

14. *See* Sidak, *supra* note 12.

15. *See* Utterback, *supra* note 13.

16. Janusz Ordover and Allan Shampi, *Implementing the FRAND Commitment*, the Antitrust Source (2014).

17. *See* Ping, *supra* note 4.

to play in creating a standard, which supports the idea that SEPs contribute significantly to the value of a standard.

The functions of SSOs are not necessary to innovate and produce standards. Interoperability, network effects, and economies of scale are all advantages that incentivize private entities to innovate with the goal of standardizing among each other without the intervention of SSOs.¹⁸ Non-dominant firms are happy to conform to a standardized landscape because a standard clearly delineates the norms to follow in order to enter, remain, and innovate in an industry.¹⁹ Conversely, dominant firms are also willing to have others conform to their standard because of the increased licensee base and further establishment of their industry dominance.²⁰ Indeed, recent research is now suggesting that patent holdup is not as rational and profitable for SEP owners compared to simply participating in patent licensing.²¹ This observation shows that standards obtain value far before any action is done by SSOs. Natural market incentives appear to be one of these sources that contribute to a standard's value, mainly by innovating new technologies that make standardization more feasible or viable.

Even in the case of de jure standardization, SSOs do not supplant technologies' contributions to a standard's value. In theory, purely de jure standards would be instituted before any precedential capital, infrastructure, or recognition is established (any sort of pre-existing standardized conditions must have been the result of some de facto standardization or prior de jure standardization).²² Adopting technologies that do not reduce these costs of creating this foundational establishment would create deadweight losses, and the benefits intended by standardization would be reduced. On the other hand, adopting technologies that make a standard more effective and easier to implement would be more sensible and in the interest of both consumers and SSOs. As a result, it is likely that SEPs, regardless of being adopted de jure or de facto, were adopted by SSOs because of their added value to the developing standard.

For the reasons discussed above, there is more to a standard than just its implementation by SSOs or induction by end users. To create a standard, adoptable technologies that make the cost of implementing a standard lower than the benefits of standardization need to be created. Standard implementers such as SSOs play no part in creating these adoptable options.²³ It is the natural incentive to innovate around standardization that brings about the value adding technological options. With this value already added, SSOs and other standard instituting mechanisms add their own value by merely discovering or promoting certain technologies.²⁴ The following part will elaborate on the role SSOs play in discovering and promoting SEPs in a standard, and explain how these contributions can lower a FRAND royalty rate in place of a complete bar of including a standard's value.

18. Urs Gasser and John Palfrey, *When and How ICT Interoperability Drives Innovation*, Berkman Center Research Publication 2007-2008.

19. *Id.*

20. *Id.*

21. J. Gregory Sidak, *Holdup, Royalty Stacking, and the Presumption of Injunctive Relief for Patent Infringement: A Reply to Lemley and Shapiro*, 92 MINN. L. REV. 714, 735 (2008).

22. Blind, *supra* note 3.

23. *Id.*

24. *Id.*

IV. RECOMMENDATIONS

With the inclusion of a standard's value in an SEP's FRAND royalty rate, there may be concerns on what, if not the value of a standard, an SSO may leverage to justify lower FRAND royalty rates. The following recommendations will look to the advantages industry standard setting has over market standard setting that an SSO can leverage to come to better FRAND licensing agreements. As previously stated, standards can arise without SSOs. However, the resulting standards tend to be less optimal than SSO determined ones. Agents further upstream, such as SSO members, have more expertise in the technical aspects of their products than do more downstream players, such as market consumers.²⁵ As a result, industry members are in better positions than market consumers to decide on the best technologies to be instituted into a standard. Along with their expertise, SSO members have more incentives to select on the basis of technicality, whereas the marketplace would be swayed to standardize a technology due to consumer preferences that do not always reflect the technical superiorities of products.²⁶

It is fair to suspect that conflicts of interest within an SSO, such as the ownership of patents and adversarial relationships, will make SSO selection biased. However, recent studies have shown that in spite of these conflicts, SSOs still tend to select the most efficient technological solutions for their standards.²⁷ According to research conducted by Northwestern University International Business Professor, Daniel Spulber, SSOs at best vote unanimously on the most efficient technology and at worst are still in majority with each other.²⁸ This contrasts with how most dominant firms are chosen, based on market shares hovering at most around 50%, which gives much less unanimous justification for adopting a standard.²⁹ Ultimately, standards that are chosen through voting among industry members tend to choose efficient technologies.

The ability to select efficient standards can be used to command lower FRAND rates while still recognizing that SEP owners are entitled to a part of a standard's value. The most straightforward argument is that, sans SSO, an industry would have incurred deadweight losses from instituting a suboptimal standard. Thus, the discount an SSO may apply would be the difference between the value of the selected standard and the value of the standard that would have been instituted de facto.

A more active application of an SSOs' advantages may prove more effective. For example, an SSO, being better equipped to determine more efficient standards than any one firm, can work an agreement to work with the SEP owner in further innovations to the standard. Assuming the SEP owner is also an SSO member, the SSO may agree to disclose and license, at a lower rate, their own innovations that build upon the SEP patented technology.

25. Denzau A. T. and R. P. Parks, 1983, *Existence of Voting-Market Equilibria*, *Journal of Economic Theory*, 30(2), pp. 243-265.

26. *Id.*

27. Daniel F. Spulber, *Standard Setting Organizations and Standard Essential Patents: Voting and Markets*.

28. *Id.*

29. *Global Market Share - Statistics & Facts*, www.statista.com/topics/898/global-market-share/.

V. CONCLUSION

Patent holdup can be a major detriment to innovation if FRAND agreements cannot be reached. However, scrutiny should be applied for any justification to discount a royalty rate if the discount denies value that is rightfully the inventor's. Proceeding without caution would run the risk of disincentivizing the activities that give rise to the created value. Excluding a standard's value in a FRAND royalty, while an easy fix to lower a royalty, does not reflect what an SEP owner is actually entitled to and disincentivizes inventors from innovating from an interoperability standpoint.

Recognizing that licensing agreements in a patent lockup situation can be unfair and unreasonable, there must be a way to justify reaching a royalty rate lower than the pre-FRAND licensing agreement. One possible solution comes from leveraging SSOs' superior abilities to create efficient standards and sharing their potential benefits with the SEP owner. This solution begins to strike the balance between mitigating the undue power that an individual SEP owner may have over its collective industry and maintaining the incentives for individual SEP owners to innovate within the realms of interoperability.