RESPONSE OF

CISCO SYSTEMS, HEWLETT-PACKARD COMPANY, INTERNATIONAL BUSINESS MACHINES CORPORATION, and RESEARCH IN MOTION LTD.

TO

FEDERAL TRADE COMMISSION
REQUEST FOR COMMENT ON STANDARD-SETTING ISSUES

PROJECT NUMBER P11-1204
AUGUST 1, 2011

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Cisco Systems, Hewlett-Packard Company, International Business Machines Corporation, and Research In Motion Ltd. (collectively, the "Commenters") submit

these comments in response to the Federal Trade Commission's Request for Comments and Announcement of Workshop on Standard-Setting Issues (the "RFC").[1]

I. Introduction

The Commenters are among the most innovative companies in the technology industry. They are recognized leaders in the fields of computing, enterprise software, networking, semiconductors, and telecommunications. The Commenters include companies with large and powerful patent portfolios that use the innovations they have created in products ranging from supercomputers to software to smartphones.

Each of the Commenters participates in standards development, and each has contributed both its technology and the efforts of its employees to the process of developing standards at numerous standard-setting organizations ("SSOs"). Consistent with the wide range of products they create, the Commenters' participation in standards development ranges from formal SSOs that develop standards in diverse technologies, for example the Institute of Electrical and Electronics Engineers, to less formal, more specialized SSOs like the Internet Engineering Task Force ("IETF") and the World Wide Web Consortium ("W3C").

The SSOs in which the Commenters regularly participate use intellectual property rights policies with a range of licensing models, including:

- permitting licensing of patents essential to implement a standard on reasonable and non-discriminatory ("RAND") terms;
- favoring licensing of essential patents without monetary compensation but permitting RAND licensing ("default RF"); and

[1] *Request for Comments and Announcement of Workshop on Standard-Setting Issues*, 76 Fed. Reg. 28036 (May 13, 2011), available at http://www.ftc.gov/os/fedreg/2011/05/110509standardsettingfrn.pdf (hereinafter, the "RFC").

- requiring licensing of essential patents on royalty-free terms ("mandatory RF").

The intellectual property rights policies used by the various SSOs in which the Commenters participate differ in other ways as well, including with respect to the rules they contain regarding the disclosure by participants of patents believed to be essential to implement a standard and whether they explicitly seek to bind transferees of essential patents to the licensing commitments given by their predecessors in interest.

As regular participants in standards development, and regular implementers of standards in products ranging from semiconductors to information processing systems and devices to software and telecommunications, the Commenters are united in their strong interest in a standards development process that encourages innovation, leads to predictable licensing costs that are consistent with customer adoption of technology, and discourages the anticompetitive and opportunistic assertion of intellectual property rights that are claimed to be essential to implement standards.

In its Request for Comments, the FTC defines "hold-up" as the ability of a patentee with a patent that reads on a standard to "demand a royalty that reflects not only the ex ante market value of the patented invention, but also added value associated with changes in the marketplace and investments made to implement the standard."[2] The Commenters are aware that some have questioned whether "hold-up," so defined, is a real concern.[3] Those that question the existence of hold-up describe the increasingly frequent litigation between those claiming to own essential patents and

[2] RFC, 78 Fed. Reg. at 28036.

[3] *E.g.*, Comment submitted by the Telecommunications Industry Association to FTC (June 14, 2011) at 4 ("TIA believes that the FTC is presuming that 'patent hold-up' is a widespread and fundamental problem ….TIA does not agree that 'patent hold-up is plaguing the information and communications technology standard development processes.") (available at http://www.ftc.gov/os/comments/patentstandardsworkshop/).

implementers of standards[4] as commercial disputes, implying that implementers of standards are unwilling to pay the reasonable terms that patentees seek.

The Commenters *know* that patent hold-up is a real concern. We know this because we or our suppliers have directly experienced assertions of patents claimed to be essential to standards that we implement in our products, and we understand the bargaining power that owners of essential patents can wield in licensing negotiations. Some of the Commenters have been involved in time-consuming, expensive, and disruptive litigation involving the assertion of patents claimed to be essential to implement standards. Some have negotiated settlements, and agreed to unreasonable licensing terms, to avoid the risk that we would be enjoined from continuing to sell the products we rely upon to meet demand from our customers, pay our employees and suppliers, and fund the continued innovation that has made us leaders in the global technology industry.

Not only does hold-up injure the Commenters and other implementers of standards, but it also causes injury to consumers of products that implement standards. As noted by Professors Farrell and Shapiro and their co-authors, hold-up is "a public policy concern because downstream consumers are harmed when excessive royalties are passed on to them. Downstream consumers also can be harmed when other burdensome terms are imposed in patent licenses and when cumulative innovation is retarded by patent hold-up."[5] Consumers can also be harmed when implementers delay rolling out new standards because of uncertainty regarding licensing terms, as happened with third generation wireless air interface standards UMTS and CDMA2000. As Professor Farrell noted at the close of the FTC's June 21 workshop, though hold-up

[4] *See infra* n. 26 (collecting cases).

[5] Joseph Farrell, John Hayes, Carl Shapiro, and Theresa Sullivan, *Standard Setting, Patents, and Hold-Up*, 74 ANTITRUST L.J. 603, 608 (2007).

in the context of standards development inevitably harms consumers, consumers are "by and large not at the table" when SSOs create IPR policies or when SSO members select technologies for inclusion in a standard.[6]

Because of our interest in a transparent, predictable, fair standards development process, the Commenters welcome the Federal Trade Commission's continued interest in issues at the intersection of standards development, intellectual property law, antitrust law, and competition policy. We encourage the Commission to continue to draw attention to the issue of opportunistic behavior in the standards development process and to steps that SSOs and the companies that participate in standards development can take to address hold-up. In particular, in an area in which antitrust concerns are sometimes misused to defend an unsatisfactory status quo, we welcome the FTC's efforts to clarify the application of antitrust law to SSOs and to provide guidance regarding the steps that participants in standards development can take to reduce the risk of hold-up without raising antitrust concerns.

The body of the Comment is organized to correspond to the headings in the RFC.

II. Disclosure of Potentially Essential Patents

The Commenters believe that patent disclosure obligations can protect the integrity of the standards development process. When information about potentially essential patents is available during the standards development process, participants may be able to use that information to assist in the selection of technologies to be included in a standard.[7] Using that information, participants can evaluate the overall

[6] A webcast of Professor Farrell's comments is available at http://meta.media.qualitytech.com/m/wm/woc-01/COMP008760MOD1/FTC_WM/062111_FTC_Sess3.wvx, beginning at 1:58:45. The quoted statement is at 2:02:44.

[7] U.S. Dep't of Justice and Fed. Trade Comm'n, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION (2007) (hereinafter, "DOJ – FTC 2007 IP Report") at 42

benefit offered by including a proposed feature of a proposed standard against the overall cost associated with including that feature (including information about patent licensing). And they can compare those benefits and costs against the benefits and costs of other technical approaches.

In addition, information about potentially essential patents can lead participants to seek information about licensing terms that they can evaluate before they commit to support the inclusion of a particular proposed feature suggested for inclusion in a standard.[8] Participants may respond to information about potentially essential patents by seeking early licensing commitments. However, information about potentially essential patents to be used to initiate ex ante licensing negotiations should be disclosed when it is still relevant. The development of complex interoperability standards is "path dependent", meaning that choices made early in the standards development process limit the alternatives participants can choose among later.[9] Information about potentially essential patents is most helpful when it is disclosed early in the process of standards development, because information disclosed late may require participants to choose between agreeing to unreasonable licensing terms and abandoning years of

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("Panelists noted that disclosure rules can help avoid hold up by informing SSO members about relevant intellectual property held by those participating in the standard-setting process, thus allowing SSO members jointly to decide whether to incorporate the patented technology in a standard.").

[8] American National Standards Institute, *Guidelines for Implementation of the ANSI Patent Policy* (2011) at § III.A ("Early disclosure permits notice of such patent claims to the standards developer and ANSI in a timely manner, provides participants the greatest opportunity to evaluate the propriety of standardizing the patented technology, and allows patent holders and prospective licensees ample time to negotiate the terms and conditions of licenses outside the standards development process itself.").

[9] As the European Telecommunications Standards Institute (ETSI) *Guidelines on Intellectual Property Rights* note, one effect of late disclosure may be "that ETSI has to change the standard, which in some extreme cases could even include the need to start again with the development of that standard." http://www.etsi.org/WebSite/document/Legal/ETSI_Guide_on_IPRs.pdf, at §2. Recognizing the value of early disclosure, one SSO requires that patents be disclosed within a short period following the formation of a working group tasked with the development of a draft specification (VITA Standards Organization Policies and Procedures, § 10.2.3 (available at http://www.busandboard.com/vso-pp-r2d6.pdf)).

effort to develop a draft standard that would require licenses to patented inventions disclosed late in the process.[10]

Finally, information about potentially essential patents can sometimes be used by participants to try to design around the disclosed patents. At least one SSO explicitly encourages consideration of designing around as one potential response to the disclosure of a potentially essential patent that a participant does not intend to license royalty-free.[11]

SSOs address the issue of patent disclosure in different ways. Many SSOs, including those that adopt the American National Standards Institute's Patent Policy, do not require disclosure of essential patents.[12] Among some more formal SSOs, a common model for patent disclosure requires individuals participating in standards development who are personally aware of a potentially essential patent to disclose that patent to the SSO. At least one SSO supplements the limited obligation to disclose based on personal knowledge by also requiring the individual participant to "ma[k]e a

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[10] The Commenters note that the fact that a patent has been disclosed by its owner does not excuse the patentee (or any subsequent owner of the disclosed patent) from obligations to license on RAND or RF terms imposed by the IPR Policy of the relevant SSO. As discussed further in Part IV of this Comment, the ability of participants to respond to the disclosure of a potentially essential patent by jointly discussing ex ante licensing terms is currently uncertain. That uncertainty decreases the utility of patent declarations as a starting point for efforts to avoid hold-up by negotiating licensing terms during the standards development process, when the negotiating power of participants that expect to implement a standard has not yet been diminished by the sunk costs they incur in implementing standards.

[11] World Wide Web Consortium, *Overview and Summary of Patent Policy* at point 4 (a possible outcome of participant's refusal to license on royalty-free terms is that relevant working group "should be instructed to consider designing around the identified claims.") (available at http://www.w3.org/2004/02/05-patentsummary.html).

[12] *ANSI Essential Requirements*, § 3.1 (available at http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/2010%20ANSI%20Essential%20Requirements%20and%20Related/2010%20ANSI%20Essential%20Requirements.pdf). Though the ANSI Essential Requirements do not mandate patent disclosure, the *Guidelines to the Implementation of the ANSI Patent Policy*, which are "suggestions", note the benefits of "early disclosure of essential patents" to standards development. *See supra* n. 8 (quoting ANSI *Guidelines*).

good faith and reasonable inquiry"[13] into the essential patents the entity he or she represents owns or controls.

SSOs typically limit the disclosure obligation (for example, by requiring disclosures only of patents of which the participant has personal knowledge) to avoid imposing patent search obligations on participants. SSOs avoid requiring patent searches because searches can be difficult for participants, particularly those with larger patent portfolios. Beyond the need to review what may be a large number of patents to determine whether they may be essential to implement a particular standard, compliance with search requirements may pose other challenges. These include the evolution of draft standards, changes to the scope of patents and claims that may occur during the patent prosecution process and (for example, through judicial decisions interpreting patents) even after a patent is issued, and the different interpretations that different patent offices in different countries may give to the same claims.

Smaller, less formal SSOs sometimes dispense with affirmative disclosure obligations, and use IPR policies with default licensing rules. In contrast to the ANSI Patent Policy, which neither requires disclosure nor imposes blanket licensing obligations, in SSOs that use default licensing rules each participant is presumed to have agreed to license any essential patent claim it owns except those it specifically identifies, typically during an exclusion or opt-out review period.[14] Many SSOs that use a default licensing model encourage royalty-free licensing. In SSOs that operate using a

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[13] VME Bus International Trade Association (VITA) Standards Organization, Policies and Procedures (2008) at § 10.2.1, available at http://www.vita.com/vso-pp-r2d4-clean.pdf. VITA specifies the "inquiry" to cover member experts in the standard's field (*e.g.*, those working on the relevant portion of the specification) and attorneys doing patent work in the field. *See* http://www.vita.com/home/VSO/Disclosure/implementation-ex-ante.pdf.

[14] Often the review period comes at the end of the process of specification development, as is true, for example, at the Wireless Gigabit Alliance (IPR policy available at http://wirelessgigabitalliance.org/join/) or the Peripheral Connect Interface Special Interest Group (PCI-SIG) (IPR policy available at http://www.pcisig.com/membership/about_us/bylaws/).

"default RF" model, the effect of making a negative disclosure may be to permit the discloser either to license the disclosed patent on RAND terms rather than RF terms or to exclude the disclosed patent from any licensing obligation. In SSOs where RAND licensing is the default, the effect of making a negative disclosure is to exclude the identified patent from any licensing obligation. At least one significant SSO both permits the use of blanket licensing commitments and requires disclosure of patents that participants in the standards development process believe are essential even from participants that have chosen to make a blanket licensing commitment.[15]

SSO IPR policies also differ relative to whether the obligation to disclose extends only to issued patents, or includes published (and even unpublished) applications as well. There has been a trend toward requiring disclosure of published applications, and some informal SSOs have adopted policies that require participants to disclose unpublished applications, at least to the extent of noting their existence.

As is suggested by the increasing use of default licensing in informal standards development organizations and the widespread use of "blanket" licensing commitments at SSOs like the IEEE Standards Association that permit participants to make such commitments,[16] participants in standards development sometimes forego the information that the identification of specific patents and applications can provide in favor of a broad assurance that participants will license all essential patents they own. In SSOs that use mandatory or default royalty-free licensing models, participants may be comfortable with less information about specific essential patents. However,

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[15] *ETSI Guide on Intellectual Property Rights*, supra n. 9, at § 2.1.3 (noting that use of general licensing commitment "does not take away the obligation for members to disclose" essential patents.

[16] IEEE Standards Association Letter of Assurance for Essential Patent Claims, option E.2, available at https://development.standards.ieee.org/myproject/Public//mytools/mob/loa.pdf. Of the over 200 individual patent declarations made to IEEE for the 802.11 standard and amendments as of July 2011, over 65 percent do not identify individual patents. See http://standards.ieee.org/about/sasb/patcom/pat802_11.html.

given the current lack of consensus regarding what limits the "R" prong of RAND imposes, avoiding intentional non-compliance with disclosure obligations in SSOs that limit the obligation to license to disclosed patents is particularly important.

SSO IPR policies typically do not specify the outcome that the SSO will apply if a participant breaches an obligation to disclose an essential patent.[17] Intentional non-disclosure has been the subject of litigation brought under theories including breach of contract, promissory estoppel, fraud, and private and government antitrust claims. The Commenters believe that intentional non-compliance with disclosure obligations that exist in SSO IPR policies or reflect the shared understanding of participants in the standards development process can threaten the integrity of the standards development process. We favor IPR policies containing clearer disclosure obligations, and favor the availability of effective legal remedies for intentional non-disclosure because those remedies can deter opportunistic behavior.

The Commenters recognize that SSOs typically cannot apply patent disclosure or licensing requirements to parties that have not agreed to be bound by the SSO's IPR policy. This provides prospective participants in standards development with the freedom to choose: they can decide not to participate in standards development and thereby avoid becoming subject to disclosure and licensing obligations.[18] By the same token, SSOs should be free to limit access to draft specifications and related information to participants that subject themselves, including through the act of participation, to disclosure and licensing obligations created by the SSOs IPR policy.

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[17] The VITA Standards Organization is an exception. See VSO Policies and Procedures, *supra* n. 13, at § 10.4.

[18] The freedom not to participate should not extend to permitting the evasion of obligations imposed under IPR policies upon transferees of patents or subsidiaries and other affiliates of SSO participants (who may be bound to licensing commitments given by affiliates under some SSO IPR policies).

Because of the difficulty that SSOs that choose to require the affirmative disclosure of potentially essential patents face in drafting rules that effectively prevent all non-disclosure, participation in standards development, and the interpretation of IPR policies, should rest on a basic – and legally enforceable – expectation that participants will act in good faith. As the Third Circuit wrote in *Broadcom vs. Qualcomm*

> Private standard setting occurs in a consensus-oriented environment, where participants rely on structural protections, such as rules requiring the disclosure of IPRs, to facilitate competition and constrain the exercise of monopoly power. In such an environment, participants are less likely to be wary of deception and may not detect such conduct and take measures to counteract it until after lock-in has occurred. At that point, the resulting harm to competition may be very difficult to correct.[19]

Indeed, the expectation that other participants will act in good faith, including with respect to patent disclosure and licensing obligations, will facilitate the work of standards development by encouraging cooperation between participants toward the common goal of creating effective standards. Likewise, because IPR policies are too often incomplete, the words of an SSO's IPR policy should be supplemented by the shared understanding of participants regarding the obligations the policy created.[20]

III. Commitments to License Essential Patents

[19] 501 F.3d 297, 313 (2007).

[20] *See Qualcomm Inc. v. Broadcom Corp.*, 584 F.3d 1004, 1016 (Fed. Cir. 2008):

> Even if we were to read the written IPR policies as not unambiguously requiring by themselves the aforementioned disclosure obligations, our conclusion as to the disclosure obligations of JVT participants would nonetheless be the same. That is because the language of the JVT IPR policies coupled with the district court's unassailable findings and conclusions as to the JVT participants' understanding of the policies further establishes that the policies imposed disclosure duties on participants (apart from the submission of technical proposals). As previously discussed, even though the *Rambus* court determined that there was not an express disclosure duty in the JEDEC patent policy in that case, it treated the policy as imposing a disclosure duty because the members treated it as imposing a disclosure duty."

(citing *Rambus Inc. v. Infineon Technologies AG*, 318 F.3d 1081, 1098 (Fed. Cir. 2003)).

As frequent contributors of technology to standards, and as implementers of standards, the Commenters believe that a participant's compliance with licensing obligations is fundamental to the integrity of the standards development process. When the Commenters implement standards that were created by SSOs, we necessarily rely on the assurances given by the participants in standards development efforts that patents that read on the final standards will be available to implementers as provided in the relevant SSO IPR policy.[21]

A corollary to the Commenters' reliance on RAND licensing commitments is that the predictability of licensing costs increases if owners of essential patents and implementers of standards share a common understanding of what limits making a RAND commitment imposes on a patentee who is otherwise free to refuse to license.[22] In a standards development exercise in which participants both contribute technology for inclusion in a standard and implement the resulting standard, and in which owners of essential patents do not transfer those patents, the self-interest of participants may create an effective consensus among owners of essential patents and implementers (two groups which may substantially overlap) as to what licensing terms are compliant with the obligation to grant licenses on RAND terms. This consensus may, in fact, have characterized standards development at one time, and may still characterize some standards development efforts today.

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[21] As stated in Apple's counterclaims in *Nokia Corp. v. Apple, Inc.*, C.A. 09-791 GMS, "[t]hose participating in standards development rely on [RAND and FRAND licensing commitments] to assure that the widespread adoption of the standard will not be hindered by patentees seeking to extract unreasonable royalties and terms from those implementing the standard" (Apple Inc.'s Answers, Affirmative Defenses, and Counterclaims (filed December 11, 2009) at Counterclaims ¶ 35. *See also* Complaint, *Microsoft Corporation v. Motorola Inc. and Motorola Mobility, Inc.*, No. 2:10-cv-01823 (W.D. Wash., *filed* Nov. 9, 2010) at ¶¶ 7 and 8; Declaration of Irwin M. Jacobs in Support of Qualcomm's Motion for Partial Summary Judgment to Limit Ericsson's Requested Relief for the Alleged Infringement of the Patents-in-Suit, *Ericsson, Inc. and Telefonaktiebolaget LM Ericsson v. Qualcomm, Inc.*, Civil Action 2-96-CV183 (E.D. Tex., Oct. 2, 1998) at ¶ 9.

[22] 35 USC § 154(a)(1).

However, in their interactions with patentees claiming to own essential patents, Commenters sometimes observe licensing demands that reflect diverging views as to what terms are reasonable and what terms are non-discriminatory. The reasons that the consensus view as to what licensing terms are compliant with RAND has recently eroded include:

- the emergence of participants in standards development with business models that rely on licensing patents essential to implement standards rather than the implementation of the standards themselves;
- the increasingly liquid market for patents, which means that patents claimed to be essential to implement standards are often acquired by Patent Assertion Entities,[23] which may find patents that are essential to implement standards particularly attractive.[24] Unlike contributors of technology that also implement standards, who may hesitate to take aggressive positions as to what licensing terms mean because of a concern that aggressive positions they take will be used against them, PAEs have every reason to view the "R" prong of RAND as imposing little, if any, constraint on their ability to seek what the market – which reflects the significant investments that implementers have made to bring to market products that implement the standard, and often many other standardized and non-standardized features – will bear;

[23] Commenters use the term "Patent Assertion Entities" as the FTC defined that term in its March 2011 IP Marketplace report. Federal Trade Comm'n, THE EVOLVING IP MARKETPLACE: ALIGNING PATENT NOTICE AND REMEDIES WITH COMPETITION (2011) at 8 (hereinafter "IP MARKETPLACE REPORT").

[24] As Professor Stuart Graham, now Chief Economist at the US Patent and Trademark Office, has observed, patents that are essential to implement standards are much more likely to be asserted in litigation than patents generally. Stuart Graham, *Patents and Technology Markets: How is the Market Operating, and Can it be Improved?*, presented at Federal Trade Commission Hearings on The Evolving IP Marketplace, slide 7 (April 17, 2010), available at http://www.ftc.gov/bc/workshops/ipmarketplace/apr17/docs/sgraham.pdf.

- churn in the competitive positions of industry participants, leading to companies that contributed to the development of standards with the goal of implementing standards concluding that they would derive more value from the patents they own by asserting them against implementers rather than continuing to implement themselves.[25]

Taken together, these factors have reduced the consensus among participants in standards development and transferees of potentially essential patents as to what limits a commitment to license on RAND terms imposes on a patentee. This lack of consensus has led to an increasing number of disputes between owners of essential patents and prospective licensees regarding whether offered licensing terms are or are not compliant with RAND.[26]

While some characterize litigation over whether particular terms are compliant with RAND as merely commercial disputes, the increasing pace of such disputes, and their prevalence in widely implemented standards such as 3G wireless and WiFi, suggest that additional definition is needed regarding what RAND means. The issues that the Commenters believe require greater clarity include:

- Who can enforce a RAND licensing commitment?
- What licensing terms are compliant with the "R" and "ND" prongs of RAND?

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[25] *Cf.* Brownyn Hall and Rosemarie Ham Ziedonis, *An Empirical Examination of Patent Litigation in the Semiconductor Industry* (January 2007) at 17 (available at http://elsa.berkeley.edu/~bhhall/papers/HallZiedonis07_PatentLitigation_AEA.pdf) (empirical study of patent litigation in semiconductor industry shows many initiators of patent infringement litigation "are not true 'rivals' but firms that are in the process of exiting the business in one way or another.").

[26] *E.g., Broadcom Corp. v. Qualcomm, Inc.*, 501 F.3d 297 (3d Cir. 2007); *Research in Motion Ltd. v. Motorola Inc.*, 644 F.Supp. 2d 788 (N.D. Tex. 2008); *Agere Systems Guardian Corp. v. Proxim, Inc.,* 190 F. Supp. 2d 726 (D. Del. 2002); *Ericsson, Inc. v. Samsung Electronics Co., Ltd.,* Civ. A. No. 06-63 (E.D. Tex. Apr. 20, 2007); *Apple Inc. v. Nokia Corp.,* C.A. No. 09-1002 (D. Del., *filed* February 24, 2010); *Microsoft Corp. v. Motorola Inc.*, No. 2:10-cv-01823 (W.D. Wash., *filed* Nov. 9, 2010); *Zoran Corp. v. DTS, Inc.,* Case 5:08-cv-04655-JF (N.D. Cal., *filed* Oct. 8, 2008); *ESS Tech., Inc. v. PC-Tel, Inc.*, No. C-99-20292 RMW, 2001 WL 1891713, at *3-6 (N.D. Cal. Nov. 28, 2001); *Intersil Corp. v. Proxim, Inc.*, Civ. No. 01-266 (D. Del. *filed* April 24, 2001); *Townshend v. Rockwell Int'l Corp.*, No. C99-0400 (SBA) (N.D. Cal., Mar. 28. 2000).

- Can an SSO define what RAND means as applied to standards it creates?
- How do the "R" and "ND" prongs of RAND apply to non-monetary licensing terms, specifically reciprocal licensing requirements and defensive suspension commitments that the owner of essential patents may seek?
- Does giving a RAND licensing commitment prevent a participant in standards development from seeking to enjoin implementation of a standard or to exclude products claimed to infringe a patent that is subject to that commitment?
- Do RAND licensing commitments bind transferees and other successors-in-interest to a patent that is subject to such a commitment?

The Commenters provide their views on each of these questions in the discussion that follows.

1. Who can enforce a RAND licensing commitment? A commitment given by a participant in standards development to license essential patents on RAND terms is intended to benefit third parties. Those third parties may be other participants in the development of the standard for which the licensing commitment is given, or any implementer of that standard. Any other rule risks under-enforcement of RAND commitments.[27] For example, limiting enforcement to the SSO only would in many cases prevent effective enforcement, as the SSO will often be reluctant to assert rights on behalf of one participant or group of participants against another. Likewise, limiting

[27] We note that the view that an implementer is an intended third-party beneficiary of a RAND licensing commitment is supported by the only decided case to address the issue directly, *ESS Tech. Inc. v. PC-Tel*, No. C-99-20292 (N.D. Cal.), 1999 WL 33520483, at 5 (N.D. Cal. Nov. 2, 1999). Other decisions appear to assume that implementers are third-party beneficiaries. See Order Granting in Part and Denying in Part Motorola's Motions to Dismiss, *Microsoft Corp. v. Motorola Inc.*, No. C10 1823 JLR (W.D. Wash., June 1, 2011); *Research in Motion Ltd. v. Motorola, Inc.*, 644 F. Supp. 2d 788 (N.D. Tex. 2008). The view that implementers are third-party beneficiaries is also supported by academic commentators, including Mark Lemley (*Intellectual Property Rights and Standard-Setting Organizations,* 90 CAL. L. REV. 1889, 1915 (2002)) and Joseph Scott Miller (*Standard-Setting, Lock-In and The Theory of the Firm,* 40 IND. L. REV. 351, 362 & n. 46 (2007)).

enforcement to SSO participants rather than all implementers to whom the licensing commitment is provided threatens the adoption of standards by non-participants in those SSOs that have rules that require licensing to non-participants. SSOs should clarify their IPR policies to explicitly provide enforcement rights to all those whom a participant claiming to own an essential patent is required to license.

2. What Monetary Terms Are Consistent With the "R" Prong of RAND? The Commenters support the view taken by the Federal Trade Commission in its 2011 IP MARKETPLACE report that the touchstone of patent damages should be the incremental value that a patented technology enjoys versus the next best alternative.[28] In the context of patents claimed to be essential to implement standards, information regarding alternatives that existed at the time a standard was developed, and why those alternatives were not selected, may exist in the records of the SSO.

The Commenters also support the FTC's position that, in evaluating the reasonableness of royalties for patents claimed to be essential to implement standards, the *Georgia-Pacific*[29] hypothetical negotiation should be presumed to take place not "at the time the infringement began"[30] but at the time that the patented technology was selected for inclusion in a standard. Situating the hypothetical negotiation at the time the technology was selected for inclusion in a standard will help avoid rewarding the patentee not for its innovation, but rather for the increased bargaining power that it derives from the sunk costs that implementers of a standard incur in creating products that implement the standard and what may be the "prohibitively high" costs of

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[28] IP MARKETPLACE REPORT at 21-22; *see also id.* at 188-89 (citing *Grain Processing Corp. v. American Maize-Products Co.*, 185 F.3d 1341, 1350-51 (Fed. Cir. 1999)).

[29] *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1118 (S.D.N.Y. 1970).

[30] *Id.* at 1120.

switching away from a standard.[31] This increased bargaining power originates not in the inherent value of patented technology but from the fact that the technology – which may enable one of dozens or hundreds of features in a complex standard – was selected for inclusion.

In assessing what licensing terms are "reasonable," courts applying the *Georgia-Pacific* hypothetical negotiation framework should recognize the reality of standards development in "patent thicket" industries such as those in which the Commenters participate. The implementation of complex technical standards may require licenses to dozens or hundreds of essential patents. For example, the IEEE-SA website identifies over 100 issued US patents, owned by dozens of different entities, that are claimed to be essential to implement the 802.11 WiFi standard.[32] One would not expect the *Georgia-Pacific* hypothetical negotiation to result in a licensee agreeing to pay royalties that, if applied to every patent owned by a third party that is claimed to be essential to implement a standard, would result in aggregate royalties that are inconsistent with the

[31] IP MARKETPLACE REPORT at 22:

> Alternative technologies compete for inclusion in the standard. Once a technology is incorporated into a standard, a firm with a patent reading on the technology can demand a royalty that reflects not only the value of the technology compared to alternatives, but also the value associated with investments made to implement the standard. Switching costs may be prohibitively high when an industry becomes locked into using standardized technology. Were patentees able to obtain the hold-up value, this overcompensation could raise prices for consumers while undermining efficient choices made among technologies competing for inclusion in a standard.

[32] http://standards.ieee.org/about/sasb/patcom/pat802_11.html. The total number of patents claimed to be essential to the 802.11 family of standards is likely to be significantly higher, as the majority of the letters of assurance filed with the IEEE-SA do not identify specific standards, but instead offer a blanket commitment to license all patents that may be essential to implement an 802.11 standard. See http://standards.ieee.org/about/sasb/patcom/pat802_11.html. Nor is 802.11 an isolated example. A study of UMTS, one of the two 3G wireless air interface standards implemented in the United States, estimates that there are over 700 patents, owned by 33 different companies, that are required to implement UMTS. PA Consulting, *Essential Intellectual Property in 3GPP-FDD* (2006) at 17.

cost of commercializing the product that implements the standard.[33] Furthermore, if the accused products that implement a particular standard also implement other standards,[34] then the hypothetical negotiation should include the consideration of anticipated licensing costs associated with patents essential to the other standards as well.

In assessing whether particular licensing terms offered by the owner of patents claimed to be essential to implement a standard do or do not comply with the "R" prong of RAND, courts should generally focus their inquiry on the specific component of a product that is claimed to be infringed and which implements the standard rather than the product as a whole. Technology products often integrate a wide range of functions, some of which are made possible by one or more standards, and many of which reflect innovation that is proprietary to particular companies. For example, a smartphone may perform numerous functions, and much of the differentiation between phone vendors derives from a unique user interface that is not standardized. The "real world earnings" of smartphone vendors may not "derive from real world system sales generated by demand for" [35] features enabled by a patent (or several) that are essential

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[33] *Cf. Georgia-Pacific,* 318 F. Supp. at 1120 (noting that the determination of a reasonable royalty may include consideration of what "a prudent licensee —who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit …."). In the context of a hypothetical negotiation for the license of a patent claimed to be essential to implement a standard, a "prudent licensee" may well consider the potential implications of agreeing to license one or more essential patents from one licensor in the context of other licensors claiming to own patents essential to the same standard.

[34] A recent article estimates that a notebook computer implements no fewer than 251 interoperability standards. Brad Biddle, Andrew White, and Sean Woods, *How Many Standards in a Laptop? (And Other Empirical Questions)* (September 10, 2010) (identifying 251 interoperability standards implemented in a laptop computer). Available at http://ssrn.com/abstract=1619440.

[35] *Cornell Univ. v. Hewlett-Packard Co.*, 609 F. Supp. 2d 279, 288 (N.D.N.Y. 2009). *See also Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1338 (Fed. Cir. 2009) (rejecting application of entire market value rule where the evidence did not support view that technology described in the infringed patent was "the basis – or even a substantial basis – of demand for [the infringing product]").

to a standard (or several) in a device that may implement dozens of standards. The same is true of other products that implement multiple standards and add significant non-standardized aspects that differentiate the products from competitive offerings.[36]

3. Can an SSO define what RAND means for the standards it creates? Given the lack of consensus regarding what licensing terms comply with the "R" prong of RAND, SSOs and their members may wish to include additional definition in the IPR policies of specific standards development organizations. Some of the Commenters participated in the 2005-2007 discussion of changes to the IEEE Standards Association IPR policy, in which such an effort to define RAND was discussed. At the time, one participant in the discussion raised the concern that an effort to define RAND (the specific proposal was to define RAND as based on the ex ante value of a patent) could be seen as "concerted action" by the companies that supported defining RAND in the policy.[37]

An attempt to seek royalties on an entire device based on the implementation of patents essential to implement a standard is alleged in the complaint *in Microsoft Corp. v. Motorola Inc.*, No. 2:10-cv-01823 (W.D. Wash., *filed* Nov. 9, 2010) at ¶ 71), in which Microsoft alleges unreasonableness of Motorola licensing demands based on "software and hardware components of Xbox 360 and other devices which are unrelated to [Motorola's] identified patents".

[36] Our comments disfavoring the application of the entire market value rule to the determination of what royalties are reasonable should not be understood to discourage or prohibit licensors and licensees from agreeing, for their convenience, to identify an entire product as a royalty base and setting a reduced royalty rate that will be applied against sales of that product. For example, the prospective licensee may find it easier to report sales of a product that it tracks, and the licensor may find it easier to audit the system sales rather than the sales of an included component. A one percent royalty applied to a $10 component that implements a standard is the same as a 1/10 percent royalty applied to a $100 product that includes the component, but for which the licensee has available sales information.

[37] The discussion on this point is available on the IEEE-SA Patent Committee list serve, at http://grouper.ieee.org/groups/pp-dialog/email/msg00061.html (adoption of proposed definition of RAND "could be viewed as the result of the concerted action by a handful of participants and the IEEE leadership for purposes of advancing a specific position that favors the proponents competitive advantage at the expense of other participants' positions. At a minimum, careful consideration of such a possibility would seem to be in order.").

The Commenters believe that the FTC could usefully provide guidance to SSOs and their participants regarding whether a decision by a standards development organization to define RAND, perhaps using the concept of ex ante value relative to alternatives that the FTC identifies in the IP MARKETPLACE REPORT, would raise antitrust concerns. The Commenters are concerned that the perception that an effort by an SSO to define with greater specificity what RAND, or the "R" prong in particular, may raise antitrust concerns could discourage SSOs from exploring whether consensus exists among their members to adopt such a definition. The Commenters note that if efforts to define RAND do, in fact, raise antitrust concerns, then, paradoxically, RAND would only be legal if it was ineffective at preventing hold-up.[38] In light of the strong potential for harm to consumers that hold-up creates, the Commenters do not believe that antitrust law mandates this strange result.

4. Applying RAND to Non-Monetary Elements of an Offer to License. The Commenters believe that reciprocal licensing requirements, reciprocal non-assertion requirements, and defensive suspension provisions can provide a licensor that benefits from the reciprocal provisions with significant value. We therefore believe that the value that reciprocal licensing requirements and similar provisions provide should be included along with any monetary terms in the evaluation of whether an offer to license complies with the "R" prong of RAND.

The Commenters also believe that non-monetary aspects of an offer to license, for example reciprocal licenses, non-asserts, and defensive suspension provisions, are properly included in the evaluation of whether particular licensing terms are or are not discriminatory. Compliance with the "ND" prong of RAND does not require that the same monetary licensing terms are extended to licensees with portfolios of different

[38] *Cf.* Carl Shapiro, *Navigating The Patent Thicket* (March 2001) at 10 (noting, regarding SSOs' preference for not defining RAND, that "[p]erversely, by leaving the precise licensing terms vague, this caution can in fact lead to *ex post* hold-up by particular rights holders, contrary both to the goal of enabling innovation and to consumers' interests.").

strength. The value of patents licensed back to the licensor (whether through reciprocal licenses or through non-asserts or defensive suspension provisions) are a distinguishing factor that a licensor can properly take into consideration in setting the monetary and other terms of a license. In appropriate circumstances, the ability of the owner of essential patents to charge less (or nothing) to a licensee in consideration of that licensee's agreement to license back patents it owns can be a way for innovative companies to "monetize" their participation in standards development through reduced licensing costs and broader design freedom.

5. Giving a RAND Commitment Generally Means Surrendering the Right to Enjoin or Exclude. The Commenters believe that giving a RAND commitment should mean that a patentee gives up the right to enjoin or exclude the use, manufacture, sale, or importation of products that implement the standard for which the patentee claims to own essential patents. As patentees with significant portfolios, the Commenters recognize the power of the statutory right to exclude. However, participants that commit to license essential patents are agreeing that they will license others who implement a resulting standard.[39] It would be incongruous to permit an owner of essential patents that made a licensing commitment, or a transferee of patents that are subject to a licensing commitment, nevertheless to seek to prevent continued implementation of a standard as to which it claims to own essential patents. The FTC recognized this incongruity in its IP MARKETPLACE REPORT, where it noted that the fact that a RAND commitment had been given "can provide evidence that denial of an injunction in favor of ongoing royalties will not irreparably harm the patentee."[40]

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[39] The surrender of the right to enjoin should be limited to the specific licensing commitment a participant gave to an SSO. That commitment may run to any implementer, or only to implementations by other participants.

[40] IP MARKETPLACE REPORT at 28.

Disfavoring injunctions or exclusion orders when patents that are subject to RAND licensing commitments are asserted against implementers follows inexorably from the goal of limiting the returns to innovation that the owner of an essential patent should properly enjoy to those that reflect the ex ante value of its patented innovation. The Commenters and other implementers of standards incur significant sunk costs in implementation. These sunk costs include product development and marketing expenses, as well as licensing costs associated with the many other patents that may be required to implement a particular standard and the many other standards that a complex product may implement.

Permitting the owner of a single patent that is essential to one of those standards to exploit the implementer's sunk costs by threatening to enjoin continued implementation necessarily provides the patentee with bargaining power that may far exceed the value of the innovation it, or its predecessor-in-interest, contributed to a standard. Owners of essential patents may use this increased bargaining power to seek licensing terms that are inconsistent with the "R" prong of RAND.[41] The availability of injunctive relief can therefore magnify the market power of patentees claiming to own essential patents, increasing the risk that they will cause hold-up. This is true whether the injunctive relief comes in the form of a preliminary injunction or permanent injunction entered in district court, or an order to exclude issued by the International Trade Commission.[42]

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[41] Regarding the impact of the availability of injunctive relief on negotiations regarding patent valuation, *see generally* Carl Shapiro, *Injunctions, Hold-Up, and Patent Royalties,* available at http://faculty.haas.berkeley.edu/shapiro/royalties.pdf.

[42] The Commenters take no position on whether the rights of the patentee might be protected by other mechanisms. Some of the Commenters believe, for example, that an injunction may be available to a patentee following an early judicial determination that the licensing terms it offered an implementer were consistent with RAND, followed by the continued refusal of the implementer to enter into a licensing agreement. Some of the Commenters believe that, if there are legitimate concerns with the ability of the implementer to satisfy a final judgment, a court might respond to those concerns by requiring the implementer to pay royalties to an escrow agent. The Commenters also take no position as to the

6. A Commitment to License Essential Patents Should Run With Those Patents.

Just as the Commenters believe that the compliance by participants in standards development with licensing commitments they have assumed is crucial to the integrity of the standards development process, the Commenters also believe that it is appropriate that licensing commitments run with patents essential to implement standards so as to bind any subsequent transferee of essential patents that are subject to a licensing commitment. We note that this is true regardless of whether the participant in standards development that gave a licensing commitment acted in good or bad faith in transferring the patents, or whether that participant itself fully complied with disclosure and licensing obligations to which it was subject under the IPR policy of the relevant SSO.

Particularly given the emergence of a liquid market for patents, allowing transferees to evade licensing commitments creates an unacceptable risk that expectations created by licensing commitments will be disappointed, to the detriment of implementers of standards and their customers.[43] Some SSOs, notably the IEEE Standards Association, have sought to address this issue by requiring an entity that has filed a Letter of Assurance with the IEEE-SA in which it commits to license essential

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availability of injunctive relief to the owner of an essential patent that is threatened with suit or sued for infringement by a patentee that itself seeks injunctive relief.

[43] As AT&T noted in a filing it made in Nortel's US bankruptcy proceeding, in which AT&T sought a judicial declaration that any acquirer of patents be subject to licensing commitments given by Nortel to SSOs:

> Relying on the FRAND licensing commitments of Nortel, numerous companies in the telecommunications and technology industries have incorporated Nortel's technologies into their products and services upon establishment of these industry standards. Absent these FRAND obligations, the purchaser of Nortel's intellectual property could engage in 'patent hold-up' of the companies reliant on continued licensing of Nortel patents on a FRAND basis, potentially causing major disruptions to the orderly operation of affected markets.

Limited Objection of AT&T to Sale of Patents Free and Clear of All Claims and Interests, *In re Nortel Networks, et al.*, Chapter 11 Case No. 09-10138 (KG), D. Del., *filed* June 13, 2011 at 2 (Docket No. 5658).

patents to give notice of that Letter of Assurance to any transferee of an essential patent, and to require its transferee to give notice.[44] While such notice provisions are helpful, the Commenters believe that it is appropriate that licensing commitments travel with essential patents to bind even purchasers who do not have notice of licensing commitments given by their predecessors-in-interest.

This rule encourages prospective purchasers of patents to inquire about licensing commitments that may have been given by their predecessors in interest, or, at least, to identify whether uses of the invention claimed in the patent seem to be associated with the implementation of a particular standard. A contrary liability rule, one which permits purchasers without notice to take free of licensing commitments given by their predecessors in interest, will inevitably discourage prospective patent purchasers from inquiring regarding earlier licensing commitments, and will therefore encourage successive transfers of patents to eliminate knowledge.

Though we believe that commitments to license on RAND terms bind transferees of essential patents, it would nevertheless be helpful if more SSO IPR policies contained statements making clear that licensing commitments bind purchasers and other transferees of patents that are the subject of licensing commitments made to the SSO. IPR policies that stated the view of the SSO that licensing commitments bound transferees would make it easier for beneficiaries of licensing commitments to defend against assertions by transferees who claim not to be bound by licensing commitments

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[44] IEEE Standards Association Bylaws, § 6.2 (available at http://standards.ieee.org/develop/policies/bylaws/sect6-7.html#6):

> The Submitter of a Letter of Assurance shall agree (a) to provide notice of a Letter of Assurance either through a Statement of Encumbrance or by binding any assignee or transferee to the terms of such Letter of Assurance; and (b) to require its assignee or transferee to (i) agree to similarly provide such notice and (ii) to bind its assignees or transferees to agree to provide such notice as described in (a) and (b).

made by their predecessors in interest.[45] It would also be helpful to prospective patent purchasers if more SSOs followed the lead of ETSI and the IEEE Standards Association by making information about licensing commitments made by participants in standard-setting available to the public.

The FTC has helpfully made clear that assertions of essential patents by transferees with notice can violate Section 5 of the FTC Act.[46] Ultimately, the Commenters believe that courts will recognize that strong public policy considerations require treating licensing commitments given to SSOs as obligations that run with a patent, just as the law recognizes that licensing commitments run with patents. Hopefully increased attention to the issue of the compliance of transferees with licensing commitments made by their predecessors in interest to SSOs will reduce the frequency with which this troubling issue arises.

IV. Disclosure, Discussion, and Negotiation of Licensing Terms During Standard Setting

In addition to contributing numerous patented innovations for use in standards, each of the Commenters implement standards in products we develop. Some of us have built billion-dollar businesses on products that implement standards such as

[45] Of course, the principle that a transferee of a patent takes subject to licenses granted by its transferor, (*In re Cybernetic Servs., Inc.*, 252 F.3d 1039, 1052 (9th Cir. 2001); *Sanofi S.A. v. Med-Tech Veterinarian Products, Inc.*, 565 F. Supp. 931, 939 (D.N.J. 1983)), as applied to licensing commitments given to SSOs, should only apply to require a transferee to grant licenses to the same set of licensees to which its predecessor in interest was obligated to license. So, for example, if an IPR policy only required that a participant grant licenses to other participants, a transferee would be free to refuse to grant a license to a non-participant.

[46] *In the Matter of Negotiated Data Solutions*, Docket No. C-4234 (Complaint filed September 22, 2008) (available at http://www.ftc.gov/os/caselist/0510094/080923ndscomplaint.pdf). *See also Rembrandt Technologies, L.P. v. Harris Corp.*, C.A. No. 07C-09-059 (JRS) (Delaware Super. Ct., New Castle County) (October 31, 2008) (holding that licensing commitment given by AT&T bound subsequent acquirer of essential patent); European Commission Press Release, "Antitrust: Commission Welcomes IPCom's Public FRAND Delcaration" (December 10, 2009) (available at http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/549&format=HTML&aged=0&language=EN).

Ethernet, WiFi, UMTS, and XML. One of the ways in which we improve the products we develop is by implementing new standards that improve the functionality of the products we make and thus encourage customers to purchase new products. We have every reason to want to include the best available technology in the standards that we implement in the products we develop. We also use interoperability standards as a platform on which to create further innovations, creating differentiation between the products our companies make and the offerings of our competitors while preserving the interoperability that our customers expect.

However, to make our products affordable, and thereby to expand the number of customers that will buy them, we try to balance the improvement that including particular technologies will bring to standards against the marginal cost associated with that technology. The availability of information about licensing terms during the standards development process helps us achieve that balance. As participants in standards development who are also prospective implementers of standards, we can consider that information as we choose between alternative technologies proposed for inclusion in a standard.

Unfortunately, for some time there has been an incorrect presumption within SSOs and among participants in standards development that including information about licensing terms as an input to the decisions participants in standards development make regarding what technologies to select for inclusion in a standard would raise antitrust concerns.[47] Antitrust enforcement agencies in the United States

[47] As then FTC Chairman Deborah Majoras noted in a 2005 speech, antitrust concerns had caused "some SSOs and their participants" to "hesitate[] to allow unilateral announcements of royalty rates by … firms that own the technology being considered for incorporation into the standard, settling instead for rules that demand RAND terms for members." Speech, *Recognizing the Pro-Competitive Potential of Royalty Discussions in Standard Setting*, at 6 (September 23, 2005), available at http://www.ftc.gov/speeches/majoras/050923stanford.pdf). Assistant Attorney General for Antitrust R. Hewitt Pate similarly observed in a 2005 speech that "Some standards development organizations have reported to the Department of Justice that they currently avoid any discussion of actual royalty rates, due in part to fear of antitrust liability." Speech, *Competition and Intellectual Property Rights in the U.S.:*

and Europe have helpfully addressed this concern by stating unequivocally that the voluntary, unilateral disclosure of licensing terms by a participant in standards development does *not* raise antitrust concerns.[48]

What is less clear is what participants in standards development can do with information revealed in the ex ante disclosures of licensing terms that other participants make. In their 2007 IP Report, the Federal Trade Commission and the Antitrust Division observed that:

> In most cases, it is likely that the Agencies would find that joint *ex ante* activity undertaken by an SSO or its members to establish licensing terms as part of the standard-setting process is likely to confer substantial procompetitive benefits by avoiding hold up that could occur after a standard is set, and this would be an important element of a rule of reason analysis.[49]

The Commenters agree that the rule of reason should be the analytical framework used to assess the validity of joint discussion and negotiation of licensing terms during

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Licensing Freedom and the Limits of Antitrust at 9 (June 3, 2005), available at http://www.justice.gov/atr/public/speeches/209359.pdf (hereinafter "Pate Speech").

[48] DOJ-FTC IP Report at 54:

> First, an IP holder's voluntary and unilateral disclosure of its licensing terms, including its royalty rate, is not a collective act subject to review under section 1 of the Sherman Act. Further, a unilateral announcement of a price before "selling" the technology to the standard setting body (without more) cannot be exclusionary conduct and therefore cannot violate section 2.

See also Guidelines on the Applicability of Article 101 of the Treaty on the Functioning of the European Union to Horizontal Cooperation Agreements (January 2011) at ¶ 299:

> Therefore, should a standard-setting organisation's IPR policy choose to provide for IPR holders to individually disclose their most restrictive licensing terms, including the maximum royalty rates they would charge, prior to the adoption of the standard, this will normally not lead to a restriction of competition within the meaning of Article 101(1). Such unilateral ex ante disclosures of most restrictive licensing terms would be one way to enable the standard-setting organisation to take an informed decision based on the disadvantages and advantages of different alternative technologies, not only from a technical perspective but also from a pricing perspective.

[49] DOJ-FTC IP Report at 52.

standards development. In light of the potential that such joint discussions and negotiations have for avoiding opportunistic behavior by patentees claiming to own patents essential to implement standards, it cannot plausibly be argued that joint discussion or negotiation of licensing terms during the standards development process would "always or almost always tend to restrict competition and decrease output" or "have manifestly anticompetitive effects".[50] As with other examples of rule-of-reason analysis involving collective decision-making by independent actors, a critical factor in the rule of reason analysis is the market power of the participants in the joint discussion or negotiation.[51] For this reason, efforts to condemn any negotiations or discussions of licensing terms other than bilateral negotiations are inconsistent with the Supreme Court's decisions, beginning with *Northwest Wholesale,* to evaluate group refusals to deal under the rule of reason. Rather, the rule of reason inquiry should include an examination of the collective market power of the prospective licensees, not whether the discussions or negotiations involve one or more prospective licensees.[52]

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[50] *Leegin Creative Products, Inc. v. PSKS, Inc.*, 551 US 877, ___, 127 S. Ct. 2705, 2713 (2007) (internal quotations and citations omitted). *But see Golden Bridge Tech., Inc. v. Nokia, et al.*, 416 F. Supp. 2d. 525, 532 (E.D. Tex. 2006), *rev'd on other grounds, Golden Bridge Tech., Inc. v. Motorola Inc.*, 547 F.3d 266 (5th Cir. 2008) (refusing to dismiss complaint alleging agreement to exclude technology from a standard was *per se* violation of Sherman Act).

[51] *Northwest Wholesale Stationers v. Pacific Stationery & Printing Co.*, 472 US 284, 298 (1985); *Wallace v. International Business Machines, Inc.*, 467 F.3d 1104, 1107 (7th Cir. 2006) (rejecting challenge to use of open-source software license where plaintiff did not allege that software covered by license had large market share "or threatens consumer welfare in the long run"); *Capitol Imaging Assocs. v. Mohawk Valley Medical Assoc.*, 996 F.2d 537, 546 (2d Cir. 1993) ("we recognize that in most cases where horizontal restraints on competition are alleged, market power remains a highly relevant factor in rule of reason analysis because market power bears a particularly strong relationship to a party's ability to injure competition.").

[52] See Antitrust Division and Federal Trade Comm'n, STATEMENTS OF ANTITRUST ENFORCEMENT POLICY IN HEALTH CARE (August 1996) at 53-54:

> Joint purchasing arrangements are unlikely to raise antitrust concerns unless (1) the arrangement accounts for so large a portion of the purchases of a product or service that it can effectively exercise market power in the purchase of the product or service, or (2) the products or services being purchased jointly account for so large a proportion of the total cost of the services being

Some contend that joint ex ante discussions or negotiations of licensing terms will discourage innovation or reduce royalties below the competitive level (that is to say, the level that reflects the ex ante value of the patented invention, not the value that the patented invention gains when it is included in a standard).[53] In general, that notion may be unwarranted, in that implementers of standards have strong reasons to favor the inclusion of innovative technology in standards.

First, participants in standards development who implement standards will often themselves be owners of patents that are essential to implement the same standard. This is true of each of the Commenters. Participants in standards development that contribute their patented innovations to standards and implement those standards therefore have competing interests: as implementers, they may prefer that royalties be low, but as patentees they may favor high royalties. There is no reason to believe that participants that implement standards will seek to suppress royalty rates.

Second, even participants who do not own patents essential to implement a particular standard will favor the inclusion of the best technology in a standard because that technology will drive sales of their products that implement the standard. Implementers of standards recognize that including innovative technologies in a

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> sold by the participants that the joint purchasing arrangement may facilitate price fixing or otherwise reduce competition. If neither factor is present, the joint purchasing arrangement will not present competitive concerns.

The Commenters also note that bilateral licensing discussions, whether they occur before or after the completion of a standard, are often protected under Non-Disclosure Agreements which may cover not only the licensing agreement between the parties but also initial offers to license and responses. While the use of non-disclosure agreements to protect licensing negotiations and agreements may be entirely appropriate, even multiple bilateral licensing negotiations occurring before a standard is selected but under NDAs can prevent the use of information regarding licensing terms by participants as an input to collective decisions regarding the selection of technologies for inclusion in a standard, as well as effectively preventing any participant from verifying that a would-be licensor is complying with its obligation to license essential patents under non-discriminatory terms.

[53] See *ante* at 16.

standard can lead to network effects, including greater economies of scale in the production of components and increasing adoption of interoperable products. The creation of a larger market, of course, benefits implementers of standards by increasing the size of the market available to them.

For both these reasons, the antitrust analysis of joint discussion and negotiation of licensing terms should not be premised on the assumption that participants in standards development who hope to implement standards in the products they sell will want to drive licensing costs below the competitive level. That analysis should also recognize that innovation in standards development is often motivated by reasons other than prospective royalties. Numerous examples in the history of standards development support the view that motivations other than patent licensing have led to the creation of widely-implemented standards. Ethernet, the pervasive local area networking standard, was initially created based on an ex ante 1,000 dollar fully paid-up licensing commitment given by Digital Equipment Corporation, Intel, and Xerox.[54] More recently, companies interested in promoting particular technologies have formed special interest groups or consortia that operate under default or mandatory RF models that have created pervasive standards. Some examples are Universal Serial Bus[55] and Bluetooth[56], the leading wired and wireless interoperability standards for short-range communications. Leading web services standards such as XML and CSS have been developed by the World Wide Web Consortium, which operates under a default RF IPR

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[54] Carl Shapiro and Hal Varian, INFORMATION RULES (1999) at 253. *See generally* Urs Von Burg, THE TRIUMPH OF ETHERNET (2001) at 102-107 (discussing motivations of Digital, Intel, and Xerox to create open standard).

[55] Universal Serial Bus v. 3.0 Adopter's Agreement, § 2.1 (available at http://www.usb.org/developers/docs/USB_3_0_Adopters_Agreement_Final_020411.pdf).

[56] Bluetooth Patent/Copyright License Agreement, § 5 (available at https://www.bluetooth.org/Membership/agreements.htm).

policy.[57] Likewise, DOCSIS, the standard used by cable television operators to provide broadband internet services to over 42 million homes and businesses in the United States,[58] was developed under the auspices of CableLabs, an SSO with a default RF licensing model.[59]

The widespread adoption of standards such as Bluetooth, DOCSIS, CSS, Ethernet, USB and XML reminds us that innovation in standards development springs from many sources. As noted previously, participants are often motivated to contribute technology because they wish to implement the resulting standard in the products they make. Participants are also motivated to generate and contribute technology to standards because owning essential patents improves their defensive patent position relative to competitors, a standard-specific example of the broader practice of defensive innovation and patenting in technology industries.[60] Therefore, predictions that joint ex ante discussion and negotiation of licensing terms will discourage innovation should be viewed with skepticism. By contrast, the benefits of ex ante discussion and negotiation of licensing terms, both providing more predictability to implementers of standards regarding future licensing costs and avoiding hold-up, are apparent.

The Commenters recognize the practical issues that ex ante discussions and negotiations of licensing terms may raise. As frequent licensors of intellectual property, the Commenters understand that licensing negotiations are complex, and that the

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[57] See Overview and Summary of W3C Patent Policy, available at http://www.w3.org/2004/02/05-patentsummary.html.

[58] National Cable Television Association website, http://www.ncta.com/IssueBriefs/Broadband-Deployment.aspx.

[59] Data Over Cable Service Interface Specifications License Agreement, § 2, available at http://www.cablelabs.com/cablemodem/downloads/License_Agreement.pdf.

[60] *See generally* Gideon Parchomovsky & R. Polk Wagner, *Patent Portfolios*, 154 U. PA. L. REV.1 (2005) (describing patenting to improve defensive positions).

patents that implementers of standards desire to license may include both essential and non-essential patents. But the fact that information that is available about licensing terms ex ante may be incomplete or imperfect is not a sufficient reason to prevent participants in standards development from considering that information.[61]

In too many SSOs, standards development today is a world in which, to quote Intel General Counsel (and former Assistant Attorney General for Antitrust) Douglas Melamed, participants "come out of" the standards development process "with absolutely no idea what it's going to cost to implement the standard …."[62] In that world, the Commenters believe that the availability of even imperfect information, and the ability of participants to assess that information collectively, just as they make collective decisions regarding the relative technical merits of competing technology proposals, could significantly improve the selection of technology for inclusion in standards and therefore mitigate the problem of hold-up.

The statement in the 2007 DOJ-FTC IP Report regarding rule of reason treatment for joint discussion and negotiation was an important signal to SSOs and participants that they should re-evaluate current rules and practices that discourage the availability and use of information about licensing terms. However, SSOs and their participants remain concerned with antitrust risks.[63] Because of their sensitivity to antitrust

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[61] *Cf. National Society of Prof'l Engineers v. US*, 435 US 679, 692 (1978) (because "price is the central nervous system of our economy", Supreme Court rejects antitrust defendant's argument that restriction on the availability of pricing information "is justified because bidding on engineering services is inherently imprecise, would lead to deceptively low bids, and would thereby tempt individual engineers to do inferior work with consequent risk to public safety and health") (internal quotations omitted).

[62] Transcript of United States Patent and Trademark Office, United States Department of Justice Antitrust Division, and Federal Trade Commission Hearing, The Intersection of Competition Policy and Patent Policy: Implications for Promoting Innovation (May 26, 2010) at 235:4-6, available at http://www.ftc.gov/bc/workshops/ipmarketplace/may26/transcript.pdf.

[63] SSOs have been subjected to antitrust liability for the acts of participants in standards development. *American Soc'y of Mech. Engineers v. Hydrolevel Corp.*, 456 US 556 (1982).

concerns, SSOs do not want to operate at what they perceive to be the edge of legality. They therefore seek to adopt rules that create a margin of safety for themselves. They view bright-line rules as particularly valuable, and respond to ambiguity by avoiding any possibility of risk.

Because SSOs are consensus-based organizations, opponents of reform can use the perception of antitrust risk to delay or prevent progressive changes in IPR policies, including changes that could protect implementers and consumers from the risk of hold-up. To prevent perceived antitrust concerns from being misused to perpetuate harm to competition,[64] the FTC could usefully expand on the views expressed in the 2007 report by providing additional guidance to SSOs and participants concerning the factors that make joint discussion and negotiation more likely or less likely to survive a rule of reason challenge. The FTC's views would help inform the discussion of ex ante disclosure of licensing terms within SSOs, and could encourage SSOs to experiment with rules that permit or even facilitate joint discussion of licensing terms.

V. Conclusion

The Commenters appreciate the FTC's continued interest in issues at the intersection of standards development, intellectual property law, and antitrust. We hope that the views expressed in this Comment are helpful to the Commission as it considers the problem of hold-up in standards development, and identifies potential solutions.

[64] *Cf.* Pate Speech, *supra* n. 47, at 9 (noting, in the context of SSO consideration of joint discussion of royalty rates, that "[i]t would be a strange result if antitrust policy is being used to prevent price competition.").