FTC PATENT STANDARDS WORKSHOP

Project No. P11-1204

COMMENTS OF QUALCOMM INCORPORATED

June 13, 2011

EXECUTIVE SUMMARY

The topics raised in the Commission's Request for Comments particularly against the background of its March 2011 report "The Evolving IP Marketplace"—are of serious import to Qualcomm and to American knowledge and innovation-based businesses generally. Any attempts to alter existing law and the current balance of interests that surrounds technology licensing could affect the success of voluntary standards development; undermine the ability of American companies to recover investments in R&D, invention, and innovation; reduce the motivation to make such investments; and ultimately harm consumers and weaken the position of the U.S. as the leading source of next-generation technologies. Even if ultimately not implemented as law or policy by the U.S. government, incautious commentary by the Commission could send the wrong message and encourage governmental action in other jurisdictions that would have these effects, to the grave detriment of U.S. business, U.S. jobs, U.S. revenues from international licensing, and U.S. competitiveness.

Qualcomm's comments are divided into six parts.

Part I explains that Qualcomm is both licensor and licensee of patents reading on standard-compliant products, and an active participant in organizations that develop standards in the wireless industry, and is thus particularly qualified to address the issues raised by the Commission's report and Request for Comments.

Part II demonstrates that the purported concern about "unknown essential patents" and suggestions that SSOs adopt more rigorous disclosure rules are misplaced. In particular, existing disclosure rules are generally working well, and "waiting in the weeds" to ambush unsuspecting standards implementers is simply not a viable strategy for SSO member patentees, the only patentees to whom SSO disclosure rules would apply. More onerous SSO patent disclosure rules, of course, can do nothing to control the behavior of non-members.

Part III lays out some of the market dynamics that explain why, after years of theorizing and speculating about patent hold-up, the proponents of replacing marketdriven negotiations as the means of establishing license terms with intervention by courts in the U.S. and competition law agencies abroad have still been unable to provide any empirical or other evidence that license fees are harming innovation or consumers. Among other things, bilateral *ex ante* negotiations between patentees and implementers are common; in addition, because standard-setting is a "repeat game", patentees that attempt to hold up an industry *ex post* can be severely punished through exclusion of their patents from revised or new standards. For these and other reasons, it is unnecessary for antitrust agencies to encourage implementer members of SSOs to act as monopsonistic buyer cartels to dictate to individual patentees the fees they may charge. Quite the contrary, encouraging monopsonistic bargaining by technology consumers (manufacturers) to drive down the price of IPR inputs could have a devastating impact on incentives to invest in basic R&D.

Parts III and IV explain how SSO RAND policies and contracts as they now exist have successfully served as an additional safeguard against conduct that could jeopardize implementation of a standard. The alleged "imprecision" of RAND is no greater than what has been found to be inevitable and workable in the patent law context of "reasonable royalties", and has not stopped RAND claims from being asserted and settled. The infrequency of those claims is in fact further proof that RAND is working. The real-world fact is that current SSO IPR policies and practices, combined with currently available tools for enforcing RAND, are demonstrably successful in achieving their primary goals: to motivate innovators to invest in developing new technology while ensuring the legal and practical availability of necessary licenses for implementers, thus creating new value for the industry, new, advanced devices and services for consumers, and U.S. jobs. The outcry of patent hold-up from equipment manufacturers or theoretical speculation by some academics is not sound evidence of a problem; absent a record that these self-interested participants in the value chain have not established, such complaints represent nothing more than an understandable desire to transfer additional profits to themselves and away from the owners of the inventions on which their products depend.

Part V demonstrates that proposals to cap infringement damages and ongoing royalties based on assessments of the "incremental value" of the patented technology over available alternatives *after* the patentee has sunk its investment but *prior* to investment by the infringer ignore the collective judgment of Congress, the Administration, the federal judiciary, and the vast majority of patent-intensive industries, all of which have rejected the same or similar proposals in one guise or another. Even if it could be measured with any confidence, an incremental value standard on its face implements "hold-up" of licensors by licensees, resulting in radical undercompensation for high-risk R&D investment and depressing incentives for future investment. Those who have urged the incremental value test on the Commission have identified no public policy reason to justify such a massive transfer of profits away from one industry segment to themselves. The Commission should expand its view to take into full account the negative implications of this "reverse hold-up" economic distortion to the growth of the U.S. economy. Finally, Part VI shows that there is no reason to add any presumption or other modification to the framework for injunctions against infringement set forth in the Supreme Court's decisions.

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COMMENTS OF QUALCOMM INCORPORATED PATENT STANDARDS WORKSHOP (PROJECT NO. P11-1204)

Qualcomm appreciates the opportunity to submit comments in response to the Commission's Request for Comments ("RFC"),¹ and to participate in the workshop on Standard-Setting Issues scheduled for June 21, 2011. The Commission's actions and comments regarding the topics raised in the RFC—particularly against the background of its March 2011 report "The Evolving IP Marketplace" (the "Report")—are of serious import to Qualcomm and to American knowledge and innovation-based businesses generally. Unwise intervention in the current balance of interests that surrounds technology licensing could affect the success of voluntary standards development; impair the ability of American companies to recover investments in R&D, invention and innovation; reduce the motivation to make such investments and create high-skilled U.S. jobs; and ultimately harm consumers and weaken the position of the U.S. as the leading source of next-generation technologies. Indeed, incautious comment by the Commission, even if ultimately not implemented as law or policy by the U.S. government or courts, could spur and encourage governmental action in other jurisdictions that would have these effects, to the grave detriment of U.S. business, U.S. job maintenance and creation, U.S. revenues from international licensing, and ultimately U.S. competitiveness.

Qualcomm offers these comments to explain the foregoing risks in light of the success to date of the existing standards process, and to avoid unnecessary policy developments or pronouncements based on legal, economic and policy positions not

¹ Federal Trade Commission: Request for Comments and Announcement of Workshop on Standard-Setting Issues, 76 Fed. Reg. 28,036 (May 13, 2011) [hereinafter RFC].

justified by documented facts, and without due consideration of potential negative impacts and unintended consequences.

Indeed, Qualcomm submits that if the Commission is able to develop a record based on facts rather than opinion and speculation from participants with particular interests, it will be well positioned to reinforce the success of the current voluntary standards environment in the U.S. (and internationally), and will discover that there is and has been no real-world "hold-up" problem attributable to standardization.

I. QUALCOMM'S INTEREST AND EXPERIENCE

Qualcomm has considerable experience in technology standardization, development and licensing of a significant patent portfolio on a global basis. The perspectives reflected here are drawn from the company's practical exposure to and participation in these activities for more than two decades in the fast-changing and fiercely competitive global wireless information technology and communications sector.

Because Qualcomm has truly massive investments and interests on both sides of the licensor/manufacturer "tension", it lives that tension internally on a daily basis. Qualcomm also has extensive, direct understanding of the dynamics of standardsetting, participating as a member in more than eighty SSOs worldwide, with the interests and risks of both "sides" vividly in mind. As a result, Qualcomm comments from both perspectives on the questions and issues raised by the Commission.

Qualcomm's position as a major inventor, innovator and licensing company is well known. Qualcomm has some 200 licensees, including essentially every 3G handset maker globally. In 2010, Qualcomm earned \$4.01 billion in revenues from licensing. Qualcomm is also the leading provider of 3G cellular baseband chips. In 2010, its revenues from hardware sales were in excess of \$6.5 billion, far more than its revenues from licensing.

In 2010, Qualcomm employed more than 12,000 engineers worldwide and plowed \$2.5 billion into R&D, much of which would be categorized as "basic" research into new technologies, including technologies that may be relevant to future generation standards rather than to short-term product development. Qualcomm could not possibly support this level and long-term and short-term mix of R&D investment from its chip business alone, so its business model must differ from the approach of many large innovator companies, which for the most part capture the value created by their R&D through sales of products and services. Qualcomm, instead, is in important part a very large "R&D shop", investing in invention, disseminating technology through publication of patents, technical support of licensees, and participation in and contributions to standard-setting, and finally recouping its investments through royalties. To support this virtuous cycle of innovation, Qualcomm reinvests a much larger proportion of its revenues in R&D than do others in its industry (as illustrated below). This remarkable level of R&D investment is made possible by Qualcomm's licensing revenues.



Other major technology companies have different business models. Some, such as Nokia or IBM, may also invest substantially in R&D, but are far more vertically integrated, and can better recover R&D investments through sales and services. Others, such as Apple, specialize in product design and manufacturing, and invest comparatively little in basic R&D. These are all legitimate business models; up to the present, the voluntary standardization process and IPR licensing environment has permitted all these models to flourish. Qualcomm believes that it is critically important that the flexibility and balance between technology innovators and aggregators or implementers (*i.e.*, businesses that are principally product and service suppliers) be preserved, and that neither the U.S. nor other jurisdictions take actions, declare policies, or change laws in a manner that discriminates against one business model in favor of another. If anything, if the U.S. is to continue to expand its international success as a "knowledge-based

economy, models that strengthen R&D investment by U.S. companies must be encouraged rather than discriminated against.

Most important SSOs are voluntary organizations, which in both their policies and their standards must find compromise positions that work for parties with widely divergent interests: those who develop new technology as well as those who manufacture products; those who recoup their investments from licensing, and those who rely on product sales; those who seek to avoid patent litigation, and those who rely on patent litigation to protect their property rights and investments. Dealing with these opposing interests is Qualcomm's daily, internal experience, as it seeks to balance the interests of its two major businesses, licensing and component sales.

Qualcomm is likewise an active investor and participant in all stages of the chain of innovation. Qualcomm invests in basic R&D looking for the inventions that will be the foundation for future generations of communication, displays, and other technologies. Qualcomm designs chips and other products implementing new technologies. Qualcomm develops complex software to deliver services on top of the processing and communication capabilities of the hardware products it sells. Qualcomm provides extensive technical support to customers as they develop their own particular handsets, smartphones, smartpads, and more. In short, Qualcomm has a lively understanding of the value added at each stage of this chain. But unlike some companies that build on foundations laid by others, Qualcomm also has a lively awareness that the whole process springs from and could not exist without those original inventions, and that invention is hard, costly and risky. Many R&D programs, particularly basic R&D, never achieve any commercial return. Some fall aside early in the investment cycle, but others fail only after large investments have been made. If incentives for basic R&D are

weakened, the downstream pipeline of follow-on inventions and new product development must also inevitably slow, to the ultimate injury of consumers and the American economy.

Indeed, the history of CDMA technology—first introduced into cellular communications at great expense and risk by Qualcomm—is a classic example of the immense importance of the incentives created by patent rights. This technology, which was developed and brought to market in the 1990s against overwhelming competition from the then-existing TDMA/GSM standard, was so superior that it is now the foundation for essentially all 3G standards and the high data rates that they provide. The enhanced data rates enabled by CDMA, in turn, make possible music, software and photo downloads, enabling the whole "ecosystem" of smartphones, "apps", mobile browsing, and the many jobs and consumer benefits provided by this exploding industry. The first step in this hugely productive chain—the high-risk development of CDMA cellular telephony—could never have been financed and pursued by Qualcomm without confidence in strong patent protection, and the hope of an entrepreneurial reward in the event of success.

This history highlights the critical importance of the incentive structure that underpins the patent law—motivating investment to achieve ongoing, "dynamic efficiency", rather than insisting on short-term "static efficiency" by minimizing input and consumer prices *now*. If courts or agencies in the U.S. or abroad had intervened in the 1990s to artificially drive down Qualcomm's royalties on 2G CDMA handsets, Qualcomm could never have made the R&D investments which have totaled in excess of \$12 billion over time, and from which both the industry and consumers continue to reap rich rewards.

II. EXISTING IPR PATENT DISCLOSURE RULES WORK SUCCESSFULLY IN THE REAL WORLD

The Commission, through its questions and its Report, expresses a concern about patent "hold-up" arising from the existence of "unknown essential patents", and raises a question as to whether SSOs should adopt more rigorous disclosure rules, presumably to facilitate so-called "*ex ante*" license negotiations and evaluation of proposed standards. This is in fact a complicated area on which SSOs have spent much attention over time, and the Commission should avoid upsetting the balance that has been arrived at by the SSO participants themselves and that has resulted in the very successful deployment of major standards-based products and services. Certainly, given the lack of verifiable data produced by the Commission or anyone else to document the prevalence of a standards-driven hold-up problem, the Commission should be seeking quantitative evidence as to whether there *is* such a problem, rather than leaping from anecdote to the conclusion that a wide-spread systemic problem exists.

First, we note that SSO patent disclosure rules actually have little to do with any demonstrated problem. SSO members generally include all significant industry participants. Among this group, it is rarely a mystery which companies will have at least some essential patents. And as the type of industry participants likely to hold significant portfolios will themselves usually need licenses and so will want to negotiate cross-licenses with other participants, "waiting in the weeds" is not a viable strategy.

In addition, SSO policies commonly provide for categorical RAND commitments, by which a member commits to license all patents that are or may become essential on RAND terms, rather than identifying patents and making RAND commitments on a patent-by-patent basis. This approach is commonly followed by members, and licenses and cross-licenses are usually desired and negotiated on a portfolio, not patent-by-patent, basis. In this context, the "disclosure" by SSO members of additional patents or applications at the margin is inconsequential in practice.² Importantly, *Qualcomm has not encountered a situation in which "late" identification of particular essential patent claims (or applications) by an SSO member that has given a categorical RAND commitment has altered the price of, or negotiating dynamic for, a license*. If such situations exist, and are prevalent and not merely anecdotal or isolated occurrences, Qualcomm urges the Commission to provide details and circumstances so that the standards-stakeholder community can respond and provide meaningful comments.

Second, the Rambus storyline is often pointed to as exemplifying the

problem of "essential patent ambush". However, the Commission acted against Rambus

based on evidence that Rambus deliberately failed to disclose patents or applications that

Rambus knew to be essential precisely for the purpose of avoiding a RAND

commitment,³ while the Federal Circuit ultimately made clear that the Rambus "problem"

stemmed from an unclear IPR policy, and could be readily solved by better drafting.⁴

The Rambus storyline of intentional, strategic withholding of information by an SSO

³ See In the Matter of Rambus, Inc., Docket No. 9302, Comm'n Op. at 4-5, 51-71 (Aug. 2, 2006).

⁴ See Rambus Inc. v. Infineon Techs. AG, 318 F.3d 1081, 1102 (Fed. Cir. 2003) ("JEDEC could have drafted a patent policy with a broader disclosure duty. It could have drafted a policy broad enough to capture a member's failed attempts to mine a disclosed specification for broader undisclosed claims. It could have. It simply did not.").

² Thus, the European Commission's *Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements* (the "Guidelines") provide that an SSO's IPR policy need only require general disclosures from members in order to fall within the Guidelines' safe harbor wherein there is a presumption that a standardization agreement does not restrict competition. 2011 O.J. C 11/1, para. 286 (requiring only "good faith disclosure, by participants, of their IPR that might be essential for the implementation of the standard under development" and noting that good faith disclosure does not "require participants to compare their IPR against the potential standard and issue a statement positively concluding that they have no IPR reading on the potential standard").

member in order to avoid making a RAND commitment has *not* proven to be a systematic problem, but on the contrary, in Qualcomm's experience, is exceedingly rare. Wide and disruptive changes should not be made (or even recommended) to a well-functioning system in order to treat a rare disease.

Third, the "problem" of patents held by non-practicing entities ("NPEs"), patent assertion entities ("PAEs") or other "litigation entities" is often cited as the bugbear to justify systemic change. But this is a *non sequitur* when it comes to SSO patent disclosure rules. NPEs are rarely members of SSOs and so are not bound by SSO disclosure or licensing rules. No adjustment of disclosure rules can affect the risks and costs associated with patents held by NPEs.

In fact, stricter or more punitive patent disclosure rules would be impractical and counterproductive. There is good reason behind the common SSO IPR disclosure policies that are accurately described in the Commission's RFC: a requirement only of good faith disclosure of potentially essential patents known to those who participate in the standardization process on behalf of a company, and an affirmative denial of any obligation to conduct an internal "patent search" for potentially essential claims.⁵ The Commission rightly recognizes that correlating patent claims (much less evolving application claims) to an evolving standard could be a very burdensome task.⁶ Indeed, the complexity of the task is evident from the difficulty of predicting the outcome of infringement disputes concerning even a single claim. Exhaustive identification of

⁵ It should be noted that some prominent SSOs, including IEEE, request nothing more than a general assurance of willingness to license essential patents on RAND terms, and do not request identification of specific patents. *See IEEE-SA Standards Board Bylaws*, Ch. 6 (Feb. 2011),

http://standards.ieee.org/develop/policies/bylaws/sb_bylaws.pdf.

⁶ RFC at 28,037.

essential claims would be a process in which errors and omissions would be inevitable if it were attempted. Any rule that would make pre-standardization identification of essential claims a *condition* of later enforcement, or worse yet paint failure to identify as evidence of intent to conceal, could not possibly be acceptable to companies that hold large portfolios, and would be fundamentally unworkable, handicapping the speed and success of standardization efforts in the U.S. If disclosure rules are too burdensome, this could discourage some patent-owners with other options from participating in particular SSOs, potentially making the alleged problem of "surprise patents" *worse* instead of better.

For that matter, potentially essential patents are often disclosed after standardization in contexts which simply cannot be "solved" by tinkering with SSO rules, mandating one-size-fits-all policies, or otherwise compelling or causing SSOs to change their IPR policies. Sometimes a simplistic picture is assumed in which patents essential to proposed technical contributions are identified, RAND commitments are (or should be) obtained, and a standard is then adopted, in orderly sequence. In fact, matters are rarely so neat. As noted above, even with the best intentions, the essential nature of a particular patent may not be recognized until well after the fact. Then, important standards are often updated and expanded after initial adoption, a process which may transform some patents from "non-essential" to "essential". Pending applications may be revised to include essential claims. Yet while these real-world complexities cannot be eliminated by modifications to SSO rules, they are regularly and satisfactorily dealt with by the practices that are voluntarily and commonly adopted by industry participants: the making of general RAND commitments, and negotiating licenses on a portfolio basis.

III. EXISTING FLEXIBILITY REGARDING TIMING OF LICENSING NEGOTIATIONS WORKS SUCCESSFULLY IN THE REAL WORLD

The Commission suggests that in addition to requiring pre-standardization disclosure of all potentially essential patents, SSOs should and legitimately may require their members to disclose the licensing terms for all potentially essential patents in advance of standardization. Qualcomm believes such a requirement to be unnecessary, but does not oppose it unless used to facilitate collusion among manufacturers and subject innovators to a "reverse" hold-up.

A. <u>Bilateral Negotiations of License Terms Prior to Standard Finalization</u> Are Common in Actual Practice, But Also Commonly Not Necessary.

Discussions of licensing in standardized industries within the academic and regulatory communities commonly assume a scenario in which a patent-holder approaches a manufacturer to demand a royalty after a standard has been adopted, and after the manufacturer is substantially invested in practicing the patent. While such scenarios happen, with respect to significant patent portfolios and active industry participants, the real world is different from this picture in at least two important respects.

First, negotiation of license terms for broad, multi-country/global, multiyear licenses covering standards still under development and years away from product launch is not unusual.⁷ For example, Qualcomm entered into WCDMA licenses with many telecommunication companies before the adoption of the UMTS/WCDMA standard by the European Telecommunications Standards Institute ("ETSI"). *Ex ante* licensees included Motorola, Nokia, Panasonic, Samsung, LG and Ericsson—which, when combined, represented more than 60 percent of royalty-bearing unit sales in 2005.

⁷ Qualcomm's experience is not consistent with the Commission's assertion that "it does not appear that there has been wide use of *ex ante* licensing", RFC at 28,037, unless the Commission means to refer to coordinated, monopsonistic *ex ante* negotiation of license terms, which we discuss in Part III.B below.

Indeed, Qualcomm has for many years stood ready to negotiate *ex ante* licenses with any party seeking to manufacture standards-compliant products, and has found that other patent-holders take the same view. In other words, if it is in fact advantageous for manufacturers to negotiate licenses before incurring the full sunk costs associated with bringing a standardized product to market, they are able to do so under the present system, and do. If a manufacturer chooses not to engage in bilateral negotiation for a license before the standard is adopted, it is not because the practice is unknown or impractical. This voluntary choice by some manufacturers creates no legitimate basis to impose—through limitations on infringement remedies in general, or interpretations of RAND with no basis in the RAND contractual agreement—artificial limits on the compensation that may be received by a patentee that has disclosed that it owns patents essential to a proposed standard.

In addition, as discussed above, there is usually no mystery as to who owns the significant patent portfolios relating to a particular standard. Of course it could happen that one important patent (or application) lurks below the radar and outside the awareness of the industry in the portfolio of an NPE or "small or medium business" ("SME") until after practicing products are brought to market, but it is important to realize that this is the marginal case, and that this scenario does not describe the licensing of the overwhelming bulk of essential patents. It would be profoundly unwise to radically change the rules and structures governing the licensing of all essential patents and much more so to introduce increased judicial intervention in pricing, with attendant increases in uncertainty—in order to "cure" the marginal case.

Second, even after a standard has been adopted, it happens regularly that new market entrants, which bore none of the cost of developing the standard and have not

previously participated in the relevant markets, negotiate licenses prior to bringing products to market. For example, companies, such as HTC, with expertise in designing and/or manufacturing other types of consumer devices have entered the market for standards-compliant cellular devices in recent years—without having played any role in developing the underlying cellular technology. Such potential new entrants cannot be subject to hold-up of the type described in the literature. If holders of patents containing claims essential to a standard are in fact elevating royalty rates so as to unreasonably depress returns on downstream investment, prospective new entrants will simply choose not to enter. If new entrants are in fact taking licenses and entering the market,⁸ this is strong evidence that problematical hold-up is not occurring as to those new entrants. And unless the terms offered to the new entrants are better than those offered to "original" manufacturers, this is also retrospective evidence that "hold-up power" was not used to extract "unreasonable" terms from those original licensees.

The Report mistakenly assumes that "the failure of the patentee and manufacturer to license *ex ante* with technology transfer" is *per se* inefficient—both because it deprives manufacturers of cost information necessary to make optimal investment decisions,⁹ and because it means that any later license is a "bare license" that has missed the opportunity to facilitate "technology transfer" from the licensor to the licensee.¹⁰

⁸ For example, in the 3G wireless industry, Qualcomm has added 18 new licensees since October 1, 2010, while the 3G UMTS/WCDMA standard was adopted a decade ago.

⁹ Report at 50.

¹⁰ *See id.* at 52.

As to cost information, the assumption is unwarranted as a matter of fact. Potential licensee manufacturers may not bother to approach a significant patent-holder early on because the manufacturer has a reasonable understanding of what the rate will be, and sufficient familiarity with the industry to be confident that this expectation will not be violated later on. Or, based on its knowledge of industry practice, the practices of a particular licensor, or the efficacy of a RAND commitment, a manufacturer may be confident that it will be able to get terms comparable to those given to its competitors, and be less concerned about the specific terms than about having a "level playing field" with its competitors.

As to the Commission's concern about "technology transfer", this entire line of argument is built on either a misunderstanding or casual dismissal of the most basic premise of our patent law. The transaction at the heart of the patent law is that the inventor must clearly transfer his invention, in useful, useable form, *to the entire interested public*, in order to obtain a patent: "[p]atent protection is granted in return for an *enabling* disclosure of an invention".¹¹ The enablement requirement of 35 U.S.C. § 112 ensures that manufacturers are informed not only of the existence of new inventions, but also *how* to practice those inventions. Thus, the fact that a manufacturer did not negotiate a license in advance does not mean that it did not have the benefit of the inventor's disclosure of and teaching about his invention. And if a manufacturer chooses to develop its product or process with blinders on rather than mining the published, wellorganized, and full-text-searchable body of patents so as to have the benefit of this statutory and sweeping "technology transfer", any resulting inefficiency would be its own fault, not that of the patentee.

¹¹ Genentech, Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1366 (Fed. Cir. 1997).

On a related note, the Report appears to reflect a belief that "duplicated" R&D efforts resulting in parallel invention of similar solutions is a "problem" and inefficiency that should be avoided.¹² On the contrary, our patent law rests on the theory that stimulating a competitive "race to invention" will produce the best solutions most quickly, and expressly contemplates parallel, competitive, and "duplicative" R&D investments. "[T]he patent law is designed to encourage competition among inventors by giving a patent to the ingenious [party] who wins in a *race for discovery*."¹³ In our freemarket, competitive system we fully expect that multiple manufacturers will compete to produce a particular product, and that less efficient manufacturers may fail, and their capital investments in a production line may be lost and (from their perspective) "wasted". Yet we believe that overall the competitive system, including this type of "wasted" and "duplicative" investment, is the best means to provide the best quality and lowest prices to consumers. If R&D is a "production line" for innovation, we should be neither surprised nor distressed if, in the "race for discovery", slower innovators (or those that choose to close their eyes to the information bank of published patents and applications) likewise lose their investments.

B. <u>Collective *Ex Ante* Negotiation of License Terms by Manufacturers</u> <u>Enables Monopsonistic Behavior and "Hold-Up" of Innovators, and</u> <u>Should Not Be Encouraged by Antitrust Enforcement Agencies.</u>

Published analyses of the risk of "hold-up" of manufacturers by patentowners in standardized industries chronically ignore the reciprocal and perhaps greater vulnerability of patent-holders to true hold-up. If manufacturers are "locked in" due to "sunk costs" by the time a standard has been adopted and products have been developed,

¹² See Report at 8, 52-53.

¹³ Potts v. Coe, 145 F.2d 27, 31 (D.C. Cir. 1944) (emphasis added).

the innovator has necessarily incurred its R&D sunk costs, and is locked in to the technology it has developed, well before the standard is finalized. Because of the "in or out" nature of standardization, if an innovator's technology is not selected for the standard, it may get no return at all on its potentially very large R&D investment. Accordingly, the R&D investor is very vulnerable indeed to hold-up if multiple prospective licensees can join together to dictate to a patentee the fees it must accept in order for its patent to be incorporated into the standard. In that circumstance, a patentee could be forced to accept a royalty rate that falls far short of providing a reasonable risk-adjusted return on its investment in R&D.

This is perhaps one reason that most SSOs—which must operate by consensus—exclude consideration of license terms (other than the necessity of obtaining a RAND commitment) from the process of developing the standard. It is surely one reason why the Department of Justice and commentators have historically cautioned that, if *ex ante* disclosure of license terms is to be called for by an SSO, this disclosure should not be permitted to enable unified, monopsonistic negotiation of license terms by manufacturers.¹⁴

¹⁴ See James F. Rill & Christopher J. MacAvoy, *Ex Ante Licensing Negotiations In Standard Setting And The Rule Of Reason*, 1-4 ANTITRUST REPORT 4 (2010) ("The risk of oligopsonistic collusion [in the SSO context] is genuine and should not be swept under the rug."); J. Gregory Sidak, *Patent Holdup and Oligopsonistic Collusion in Standard-Setting Organizations*, 5 J. COMPETITION L. & ECON. 123, 141-82 (2009) (arguing that *ex ante* disclosure of license terms presents a risk of oligopsonistic collusion); Letter by Thomas O. Barnett, Ass't Att'y Gen. for Antitrust, U.S. Dep't of Justice, to Michael J. Lindsay, counsel to IEEE, at 11 (Apr. 30, 2007), http://www.justice.gov/atr/public/busreview/222978.pdf (suggesting that IEEE's express)

prohibition of "discussion of specific licensing terms within IEEE-SA standards development meetings" assuaged concerns that discussions of costs *ex ante* "could, in certain circumstances, rise to the level of joint negotiation of licensing terms"); Hill B. Wellford, Counsel to the Ass't Att'y Gen., Antitrust Division, U.S. Dep't of Justice, *Antitrust Issues in Standard Setting*, Remarks Before 2d Annual Seminar on IT Standardization and Intellectual Property, Beijing, China, at 15 (Mar. 29, 2007), http://www.justice.gov/atr/public/speeches/222236.pdf ("SDO buyer-cartel behavior has the real potential to damage innovation incentives, and therefore is properly the subject of

This balance is a delicate one, but it can be walked. Unilateral disclosure (whether formal or practical) of proposed license terms for an anticipated standard is not unusual in the real world: 3G licensees have at least an approximate understanding far in advance as to what it will cost to obtain necessary licenses to cover 4G devices from Motorola, Qualcomm or Nokia. But this foreknowledge is a very different thing from permitting manufacturers to use an SSO technical committee as a cartel through which to drive down the price of technology inputs: "Unless you agree in advance to charge no more than X, we will exclude your technology from the standard."

For these reasons, the Commission should be extremely careful in its recommendations and comments about disclosure of pricing terms prior to adoption of a standard. To attempt to counterbalance the bargaining power given to innovators by patents by giving manufacturers tacit or even express permission to engage in monopsonistic bargaining to drive down the price of technology inputs would be contrary to both law and sound policy.¹⁵ If investors in basic R&D in standardized industries risk being "held up" by monopsonistic bargaining at the very point in time at which the investor has "sunk" all of its R&D costs, while the manufacturers do not yet have sunk costs, then basic research in these industries will become a far less attractive investment, venture money will go elsewhere, and we should expect to see basic R&D investment in standardized industries increasingly limited to large, vertically integrated companies that are able to recoup their investments through sales of products rather than licensing. This

antitrust scrutiny."); Roger G. Noll, "*Buyer Power*" and Economic Policy, 72 ANTITRUST L.J. 589, 609 (2005) (arguing that monopsony that decreases the reward for innovation "would reduce the intensity of technological competition and thereby could reduce efficiency in the long run").

¹⁵ See Noll, supra note 14, at 606-10 (discussing the risks that result from creating a monopsony to offset a monopoly).

would be a very odd policy goal, as it would disadvantage small entrepreneurial entities that historically have created many significant inventions, products and industries that have strongly benefited the U.S. economy.

In fact, American antitrust law is sufficiently clear and robust that there is little near-term risk that monopsonistic behavior by manufacturers within an SSO to drive down the price of intellectual property could escape antitrust liability in this country. However, other jurisdictions' laws are less clear, and may reflect a less developed appreciation of the anticompetitive hazards of monopsony. Even a mild endorsement of such conduct by the Commission is likely to be cited in such jurisdictions to justify actions which will negatively affect American companies such as Qualcomm on a worldwide basis, shifting value by governmental fiat (or government-blessed monopsony) away from American "knowledge economy" companies who invest heavily in creating intangible intellectual property, and into the hands of foreign implementers, many of which invest little or nothing in R&D, and particularly in basic R&D. Accordingly, the Commission should tread all the more carefully in this area.

IV. THE MECHANISM OF RAND COMMITMENTS WORKS SUCCESSFULLY IN ACTUAL PRACTICE

As discussed above, commitments by SSO members to license their patents on RAND terms play a critical role in facilitating standardization and the community-wide technology transfer that is inherent in the adoption of a standard. Nevertheless, commentators sometimes point to the lack of specific definitions of RAND in SSO policies, and the lack of enforcement mechanisms beyond the ordinary tools of contract law, and leap to the conclusion that a RAND commitment is a meaningless platitude that must be ineffective in practice. The inference is mistaken.

A. <u>The Meaning of RAND.</u>

It is true that SSO policies do not define "reasonable" or "nondiscriminatory" in any detail, or otherwise define required licensing terms. In fact, in the case of ETSI, at least, the history of its IPR policy makes clear that it was a considered decision of the membership *not* to define these terms with any inflexible precision, nor by reference to any particular economic theory.¹⁶ This loose flexibility is not surprising. The written policies are designed to serve generations of standards, unpredictable future commercial settings, very differently situated parties,¹⁷ and all the range of complex exchanges of value (including but not limited to cross-licenses) that parties may find it useful to conjoin with the license.¹⁸ Indeed, the flexible nature of RAND is a positive attribute of SSO rules because it facilitates licensing freedom, and allows room for licensors and licensees to define terms, both monetary and non-monetary, that best address the strategic goals of each. Such freedom is critical because the strategic goal of one licensee may not be the same as another licensee, and to constrain flexibility of

¹⁶ Roger G. Brooks and Damien Geradin, *Taking Contracts Seriously: The Meaning of the Voluntary Commitment to License Essential Patents on 'Fair and Reasonable' Terms* in INTELLECTUAL PROPERTY AND COMPETITION LAW 398-401 (Steven Anderman and Ariel Ezrachi eds., Oxford University Press, 2011) [hereinafter Brooks & Geradin OUP], also available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1569498, at 9-11 [hereinafter Brooks & Geradin, Taking Contracts Seriously SSRN].

¹⁷ See ETSI/GA 20(94)2 (Final Report of the Special Committee) Annex XVIII (Minutes of the Third Plenary Meeting of the IPR Special Committee) at 4-5 (noting that "non-discriminatory" is "not necessarily . . . identical"); *id.* at Annex XII (Final Texts for Common Objectives from 2nd Plenary Meeting) ("Licensing terms and conditions should allow normal business practices for ETSI members. ETSI should not interfere in licence negotiations."); *see generally* Roger G. Brooks & Damien Geradin, *Interpreting and Enforcing the Voluntary FRAND Commitment*, 9 INT'L J. OF IT STANDARDS AND STANDARDIZATION RESEARCH, Jan.-June 2011, at 15-16, also available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1645878, at 32-34.

¹⁸ The ETSI IPR policy, for example, explicitly permits cross-licensing. *See* ETSI IPR Policy § 6.1, http://www.etsi.org/WebSite/document/Legal/ETSI_IPR-Policy.pdf. *See also* ETSI/GA21(94)(39)Rev.2 (Final Minutes of the ETSI 21st General Assembly) at 19 (noting that "reciprocity" as used in § 6.1 of the ETSI IPR policy includes cross-licensing).

negotiations and define license terms so that all terms are identical would force the loss of pro-competitive efficiencies available between particular licensing partners. Licensing freedom thus fosters the efficient transfer of technologies, and spurs competition in the commercialization of products and services based on such technologies.¹⁹

Further, the foundational goal of SSO RAND policies is *availability* of licenses necessary to practice standards. Certainly, a patent-holder who gives a RAND commitment gives up the right to refuse to license, or to license on exclusive terms. Further, there is little doubt that terms that do not make licenses meaningfully available to efficient implementers of the standard are not "reasonable" within the meaning of RAND. But neither this logic nor the terms of SSO policies require that licenses be cheap, or that royalties be in an amount less than the value contributed by the licensed technology as determined in the market, as Congress intended. Evidence that license terms for a particular portfolio are in fact widely accepted, and that the relevant industry is flourishing while those royalties are being paid, should be considered strong evidence that the license terms are consistent with license availability, and do not violate a RAND commitment.

To say that RAND leaves wide latitude to the negotiating parties does not imply that there could be a solution that is both more "precise" and economically superior. On the contrary, any more mathematical rule would very likely prove to be a procrustean bed that would introduce severe inefficiencies. Certainly no major SSO has attempted any such sharper-edged definition of RAND, and this collective reticence on

¹⁹ See Gerald F. Masoudi, *Intellectual Property and Competition: Four Principles for Encouraging Innovation*, Digital Americas 2006 Meeting, Intellectual Property and Innovation in the Digital World, at 14 (Sao Paolo, Brazil, Apr. 11, 2006), http://www.justice.gov/atr/public/speeches/215645.pdf (licensing freedom allows parties "to find the royalties that will reward [licensors] and the most efficient co-producers that can bring products to consumers").

the part of the community that is most familiar with the intricate machine that is standards development and adoption, and that has most at stake, deserves a great deal of respect.

But with all that said, the imprecision is no greater than what has been found to be both inevitable and workable in the patent law context of "reasonable royalties", and as discussed below, it has not stopped RAND claims from being asserted, and settled. Parties have prepared to litigate RAND disputes by introducing evidence including industry practice, valuations of patents, prior licenses covering the patents in question, and indeed the full and permissive range of information that one might expect in an adjudication of "reasonable royalties" under *Georgia-Pacific*.²⁰

B. <u>Current SSO RAND Policies Have Not Resulted in Hold-Up, But Instead</u> <u>Continue To Motivate and Enable Successful Innovation and</u> <u>Commercialization.</u>

More importantly, the overarching reality based on real-world evidence is that the existing, more-or-less uniform approach to RAND licensing in SSO IPR policies works. While many standards over time have failed because of competition from a better technical solution, or refusal of key industry players to participate in the relevant SSO, proponents of intervention have identified no instance in which a standard has failed to achieve widespread industry acceptance or market success because of the cost of obtaining necessary licenses for essential patent claims. And this is true even though some essential patents may be owned by SSO non-members over whom the SSO has no leverage at all.

Put simply, there has been no "hold-up" crisis. Perhaps no industry more than wireless communications has received greater attention of late from those

²⁰ Georgia-Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 1116 (S.D.N.Y. 1970), modified and aff'd, 446 F.2d 295 (2d Cir. 1971).

speculating about patent hold-up. However, aggregate fees for patents infringed by 3G wireless products and services are estimated to range between 3-9% of the price of a handset, and are a much smaller fraction of operator revenues enabled by the patented technology.²¹ The implementation of 3G wireless standards has dramatically outpaced that of prior standards—despite the fact that 3G standards are subject to many more essential patent claims than were 2G standards—and prices have been sharply declining. Meanwhile, vast profits (far more than the cumulative royalties paid out to patentholders) have been earned by wireless operators and device manufacturers, even while paying those royalties and defending against lawsuits from competitors and NPEs. Perhaps more importantly, the status quo SSO IPR policies and the available mechanisms of enforcement—replete with all the characteristics or limitations that critics call defects—have been adequate to motivate all necessary industry participants to invest large amounts in developing 4G technologies and beyond. These facts render it all the more mystifying why the Commission has apparently accepted the hold-up mythology without requiring the alleged victims to come forward with real evidence validating their concerns.

The real-world fact is that current SSO IPR policies and practices, combined with currently available tools for enforcing RAND, are demonstrably successful in achieving their primary goals: to motivate investment by innovators to develop new technology and to enable commercial success for implementers, in order to create new value for the industry and new, advanced devices and services for consumers. The outcry of patent hold-up from equipment manufacturers or downstream customers, or

²¹ See Keith Mallinson, Patent Licensing Fees Modest in Total Cost of Ownership for Cellular, IP FINANCE (June 12, 2011), http://ipfinance.blogspot.com/2011/06/patent-licensing-fees-modest-in-total.html.

theoretical speculation by some academics or commissioned and sponsored experts, is not sound evidence of a problem; absent a record that these participants in the value chain have been unable to establish, such complaints represent nothing more than an understandable desire to reduce their costs and/or transfer additional profits to themselves and away from the owners of the patented inventions on which their products depend.

A number of published theories purport to demonstrate that a chronic hold-up crisis is inevitable, but without citing real-world support or data to substantiate those theories. The fact that there has been no hold-up crisis casts doubt on the adequacy of the economic models, not on the real-world facts.

C. <u>A RAND Commitment Is a Voluntary, Enforceable Contract.</u>

Few major SSOs require a general commitment to license essential patents on RAND terms as a condition of membership, or indeed as a condition of participation in the development of a particular standard. Instead, they explicitly acknowledge that a RAND commitment is voluntary and may be given or withheld, categorically or on a patent-by-patent basis.²² When, in the early 1990s, ETSI briefly adopted an IPO policy that approached mandatory RAND licensing,²³ it found that there was no consensus

²² For example, ANSI's IPR policy permits members to refuse to grant RAND commitments as to particular patents. *See ANSI Essential Requirements* § 3.1 (Jan. 2010), http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/ American%20National%20Standards/Procedures,%20Guides,%20and%20Forms/2010%20ANSI%20Essential%20Requirements%20and%20Related/2010%20ANSI%20Essentia 1%20Requirements.pdf.

²³ This proposed policy included what became referred to as an "automatic licensing" or "licensing by default" provision whereby each member was required to license its essential patents on RAND terms *unless* it identified patents it did not want to license at the beginning of a new standards development project. *See* ETSI/GA12 (92)3; Brooks & Geradin OUP, at 398; Brooks & Geradin, Taking Contracts Seriously SSRN, at 10. The policy also included a requirement of advance declaration of maximum royalty rates, a rule precluding required cross-licensing and a mandatory arbitration requirement. *See* ETSI/GA12 (92)3.

among its members for such a policy, and that important participants and major patentholders threatened to drop their membership.²⁴

Once made, however, under many SSO policies a RAND commitment is a contract that gives rise to third-party rights enforceable in court by would-be licensees.²⁵ If a license to essential patent claims subject to a RAND commitment is requested, a refusal to grant RAND terms is a breach of contract, which can be redressed by the remedies available for breach in any given jurisdiction.

RAND commitments are enforceable in the real world as well as in theory. Qualcomm has more than once faced claims in litigation that it has failed to offer RAND terms, and has been prepared to explain and defend the reasonableness of its terms in court, in detail. Other very large cellular industry participants such as Motorola Mobility and Nokia have likewise faced (or face today) contract-based RAND claims in private litigation.²⁶

It is true that the few RAND-based claims asserted in litigation against major industry participants thus far have settled, but this is not a sign that the RAND commitment is not working or is unenforceable: it is simply the common endgame of complex disputes between companies that each have claims against the other, and that are very likely to have ongoing business relationships with each other in the future.

²⁴ See the history documented in Brooks & Geradin OUP, at 398-99; Brooks & Geradin, Taking Contracts Seriously SSRN, at 9-11.

²⁵ Some SSO IPR policies limit beneficiaries of the licensing undertaking more narrowly.

²⁶ E.g. Nokia Corp. v. Apple Inc., C.A. 09-791-GMS (D. Del.); Apple Inc., v. Motorola Mobility Inc., 11-cv-178-BBC (W.D. Wis.).

D. <u>The RAND Commitment and Market Mechanisms Work Even Without</u> <u>Actual Litigation.</u>

While RAND commitments are enforceable by the ordinary tools of contract law, and while as noted such claims have been made in court in the past and are pending today, it is true that RAND litigation after a breakdown of license negotiations is rare. And this is true even though there is little downside to a manufacturer in asserting a claim that offered terms are not RAND. But again, the scarcity of litigation is not a "problem", but rather a sign that the consensus RAND mechanism that has been arrived at by voluntary SSOs is sufficient in the overwhelming majority of cases to accomplish its goals given other incentives that exist in the real world. This "invisible hand" works through at least three mechanisms.

First, since RAND-based claims can be and have been asserted in court, licenses covering patents that include essential claims are consciously negotiated under the shadow of the RAND commitment and the potential for judicial enforcement. And while litigating a RAND claim will expose the manufacturer to little risk beyond the cost of its own attorney's fees, the downside risk to the licensor if it lets the dispute go to litigation could be severe, potentially triggering a cascade of similar claims from other existing and would-be licensees, disrupting its licensing program and abruptly reducing its licensing revenues. In other words, the availability of judicial enforcement of RAND creates a powerful incentive for patent-holders to reach agreement on terms, rather than find themselves in litigation.

Second, the economic scholarship concerning "hold-up" models with which we are familiar uniformly ignores the fact that, at least for significant participants in continually evolving industries, standards development and RAND licensing form a never-ending repeat game, not a one-shot hold-up opportunity. Patent-owner A's licensing practices and its "standards community citizenship" with respect to Standard S^1 are known while the SSO members decide whether to incorporate new technology of A in new Standard S^2 . An over-aggressive licensing strategy that ignores this fact will quickly be self-defeating.

Third, since any industry participant with a significant portfolio is very likely to require cross-licenses to protect its own product business, to press negotiations so aggressively as to fail to reach agreement requires something of the mentality of a suicide bomber; reciprocal patent litigation can lead to very unpleasant results for all concerned. Neither businesses nor investors enjoy radical uncertainty, and significant licensors want to reach agreement, not litigation.

E. Disclaimer of RAND Commitments Has Proven To Be a Non-Problem.

The Commission's RFC asks whether and how "a RAND commitment given by a patent holder [should] bind later owners of the patent".²⁷ Qualcomm believes that a RAND commitment *should* bind later owners of a patent, and has given attention to this question over time. Fortunately, existing doctrine as an empirical matter has already solved this potential problem—in this country at least—with legal tools already available: there is no U.S. case in which a court has held that a patent once subject to a RAND commitment is now "clear" of that commitment due to different ownership. On the contrary, it is not difficult to argue that given the online publication of RAND commitments by major SSOs, any purchaser of a patent subject to such a commitment takes with actual or constructive notice of that commitment, can be presumed to have negotiated a price taking that "encumbrance" into account, and should therefore be

²⁷ RFC at 28,038.

equitably estopped from asserting the patent in a manner inconsistent with that undertaking.²⁸

In sum, concerns about "RAND evasion" have thus far proven to be academic at least under U.S. law; it appears that courts have adequate tools to address the issue should it arise again.

V. THE COMMISSION SHOULD NOT SEEK TO IMPOSE ITS OWN DEFINITION OF RAND

In spite of the documented efficacy and enforceability of existing RAND commitments, the Commission has proposed an entirely new judicial framework that seeks to calculate and define RAND royalty rates. In particular, the Commission has proposed that courts should "cap" the royalty damages for a patent subject to a RAND commitment based on its assessment of the "incremental value" of the patented technology over available alternatives prior to the licensee's investment of "sunk costs" into product development.

The Commission's attempt to redefine patent law retreads previous legislative proposals that have been extensively discussed and eventually rejected by Congress. In the process, the Commission's proposed rule contradicts fundamental principles of U.S. patent law and undermines the Federal Circuit's own efforts to apply and give light to the existing law of reasonable royalties. Finally, the proposal's twin

²⁸ This was essentially the result reached by the FTC in its 2008 decision in the *N*-*Data* case. *See In the Matter of Negotiated Data Solutions LLC*, File No. 051 0094, Analysis of Proposed Consent Order to Aid Public Comment, at 9-10 (Jan. 23, 2008); *see also Vizio, Inc. v Funai Elec. Co., Ltd.*, No. CV 09-0174 AHM (RCx), 2010 U.S. Dist. LEXIS 30850, at *17-19 (C.D. Cal. Feb. 3, 2010) (holding that where party making RAND commitment later transfers patents with a specific intent to evade that RAND commitment, this may be an unlawful conspiracy redressable under Section 1 of the Sherman Act).

focuses on "incremental value" and "*ex ante*" negotiations ignore industry realities and sound economic principles, and inevitably would disincentivize and deter innovation.

A. <u>The Limits on Patent Damages Proposed by the Commission Have Been</u> <u>Advocated, Debated and Rejected by Congress in the Course of Current</u> <u>Patent Reform Deliberations.</u>

The Commission's proposal to redefine reasonable royalty damages law appears to be simply a renaming and repackaging of "apportionment" and "prior art subtraction" proposals that have recently been urged, extensively debated, and rejected in Congress. We do not believe that it is appropriate for the Commission to attempt to persuade U.S. courts or foreign jurisdictions to adopt policies explicitly rejected by Congress.

The Commission is aware that damages-limiting proposals of this type have proven highly controversial and divisive since first introduced by the House and Senate Judiciary Committees more than six years ago. After an exhaustive political debate that engaged virtually every sector of our innovation economy, as well as the federal agencies responsible for Administration policy on patents, both committees concluded that changes to substantive damages law were politically untenable, inadvisable and unnecessary, particularly in light of recent Federal Circuit decisions. The Commission's recommendations retread this well-worn ground in a manner that ignores the collective judgment of Congress, the Administration, the federal judiciary, and the vast majority of patent-intensive industries.

Early versions of the House and Senate patent bills would have limited reasonable royalty damages to that portion of the "economic value" of the infringing product or process attributable to the patented invention's "specific contribution over the prior art". This test—alternatively referred to as mandatory apportionment or "prior art subtraction", and either indistinguishable from or closely similar to the Commission's current "incremental value" test—was perceived by many as a thinly veiled effort by large corporations that aggregate and use significant third-party patented inventions in their products and services to minimize their infringement liability. Even experts who supported stricter evidentiary standards in the valuation of a reasonable royalty recognized the pitfalls of a formulaic and overly rigid cap on damages, given the broad range of market considerations that influence a negotiated royalty.

By 2009, the Senate Judiciary Committee had abandoned any proposed changes to substantive damages law, concluding that federal courts could appropriately guard against excessive damage awards by exercising a more robust "gatekeeping" role over the "factors and methodologies" used to determine damages. The Federal Circuit took heed and between 2009 and 2011 issued three significant decisions—*Lucent Technologies, Inc. v. Gateway, Inc.,*²⁹ *ResQNet.com, Inc. v. Lansa, Inc.,*³⁰ and *Uniloc USA, Inc. v. Microsoft Corp.*³¹—in which it vacated damage awards based on speculative or otherwise unreliable evidence or metrics. With these decisions, the court (and Chief Judge Rader in particular) rejected the use of evidence or valuation tools that lack a sufficient economic nexus to the patented invention at issue. As a result of these cases, the Senate concluded that even a gatekeeper amendment was unnecessary and eliminated it from the pending Senate patent bill (S. 23). After the full Senate overwhelmingly (by a vote of 95 to 5) passed its patent bill in March of this year without any amendment to damages law, the House Judiciary Committee quickly followed suit and approved its

²⁹ 580 F.3d 1301 (Fed. Cir. 2009).

³⁰ 594 F.3d 860 (Fed. Cir. 2010).

³¹ 632 F.3d 1292 (Fed. Cir. 2011).

version of the bill (H.R. 1249) that also makes no changes to damages law or calculation of a reasonable royalty. The House is expected to consider the bill as early as this week.³²

In his official statement on the Senate bill, Senator Jon Kyl (whose staff played an instrumental role on the damages issue) noted that, prior to these Federal Circuit decisions, "I [had] underestimated the courts' ability and willingness to address these problems on their own. And I certainly did not anticipate the speed with which they might do so. . . . The present bill appropriately leaves patent-damages law to common law development."³³ Today there is literally no political support to reopen the damages debate, and even once passionate advocates of damages reform have signaled to Congress and the Administration that the issue has been adequately addressed by the courts.³⁴

In light of this history, the Commission's decision to advocate major changes to substantive damages law is perplexing. Although the Commission uses different terminology to define its proposed cap on reasonable royalty damages, its proposal shares the same objectives—and defects—as the earlier apportionment proposal. In each case, the goal is to limit a patent owner's compensation to the incremental benefit

³² See Office of Democratic Whip Steny Hoyer, The Weekly Whip: Friday, June 10, 2011, http://www.democraticwhip.gov/content/weekly-whip-friday-june-10-2011.

³³ 157 CONG. REC. S1,373-74 (daily ed. Mar. 8, 2011) (statement of Sen. Jon Kyl). Between 2007 and 2008, Senator Kyl and his staff undertook a comprehensive study of patent damages rules and litigation practices, soliciting the views of a broad range of practitioners and damages experts throughout the country. This year-long process ultimately persuaded Senator Kyl that a "unified field theory of damages law" was neither warranted nor advisable. 154 CONG. REC. S9,983 (daily ed. Sept. 27, 2008) (statement of Sen. Jon Kyl). He observed that "[d]amages calculation is an inherently fact-intensive inquiry and requires legal flexibility so that the best evidence of a patent's value may always be considered." *Id*.

³⁴ See Statement of Administration Policy on S.23 (Feb. 28, 2011).

achieved by the infringer, as opposed to the market value of lost royalties that would have been paid to the patent holder had the infringement not incurred. The Commission's recommendations not only resurrect a form of apportionment, despite an unequivocal decision by Congress to abandon this approach, they go well beyond any of the damages amendments considered by the Senate or House Judiciary Committees. Similarly, the Report pays little deference to (and, in fact, largely ignores) the Federal Circuit's recent efforts to place reasonable royalty determinations on firmer economic footing. Given the widespread consensus that the Court's decisions have eliminated the need for *any* changes to damages law, the Commission's recommendations seem either disconnected from current thinking on these issues, or unduly influenced by the voices of a relatively small number of companies whose policy prescriptions Congress has determined are not in the best interests of our innovation-driven economy overall.

B. <u>"Incremental Value" Cannot Properly Be Treated as a Cap on</u> <u>"Reasonable" Royalties.</u>

The Commission has suggested that an estimate of the "incremental value" provided by a patent over the next best alternative should be treated by courts as a "cap" on what might otherwise be deemed a "reasonable royalty" through a *Georgia-Pacific* analysis, or in the RAND context. For several reasons, Qualcomm believes that this suggestion cannot be correct, and could have devastating impact on incentives to invent in general, and on the U.S. economy in particular.

First, the idea has no foundation in patent law, industry practice, the language of SSO IPR policies, or in the history of those policies. With respect to patent law, the *Georgia-Pacific* framework gives courts the necessary flexibility to reconstruct the market conditions that would have existed, and assess the market value that would have been assigned to the patented invention, had the infringement not occurred. As the

Federal Circuit has held time and again, the existence of a non-infringing alternative may be a relevant factor in the hypothetical negotiation, but it should not be the sole or even predominant factor.³⁵ Indeed, any categorical rules that trade flexibility for "certainty" are inherently at odds with the fundamental purposes of reasonable royalty damages. "The whole notion of a reasonable royalty is a device in aid of justice, by which that which is really incalculable shall be approximated"³⁶

In addition, SSO IPR policies point in a different direction than the Commission's proposal. While as discussed above *ex ante* bilateral negotiation of license terms is by no means rare, it is also true that "[s]etting specific terms of the patent license [commonly] occurs in bilateral negotiations . . . after the standard-setting process is completed, sometimes long after the standard has been implemented".³⁷ Looking to the ETSI IPR policy as a prominent and important example, it is quite clear that when adopting that policy the members looked primarily to real-world bilateral negotiations between parties to determine what is commercially "reasonable," and there is no hint of criticism or distrust in that policy of terms negotiated *ex post*.³⁸

Second, particularly in the case of portfolio licenses, determining the retrospective "incremental value" of an entire portfolio as against an unbounded set of

³⁵ See Mars, Inc. v. Coin Acceptors, Inc., 527 F.3d 1359, 1373 (Fed. Cir. 2008) ("[It is] wrong as a matter of law to claim that reasonable royalty damages are capped at the cost of implementing the cheapest available, acceptable, noninfringing alternative . . . To the contrary, an infringer may be liable for damages, including reasonable royalty damages, that exceed the amount that the infringer could have paid to avoid infringement.").

³⁶ Georgia-Pacific Corp. v. U.S. Plywood-Champion Papers, Inc., 446 F.2d 295, 300 n.5 (2d Cir. 1971) (*citing Cincinnati Car Co. v. N.Y. Rapid Transit Corp.*, 66 F.2d 592, 595 (2d Cir. 1933) (Hand, J.)).

³⁷ RFC at 28,037.

³⁸ Brooks & Geradin OUP, at 397-401; Brooks & Geradin, Taking Contracts Seriously SSRN, at 9-12.

"alternatives" at some time in the past is an impossible task. While it can be talked about in theory and modeled with simplified equations, it cannot be done with any practical accuracy. Any attempt to import this intellectual construct as a "cap" that could trump the outcomes of real-world negotiations between industry participants would introduce gross speculation and indeterminacy, and greatly increase incentives for manufacturers to litigate rather than negotiate, adding all the attendant costs of litigation to the ultimate burden on the consumer.

Third, and perhaps most fundamentally, even if it could be measured with any confidence, an incremental value standard on its face would radically undercompensate R&D, depressing incentives for future investment. Any R&D investment risks failure, so the anticipated return in case of success must include a "risk multiplier", or the investment will not be made. In a standardized technology area, the risk is even greater: the "in or out" nature of standardization increases the risk that the investor will receive no return at all. Indeed, he may receive no return even if he develops a great improvement over the status quo, if a different solution is selected for inclusion in the standard.

Presumably, it is desirable to have multiple independent teams attacking hard technical problems in parallel, in the hope that competitive efforts will turn up a really good solution or multiple solutions. But an "incremental value" cap would strongly discourage just this type of competition for innovation, in two ways. The more teams are working on a problem, the greater the risk each will fail to have its solution included in the standard. Accordingly, *ex ante*, each team's anticipated "risk multiplier" must be that much higher, or it will not make the investment—but the "incremental value" cap leaves no room for any risk multiplier. In addition, the more teams that attack a hard problem, the *smaller* the "incremental value" of the best solution compared to the second best solution is likely to be. Again, the "incremental value" standard almost guarantees an inadequate return even to the winner (while standardization promises no return at all to the losers), strongly discouraging competition for innovation.

Fourth, the "incremental value" standard as proposed exacerbates the potential for "hold-up" of licensors by licensees. The "incremental value" standard is justified on the theory that no rational licensee would agree to pay more for technology A than its incremental value over B (plus the cost of acquiring rights to B^{39}). But one might also say that no rational inventor would accept terms that do not provide a reasonable risk-adjusted return on its R&D investment. The difference between the two is that at the time proposed in the Commission's report for this so-called "*ex ante*" hypothetical negotiation—after the innovation is complete, and before standardization—the manufacturer has no sunk cost and has the option of "walking," while the patent-holder's R&D costs are already all "sunk," and it must take the best it can get, or get nothing. In other words, the innovator is "locked in" and can be "held up" such that the value gains created by the innovation are appropriated by the manufacturer rather than by the inventor. Indeed, the Commission appears to recognize just this vulnerability in its recent Report, when it writes, with respect to a price negotiation that functions as "bidding" to have technology included in a standard, "A patentee who would not have lost sales would rationally want to license the patent at the maximum rate the infringer would

³⁹ It has been argued that in the case of IP licensing, for which there is essentially no marginal cost associated with granting the next license, the owner of technology B will bid the price of a license to its alternative technology to a value approaching zero in order to get the business. Thus, the "incremental value" measure of value for technology A would approach its incremental value over B pure and simple, *regardless* of the cost of developing A, the cost of developing B, or the value provided to the licensee by A (or B) over the status quo. If so, the "incremental value" test would *wildly* undercompensate (and undermotivate) investments in R&D.

pay."⁴⁰ In other words, in this circumstance the innovator essentially has no option but to take what it can get, however inadequate. In short, there is indeed "hold-up" in this scenario, but in the opposite direction than that hypothesized by the Commission. The enterprises that have urged the incremental value standard upon the Commission have identified no public policy reason why government should grant such a massive transfer of rents away from one industry segment to themselves, even if this were consistent with patent law and policy—which it clearly is not. The Commission's apparent indifference to this economic distortion is perplexing.

In fact, it is not fair or accurate to label this moment in time "*ex ante*": it is *before* investment lock-in of the potential licensee, but *after* investment lock-in of the patent holder. It is, indeed, an unbalanced moment in the middle, a strictly *faux ex ante*. A true *ex ante* negotiation would take place before *either* party has invested or is locked in. For example, such a negotiation could take the form of: "What royalty will you pay if I solve that problem for you?" Or, "What royalty will you pay if I solve that problem for you and you select my solution?"

If hold-up is a problem, then imposing an incremental value cap by invoking a *faux ex ante* hypothetical negotiation is a problem. It is also a game that can only be played once: once it is understood that this is how the game will be played in pricing standardized technology, risk capital will have enough sense to go elsewhere.

The Commission's Report also urges that courts measure reasonable royalty damages against the value of the "smallest saleable component" that practices the patent.⁴¹ At the same time, the Commission recognizes that sophisticated and freely

⁴⁰ Report at 167-68.

⁴¹ *See id.* at 212.

contracting parties commonly set royalty rates as a percentage of revenues from a larger finished product,⁴² likely because of inefficient costs associated with attempting to calculate revenues from "smallest saleable components", and with attempting to map individual patents to individual components. Obviously, a larger royalty *base* does not imply a larger per-unit royalty, as the royalty *rate* can be adjusted accordingly. For courts to adopt as a rule of thumb a royalty base which industry participants often deem to be impractical would be imprudent, and introduce unnecessary inefficiency and inaccuracy. More importantly, to the extent the "smallest saleable component" rule is advocated as an indirect means of introducing an incremental value or "apportionment" standard for reasonable royalties, then the proposal is misguided for all the additional reasons discussed above.

C. <u>RAND Is Not Defined as "Ex Ante" Pricing.</u>

In its RFC, the Commission defines "hold-up" as "a demand for higher royalties . . . after the standard is implemented than could have been obtained before the standard was chosen",⁴³ and asserts that SSOs have adopted RAND licensing policies in order to "prevent hold-up" thus defined. The Report similarly appears to recommend that the rate to which the parties would have agreed *prior* to investment and "lock-in" by the potential licensee (whether as a result of standardization or otherwise) should be the upper bound of any royalty-based damage award.⁴⁴ However, the definition of hold-up on which this argument rests is not a useful one, and the asserted causal link between hold-up risk and RAND licensing policies is wrong.

 $[\]frac{42}{42}$ See *id.* at 208.

⁴³ RFC at 28,036.

⁴⁴ See Report at 190-91.

As to the proposed definition of hold-up, it is peculiar that the definition is not tied to the value *created* by the licensed invention. It is a well accepted result of economics that, if innovators capture less than the full value created by their inventions, then only sub-optimal investments in innovation will be made, resulting in a loss of societal welfare.⁴⁵ As reviewed previously, innovators are ripe to be held up at the moment proposed by the Commission—after investment in innovation and before standardization. If a new balance of power after standardization allows innovators to capture an *increased* proportion of the value created by their inventions compared to *ex ante*, but still not more than that value, it is odd to label this "hold-up", and baseless to assume that this would be an economically inefficient result.

With respect to RAND licensing in particular, however one argues the economic theory, one will search in vain for evidence that major SSOs intended, by their RAND licensing policies, to lock members into an "*ex ante* pricing" rule (*faux* or otherwise), or that the goal of RAND commitments was to prevent "hold-up" under this or any similar definition. In the well-documented history of the ETSI IPR policy, one can find an ample record of concern that licenses necessary to practice the standard be meaningfully available, and one can find strong statements that a RAND commitment is not intended to disrupt the ordinary licensing practices of members nor to displace bilateral negotiation,⁴⁶ but one will find no statement by ETSI or any ETSI committee

⁴⁵ See Jean Tirole, THE THEORY OF INDUSTRIAL ORGANIZATION 390-91 (1988) (discussing underincentivization in context of patent-holder's failure to capture full value of innovation); Steven Shavell & Tanguy Van Ypersele, *Rewards Versus Intellectual Property Rights*, 44 J. L. & ECON. 525, 533-34 (2001) (same).

⁴⁶ See ETSI/GA 20(94)2 (Final Report of the Special Committee) Annex XII (Final Texts for Common Objectives from 2nd Plenary Meeting), at 1 ("Licensing terms and conditions should allow normal business practices for ETSI members. ETSI should not interfere in licence negotiations.").

that RAND is intended to dictate the allocation of value at the margin as between licensor and licensee.

Finally, the Commission's recommendations that reasonable royalties for a patent—whether the issue is compliance with a RAND obligation, calculating damages for past infringement, or establishing an ongoing royalty if an injunction is denied under *eBay Inc. v. MercExchange, L.L.C.*—be limited by either a "hypothetical *ex ante*" negotiation or by an "incremental value over the next best alternative" measure are simply contrary to basic and firmly established tenets of patent law and underlying policy. The long-standing rule is that an appropriate and reasonable compensatory damage award for patent infringement must at least align with the royalty a willing licensor and licensee would have negotiated at the time of first infringement—that is, when the patent-holder's rights were first violated—and making the additional assumption that the patent is valid, enforceable, and infringed.⁴⁷ This follows from the principle that damages should place the patent-holder in at least the same position it would have occupied had the patent not been infringed,⁴⁸ and that infringement damage awards should not make infringement attractive.⁴⁹ The Commission's proposal, by

⁴⁷ See Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1324-25 (Fed. Cir. 2009) ("[T]he hypothetical negotiation [approach] or the 'willing licensor-willing licensee' approach, attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began. . . . The hypothetical negotiation also assumes that the asserted patent claims are valid and infringed."); see also Georgia-Pacific, 318 F. Supp. at 1120.

⁴⁸ See Brooktree Corp. v. Advanced Micro-Devices, Inc., 977 F.2d 1555, 1579 (Fed. Cir. 1992) ("In patent cases, as in other commercial torts, damages are measured by inquiring: had the tortfeasor not committed the wrong, what would have been the financial position of the person wronged?").

⁴⁹ See Panduit Corp. v. Stahlin Bros Fibre Works, Inc., 575 F.2d 1152, 1158 (6th Cir. 1978) ("Except for the limited risk that the patent owner, over years of litigation, might meet the heavy burden of proving the four elements required for recovery of lost profits, the infringer would have nothing to lose, and everything to gain if he could count on paying only the normal, routine royalty non-infringers might have paid.").

contrast, could leave an infringer far *better* off than if it had negotiated a license at the time of first infringement, creating powerful incentives to infringe and litigate rather than negotiate a voluntary license. The Commission is proposing a radical repudiation of long-standing law and policy, not an adjustment at the margin, and one that would result in far more frequent judicial involvement in determining royalty rates, an already notoriously difficult exercise.

VI. REMEDIES FOR INFRINGEMENT SHOULD NOT BE FURTHER RESTRICTED BY A CATEGORICAL RULE AGAINST INJUNCTIONS

In addition to proposing new limitations on the calculation of reasonable royalty damages in an infringement suit, the Commission has also proposed limitations on the availability of *equitable* damages. As the Commission has recognized, the ability of a patentee to obtain injunctive relief against an infringer plays an important role in promoting innovation by (i) preserving the patentee's exclusive patent right, (ii) deterring infringement and (iii) encouraging licensing.⁵⁰ Nevertheless, the Commission has raised concerns that the threat of injunction may exacerbate the hypothetical problem of patent hold-up, and has recommended that injunctive relief be denied where the costs of such hold-up outweigh the harm to the patentee from ongoing infringement.⁵¹ To that end, the Commission has suggested that in the standard-setting context, a patentee's prior RAND commitment should be considered powerful evidence that ongoing royalties are adequate compensation and that injunctive relief should be denied.

Qualcomm agrees with the Commission's observation that any injunction analysis in federal court must follow the four-factor framework set forth in the Supreme

⁵⁰ *See* Report at 224-25.

⁵¹ See id. at 225, 227.

Court's *eBay* decision.⁵² However, it is unnecessary to add any presumption or other modification to that framework, and it would be inappropriate and potentially harmful to do so.

At the outset, we should note that the risk or threat of an injunction that bars practice of a standard, based on infringement of an essential claim, is a purely academic phantom under existing U.S. law: we are aware of no such injunction ever issued by any U.S. court. This has been true even before the Supreme Court's *eBay* decision, it is true even though standards, essential patent claims, and injunctive remedies have existed for decades, and it is true notwithstanding the fact that RAND commitments can never actually be obtained for all patents essential to major standards.

We should also be clear as to the scenario we are discussing: in U.S. courts, at least, it appears quite unlikely that an injunction would be entered against an infringer so long as a defense is pending that the patent-holder refused to offer RAND license terms. The live question, then, is whether an injunction should issue against a willful, continuing infringer who refuses to take a license on terms that have been adjudicated to comply with RAND. There is no sound reason to deny an injunction against such an infringer.

First, a RAND commitment is a voluntary contract, not a nose of wax to be reshaped *ex post* to suit policy preferences. There is nothing in the language or history of the IPR policies of major SSOs to indicate that the SSOs expect, or those who give RAND commitments understand, that they are waiving all right to injunctive relief, even against willful infringers, even if the patent-holder has complied with its obligation to offer licenses on RAND terms. Since as a matter of law a waiver must be intentional, no broad waiver can be found in this context.

Second, a "no injunctions, ever" rule would radically *discourage* voluntary negotiation of licenses. The Commission theorizes that potential infringers would be deterred by the fact that a post-litigation award of ongoing royalties after a determination of validity and infringement would be higher than hypothetical pre-litigation royalties.⁵³ Indeed, post-litigation royalty-based damage awards *should* be higher than hypothetical pre-litigation royalties for this reason, as firmly established law recognizes.⁵⁴ However, it is unclear how this can be reconciled with the Commission's parallel recommendation that reasonable royalty damages be limited to the incremental value of the patented invention over the next-best alternative.⁵⁵ Quite simply, the combined limitations to patentees' compensatory and equitable remedies would offer infringers a regime of mandatory licensing on court-ordered terms, make infringement a risk-free option for manufacturers, reduce voluntary licensing, and increase litigation.

As discussed previously in Part IV.C, the proper procedure, both legally and logically, is for the court to grant an injunction if it finds that RAND terms have been

⁵⁵ *See* Report at 20-21.

⁵³ See id. at 173-74.

⁵⁴ See Panduit Corp., 575 F.2d at 1158 ("The setting of a reasonable royalty after infringement cannot be treated, as it was here, as the equivalent of ordinary royalty negotiations among truly 'willing' patent owners and licensees. That view would constitute a pretense that the infringement never happened. It would also make an election to infringe a handy means for competitors to impose a 'compulsory license' policy upon every patent owner."); *Stickle v. Heublein, Inc.*, 716 F.2d 1550, 1563 (Fed. Cir. 1983) ("[D]amages [award may be] greater than a reasonable royalty so that the award is 'adequate to compensate for the infringement.""); *Super Sack Mfg. Corp. v. Bulk-Pack, Inc.*, No. 4:90CV171, 1992 WL 96863, at *11 (E.D. Tex. Apr. 6, 1992) ("[A] reasonable royalty for an infringer may be greater than the royalty which a hypothetical patent owner and willing licensee would have agreed upon on the date the infringement commenced. . . . To find otherwise would place the infringers in a 'heads-I-win, tails-you-lose' position.") (internal citations and quotations omitted).

previously offered and refused, and leave it to the parties to negotiate a license. If the infringer is unwilling to accept terms that have actually been affirmed as RAND by a court, there is no reason for it to be able to continue infringing; no one can contend that a RAND commitment by a patent owner is consent to royalty-free licensing, or to a treadmill of sequential litigations to recapture unpaid royalties as damages.

Third, a "no injunctions, ever" regime would represent a radical change in our patent law affecting large swaths of innovation, and of the economy. The fundamental theory and purpose of the patent grant is "[t]he encouragement of investment-based risk . . . based directly on the right to exclude".⁵⁶ Inherent in the granting of patent rights is that the "patentee is generally entitled to determine how it wishes to commercialize its invention in order to optimize its economic benefit from the patent grant".⁵⁷ Of course a RAND commitment represents a voluntary and contractual limitation on that otherwise almost absolute right, but as noted above no absolute abandonment of injunctive relief can be found as a matter of contract law. Economic arguments reflecting a basic policy disagreement with the statutory right to exclude cannot justify courts or regulators in overruling that statutory right beyond any voluntary contractual surrender.

Fourth, the equitable flexibility provided by *eBay* gives courts ample discretion to withhold injunctive relief when appropriate, without requiring any additional test or hurdle peculiar to the RAND commitment. We note that any added RAND-based hurdle likely would be irrelevant to the very situation where hold-up is

⁵⁶ Patlex Corp. v. Mossinghoff, 758 F.2d 594, 599, mod. on reh'g 771 F.2d 480 (Fed. Cir. 1985).

⁵⁷ Carborundum Co. v. Molten Metal Equip. Innovations, Inc., 72 F.3d 872, 880 (Fed. Cir. 1995).

most likely—where the patentee is a non-practicing entity operating outside the constraints of any standard-setting organization. An NPE patentee (and potential hold-up source) is unlikely to have made any RAND commitments for its patents. Accordingly, in such a situation, a court would simply assess the threat of hold-up through a straightforward, fact-specific application of the *eBay* factors, and grant or deny an injunction in accordance with its equitable discretion.

Finally, the Commission expresses concern that the threat of a standardblocking exclusion order issuing from the ITC, outside the purview of the *eBay* framework, may facilitate hold-up.⁵⁸ But this also is counter-factual speculation. The industry is well aware that the ITC has never issued an exclusion order based on infringement of a patent subject to a RAND commitment, so there is little reason to believe that such a "threat" carries any great weight during license negotiations. How the ITC would assess whether or not to grant an exclusion order in such a case if asked, under its existing statutory framework, remains to be seen. Any recommendation that the ITC modify its current enforcement policies would be premature and necessarily formed in a vacuum of experience.

VII. CONCLUSION

The Commission has, in the past, emphasized the critical importance of empirical research and economic data in formulating policy. Yet its current recommendations on damages and standard-setting practices appear to be based on anecdotes and the minority views of that same handful of large IT manufacturers, along with a cadre of anti-IP academics, who have tried and failed to persuade Congress to reshape patent damages law over the past decade.

⁵⁸ *See* Report at 239-43.

As discussed in this submission, flexibility, reliance on private negotiation, and respect for intellectual property rights are critical to maintaining the complex balance of interests between patentees, licensees, standard-setting organizations and consumers—a fact that the courts, and now also Congress, have recognized. Particularly given that America is a net producer of intellectual property, and given the many jobs within this country driven by R&D investments, we urge the Commission to be extremely wary of recommending modifications to existing law and practice that may seriously damage the innovative process.

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