

Seeing the Forest Through the SEPs

BY JOHN D. HARKRIDER

IN THE MID-1970s, THE SOVIET UNION proposed an ostensibly balanced step towards nuclear disarmament: if the U.S. agreed to ban its Trident Ohio-class submarine, the USSR would ban its “analogous” Soviet submarine.¹ At first blush, this offer appeared to represent a reciprocal approach to reducing the superpowers’ nuclear capabilities related to submarine-launched ballistic missiles (SLBMs).

Although many Americans protested against the building of the Trident submarine, the U.S. Government rejected this offer, and with good reason. At the time, the USSR already possessed SLBMs that were more advanced than those in the Pentagon’s arsenal. Developing the Trident Ohio-class submarines was necessary in order for the U.S. to achieve equivalent SLBM capabilities. The Kremlin’s proposal to ban its “analogous” submarine would not have affected its pre-existing SLBMs—it would have only prevented the U.S. from catching up. Thus, what was presented as an even-handed step towards disarmament actually would have tilted the battle field in favor of the USSR and arguably extended the arms race.

Something similar is happening in the current debate regarding standard essential patents (SEPs). Over the last several years, Microsoft and Apple have waged a patent war against devices running the open source Android operating system, obtaining injunctions,² billion-dollar jury verdicts,³ and billions of dollars in royalties.⁴ Apple and Microsoft achieved those successes despite concerns about the general quality of the underlying patents and despite winning only a small fraction of the claims they filed.

Despite complaints from members of the open source community that certain proprietary-source firms had long sown fear, uncertainty and doubt in an effort to limit the adoption of open source products,⁵ the antitrust regulators largely stayed on the sidelines. That began to change when Microsoft and Apple, joined by several other proprietary software firms threatened by open source competition, sought to expand their patent arsenals by acquiring thousands of patents from Novell and Nortel. The Department of Justice

forced the parties to the CPTN/Novell transaction to alter the terms of their deal to incorporate several protections for open source software,⁶ but allowed the Rockstar consortium to bid for and ultimately acquire the Nortel portfolio.⁷

The antitrust agencies’ interest in the “smartphone wars” accelerated only when Google, the main driving force behind Android, sought to acquire Motorola Mobility—and its sizeable patent portfolio—in an effort to decrease patent imbalance in the industry and thus deter further attacks on Android. The Agencies began to focus on the assertion of SEPs, in particular the alleged risk that suits brought by SEP owners seeking injunctive relief would allow them to “hold-up” implementers.

The Agencies’ focus on SEP injunctions seemed odd. After all, no injunction or exclusion order on SEPs has ever been issued in the smartphone space in the U.S., and Motorola did not dispute its obligation to license those patents on FRAND terms. Indeed, Apple had refused to pay Motorola Mobility *anything* for its significant portfolio after three years of negotiation under a hypothetical threat of injunction, which is hardly evidence of hold-up. During this time, Apple reportedly collected up to 80 percent of the profits in the smartphone industry, evidence that the more significant concern was that firms would hold-out from paying royalties, not be held-up from making profits.⁸

Moreover, the legal argument for barring even the potential for injunctive relief was novel. As recently as 2011, Microsoft argued to the FTC that FRAND commitments should not be understood to preclude claims for injunctive relief and that there is “little evidence that patent hold-up in the standards context is a real problem.”⁹ Moreover, the Commission itself noted in its 2007 *Rambus* opinion that injunctive relief was and ought to be available with respect to FRAND-encumbered SEPs.¹⁰

Microsoft and Apple’s endorsement of strict controls on the availability of injunctive relief for SEPs changed after Google’s announced acquisition of MMI. Their proposed ban on injunctions would (1) prevent Google from using SEPs to defend itself and other open source distributors and partners from attack, while (2) permitting Microsoft, Apple, and their allies to use their larger portfolios of non-SEPs to obtain injunctions against Android and other open source devices. In effect, these companies ripped a page from the Soviet playbook, proposing what appeared to be a neutral rule towards peace, but the effect of which would be to allow them to continue the war on more favorable terms.

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The Federal Trade Commission took a more nuanced approach to the issue. After an in-depth review of the facts and theory, the Commission adopted a balanced approach that addressed the potential risk of *willing* licensees of SEPs being enjoined, without completely limiting the effectiveness of SEPs as deterrents against *unwilling* licensees and patent aggressors.¹¹ In short, the FTC endorsed a solution that takes into account the dual harms of hold-up and hold-out. In doing so, the FTC preserved incentives for firms to continue to invest in standard setting and the many procompetitive benefits that standard-setting organizations (SSOs) produce.

The Role and Incentive Structures of Standard-Setting Organizations

By encouraging interoperability, SSOs produce benefits that redound to innovators, implementers, and consumers. Many of the most significant accomplishments in the telecommunications field are attributable to the work of major SSOs, such as the European Telecommunications Standards Institute (ETSI), which promulgated the GSM, 3G, and 4G standards (and which holds the trademark on “LTE” as a result). The fact that SSOs like ETSI are diverse groups of firms that compete both in innovation and in their implementation of finished standards is crucial both to their technical and economic success.

Most of the work of SSOs is done by committees and working groups that are charged with drafting a new standard (or portion of a standard). Such groups bring together representatives of the key stakeholders to consider the relevant technical questions and, ultimately, determine the content of the standard. Significantly, many of the proposals considered by an SSO and its working groups (particularly in the telecommunications industry) might be patented by one of the SSO members. Moreover, a firm’s representative on a committee might have an incentive to incorporate her firm’s patented technology into a proposed standard as a way of increasing future licensing revenue (particularly once the industry becomes locked into the standard). As a result, most SSOs require any firm participating in a standards-development effort to both disclose whether it owns potentially essential patents for a particular proposal and agree, in advance, to license any of its patents essential to the ultimately adopted standard on fair, reasonable, and non-discriminatory (FRAND) terms.

FRAND licensing requirements balance two important interests of an SSO. The first is to maximize the technical quality of the standard by providing an incentive for innovators to participate in the SSO (and contribute their know-how and R&D efforts to the collective effort). The second is to maximize adoption of the standard (and thus the value of the standard to the entire industry) by ensuring that any interested firm can obtain the patent licenses necessary to implement the standard on reasonable terms, without being subject to attempts by SEP holders to engage in “hold-up” and monopolize the consumer value of the standard. Beyond

those general principles, however, there is frequently disagreement—both among SSO members and with non-members—as to how the requirement of FRAND licensing should be interpreted and enforced.¹²

At one extreme, “innovator” companies with significant portfolios of SEPs (which are generally the result of significant R&D investments) tend to advocate for robust interpretations both of what a “reasonable” royalty can be and of SEP holders’ right to enforce their patents against parties that are unwilling to agree to a license agreement and pay a reasonable royalty. At the other end of the spectrum, firms that do not own SEPs, but rather are pure “implementers” of the standard, tend to argue that “fair and reasonable royalties” should be lower and that, by promising to license on FRAND terms, SEP holders agreed to limit the remedies they would seek for alleged infringement of their essential patents (for example, by foregoing injunctive relief or enhanced damages).

SSOs have historically taken a middle ground between these two positions, refusing to specify the appropriate FRAND rate and refusing to adopt a categorical rule for or against injunctions. Such a balanced approach is in the SSOs’ self-interest, which in turn suggests it is welfare enhancing. The reason is simple: SSOs represent the interests of *both* types of companies and have an interest in adopting a middle ground that maximizes participation in both developing and deploying their standards. Indeed, many SSO members are themselves both innovators and implementers, but often in different proportions for various standards.

Consider, for example, what would happen if an SSO were to adopt a uniform rule that royalties must always be charged against the cost of a component (e.g., a \$30 chipset) rather than the price of the end device (e.g., a \$300 handset). Such a rule would—if royalty rates were held constant—reduce total royalties by a factor of ten. Innovator firms therefore would be faced with one of several equally unappealing choices: (1) reduce their participation in SSOs generally, and thereby forgo the ability to shape the next generation of industry standards; (2) choose to participate in an alternative SSO that did not as strictly restrict the royalties they could charge; or (3) reduce their overall investment in R&D to account for the lower expected royalty return. None of these choices is a good outcome either for the firms concerned or the SSO (including its implementer members), particularly since the firms most affected (and thus most likely to change their behavior) are likely to be among the most significant contributors to the standard-setting process and the collective R&D effort that serves as its foundation. The ultimate outcome, therefore, is likely to be lower quality standards, less innovation, and less consumer demand for new products.

Conversely, imagine what would happen if the same SSO were to adopt a rule permitting (or even encouraging) injunctive relief for any infringement, even by a firm that is entirely willing to take a license on FRAND terms. Such a rule might permit large SEP holders to hold-up other imple-

menters with few or no SEPs and demand supra-FRAND rates. As a result, implementers undoubtedly would reduce their investment in products implementing standards or find another SSO that had a different rule against injunctions. This would slow adoption of the SSO's standards, reducing both the positive network externalities available to all participants and the royalty revenues available to SEP holders. (Notably, the latter phenomenon would affect even SEP holders which did not themselves attempt to "hold-up" implementers, since overall demand would nonetheless decline.)

SSOs therefore adopt a balanced approach (including frequently declining to provide specific guidance on the precise meaning of "FRAND" and instead allowing the parties to develop meaning through bilateral negotiations). Going too far in either direction would potentially reduce participation in their SSO as well as standard setting generally.

More importantly, the SSO members themselves have an interest in a balanced approach because they collectively represent the interest of an industry seeking to maximize output. That is, they collectively represent producers (SEP holders) and consumers (device manufacturers). Indeed, most of the longstanding members of SSOs are themselves both SEP holders and implementers—for example, those who make devices may have SEPs, but they may also have to pay others for SEPs. That was undoubtedly one reason why a recent ETSI working group rejected the "extreme" positions that injunctions should always be available, even against willing licensees, or that they should be categorically barred.¹³

SSO participants are thus analogous to individuals behind a Rawlsian veil of ignorance.¹⁴ Individuals who are not aware of what status they will have in life will set fair and just rules that are evenly applied to all individuals or situations. Firms that both invest in R&D—and thus could come to own patents subject to FRAND licensing obligations—and expect to implement the eventual standard, are not aware if they will be held up by SEP holders or will instead find SEP implementers holding out from paying for use of their SEPs. Given that condition of uncertainty, they are likely to adopt rules that balance both concerns.

Asymmetry of Remedies

Inherent in FRAND licensing requirements is the expectation that the parties will negotiate in good faith to determine appropriate royalties. If those negotiations fail to lead to an agreement, however, the two parties have highly asymmetric litigation options available to them to resolve the impasse.

An implementer who is *willing* to license the SEPs on FRAND terms, but believes that the patent holder is insisting on unreasonable or discriminatory terms, can generally bring a state law breach of contract action to determine whether the SEP holder has, in fact, complied with its FRAND licensing obligation. If a breach is found, the implementer can arguably seek relief in the form of a declaration of an appropriate FRAND royalty rate for the standards at

issue. This claim has a chance to succeed because courts have held that the implementer is a third-party beneficiary of the SEP holder's promise to license on FRAND terms.¹⁵ Because the patentee's FRAND licensing obligation typically attaches to all of its patents that are essential to a particular standard (which are generally licensed on a standard-by-standard basis), the implementer can generally bring a *single* breach of contract action to resolve a dispute that might involve *hundreds* of SEPs. Microsoft, for example, used that approach to obtain a FRAND rate determination as to Motorola's H.264 and 802.11 SEPs in a breach of contract action in the Western District of Washington.¹⁶

Patentees, however, lack an equivalent remedy, because an implementer has no obligation (contractual or otherwise) to pay the FRAND rate unless it is actually infringing a valid patent. The patentee's only way to compel the implementer to take a license or to otherwise receive compensation is to litigate the underlying infringement claims.

Yet no court will hear a patent infringement suit on more than a handful of patents at a time. A holder of a significant portfolio of SEPs is therefore forced to resort entirely to damages judgments as a means of obtaining compensation for the use of its valuable intellectual property. This, in turn, means that SEP holders would need to bring potentially hundreds of individual patent infringement suits, proving validity, infringement, and damages as to each patent *seriatim* to even come close to approximating the reasonable royalty that a willing licensee should have paid from the outset (and even then, it is not clear that a court would require the now-adjudged infringer to pay the same royalty going forward, creating the risk of yet more litigation). In such a scenario, the DOJ has recognized that potential licensees may have little incentive to negotiate portfolio-wide SEP licenses.¹⁷

That is where the availability of injunctive relief can be a useful and efficient tool to compel a recalcitrant infringer to engage in good-faith license negotiations. Recognizing that as an option would not necessarily subject implementers to hold-up, since they would always retain the right to seek a FRAND license and to seek judicial relief if they believe the licensor is breaching its commitment; the licensor's willingness to make a fair and reasonable offer could even be deemed a precondition to obtaining the equitable remedy of injunctive relief on a FRAND-encumbered patent.¹⁸ The key point is that a categorical elimination of injunctive relief as even a potential remedy greatly enhances the risk of "hold-out."

Indeed, because each patent infringement suit could take several years, and because the likely worst case scenario is that they would have to pay some fraction of the FRAND royalty for the patents that they infringe upon, there is little incentive for the implementer to negotiate a FRAND license in such a system. That is especially true when one considers that there is little possibility that a court would find that every patent in a portfolio was infringed and valid, meaning an implementer is always better off holding out instead of negotiating a FRAND license. That appears to have been Apple's

strategy in its failed attempt to convince a Wisconsin district court to require Motorola to *offer* a FRAND royalty set by the court for its cellular essential patents, but only as a precursor to further negotiation between the parties—despite the fact that Apple had consistently failed to pay any royalties over the many prior years of negotiation.¹⁹

The Evolution of SEP Licensing Practices

Although patents play an important role in the telecommunications sector, prior to the entry of Apple and Microsoft, there had been very little patent litigation between industry participants. Instead, there had been a long history of cross-licensing between holders of large portfolios of SEPs.

Because most telecommunication firms were both licensors and licensees at the same time, they each had interests in setting royalty rates that were, in fact, fair and reasonable. If they set a rate on their 3G patents that was too high, that rate would become precedent for a firm that was trying to charge them a high rate. If they argued for too low a rate, that rate would become precedent for those who wanted to pay them that low rate.

Moreover, given the large number of patents that potentially read on a single device,²⁰ telecommunication firms invariably licensed their entire portfolio of patents that read on a particular standard as opposed to patent-by-patent licensing. This is because a portfolio license gives the licensee freedom to operate within a given field without concern that they only licensed some but not all of the licensor's patents that read upon a particular standard.²¹

As a result of this dynamic, most telecommunication firms charge very similar prices for their portfolio of SEPs. Specifically, Samsung, Nokia, Ericsson, Alcatel-Lucent, Motorola, and Qualcomm all charge between 2 and 4 percent of the end-device for their portfolio of SEPs.²² Further, most of these firms do not “royalty stack,” which means that if a firm enters into a license for GSM or UMTS at 2 percent, that firm generally would not also pay an additional royalty to the same patentee for implementing additional standards in the same devices. Where firms had balanced portfolios, it was possible that they would cross-license each other at low royalty rates or even at zero royalty.

Apple, Microsoft, and Google Enter the Smartphone Space. In the mid-2000s, three firms that previously had little history in the telecommunications industry entered the smartphone space: Apple, with its iPhone; Google, with Android; and Microsoft, with Windows Mobile. These firms all had different business models and all had different patent holdings, which led to very different strategies.

Apple wanted to sell a high-end device and did not want to license either its software or design patents to competitors. Microsoft wanted to license its operating system to OEMs and was willing to license its patents, provided it could earn significant revenues from them.

Google had a very different strategy. It wanted to broadly distribute its free Android operating system to encourage

OEMs to enter the smartphone space, enabling as many consumers as possible to access the Internet on low-priced mobile devices. Google's strategy posed a threat to both Microsoft and Apple because it lowered the prices and profits that they could earn on smartphones. In particular, Android posed a significant threat to Microsoft's desktop operating system monopoly, as consumers increasingly substituted from desktops to mobile devices.

Because Google, Apple, and Microsoft were not telecommunications firms, however, none of them had significant portfolios of network protocol SEPs and therefore they could not enter into a broad SEP cross license as incumbents had traditionally done.

Microsoft and Apple, however, had significant portfolios of non-SEPs. In fact, at the time of the announcement of Google's acquisition of Motorola Mobility, Microsoft had approximately 18,000 patents and Apple had approximately 4,500 patents. These firms, however, had invested very little in network protocol technologies. For example, by the announcement of the Motorola Mobility Acquisition, Apple had declared only 23 U.S. patents as essential to ETSI and Microsoft had declared only one.²³

Google had an even more significant problem—it lacked a significant portfolio of *both* SEPs and non-SEPs. This was not because Google had failed to make significant investment in R&D. Indeed, Google spent more on R&D as a percentage of sales than Apple.²⁴ Instead, it was due to the fact that Google was a young company and therefore did not have sufficient time to accumulate patents and, as a firm with strong connections to the open source community, had historically been skeptical of the merits of patenting software.

All three of these firms adopted very different strategies to address their lack of network protocol SEPs. Apple sought injunctions against Android OEMs, such as Motorola, Samsung, and HTC, for allegedly infringing design patents, such as those covering the rounded corner of the iPhone²⁵ and software patents, such as those covering “swipe to unlock.”²⁶ Apple—when it chose to license its patents—sought up to 10 percent of the base price of Android smartphones as royalties on just a handful of its patents.²⁷

In contrast, Apple refused to pay anything to SEP holders like Motorola. Instead, Apple exploited the asymmetry in FRAND remedies. After more than three years of fruitless negotiations, Motorola Mobility sued Apple for infringement. Apple countersued, alleging, *inter alia*, breach of contract and claiming that it had no obligation to pay the FRAND rate set by the court without Motorola bringing hundreds of individual patent infringement actions.²⁸

For its part, Microsoft also sought injunctions against Android OEMs using non-SEP software patents. Unlike Apple, however, Microsoft was willing to enter into patent cross-licenses, though at highly disadvantageous terms. Specifically, Microsoft reportedly required Android OEMs to pay license fees of \$5 to \$15 per device (amounting to 5 to 10 percent of the base price of many devices), and in some

cases, to agree to sell smartphones using Windows as well.²⁹ That strategy reportedly has earned Microsoft more than \$1 billion in annual royalties from Android OEMs.³⁰

Whatever the consumer welfare implications of those strategies, there is little question that the patent laws protect each company's right to assert its patents, absent evidence that they were obtained through fraud or inequitable conduct or that their assertion would extend the patent monopoly beyond its Congressionally-conferred scope. But at the same time, defensive assertions and negotiated settlements are also part of the patent law equilibrium, and restrictions on the ability to bring certain types of patent claims can have far-reaching implications for the patent system and for competition.

Hold-Up v. Hold-Out. There is no question that hold-up and hold-out are valid concerns for policy makers charged with promoting both innovation and downstream competition. If SEP holders are able to use injunctions against willing licensees, there is a risk that they can force firms to pay supra-FRAND rates because the alternative—being enjoined from the market—can make them lose the entire profit stream they expect to earn from the excluded device. As a result, firms may not invest in devices implementing the standard. Conversely, if firms are free to refuse to pay for their use of SEPs without any risk of injunctions or damages (at least within a reasonable period), that may lead to underinvestment in standards development and related innovation. What's more, it may increase the comparative value of low-quality software and design patents, which do not have FRAND limitations.

In the presence of competing hypotheses, empirical evidence can help determine which hypothesis is correct. If hold-up were prevalent in the industry, one would expect to see the profits of SEP holders significantly outstrip those of SEP implementers. Yet, the opposite is true. Apple, which has very few network protocol SEPs, earns up to 80 percent of the profits in the smartphone space.³¹ In contrast, Nortel, one of the largest holders of SEPs in the world, declared bankruptcy, and Motorola Mobility and Nokia, two of the largest holders of SEPs, were both losing money for years.³²

Moreover, the largest holders of non-SEPs, Apple and Microsoft, have been able to obtain injunctions and billion-dollar damage awards against SEP holders, demanding and obtaining damages that are far in excess of the rates they contend are supra-FRAND. While patent holders generally have no obligation to license their patents, it seems odd to argue that a 10 percent royalty is an appropriate measure of damages for a design feature, such as swipe to unlock or the rounded corners of an iPhone, while arguing that a 2.25 percent royalty for essential telecommunications functionalities that drive consumer demand for smartphones (e.g., the ability to transmit videos, music, and large documents wirelessly) is outrageously extortive. Likewise, if SEP holders had the power to hold-up firms like Apple for licenses to their SEPs, one would have expected them to use that power to

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resolve the patent claims against them before they reached the stage of injunctions or massive damage verdicts.

The DOJ Responds

Given the well-recognized problems with patents in high technology generally and in the smartphone space specifically, it is unsurprising that the antitrust agencies entered the fray. These issues were brought to the DOJ's attention in its review of the CPTN transaction, in which Apple, Microsoft, Oracle, and EMC, four firms that had faced open source challenges to their proprietary software-based market power, sought to purchase the patent portfolio of Novell, one of the leading providers of open source software.

Novell previously had little incentive to assert its patents against open source competitors because doing so would undermine the market acceptance of open source, and could also harm its reputation in the open source community and alienate key contributors, both of which were central to its business.³³ For Apple, Microsoft, Oracle and EMC, by contrast, open source software functioned as a rival to their respective proprietary products. Hence, those firms potentially had greater incentives to assert the acquired patents aggressively. As the DOJ noted, "as originally proposed, the deal would jeopardize the ability of open source software, such as Linux, to continue to innovate and compete in the development and distribution of server, desktop, and mobile operating systems, middleware, and virtualization products."³⁴ As a result of the DOJ's investigation, the parties modified the transaction. Microsoft agreed to sell all of its acquired patents back to Attachmate (the successor to Novell's open source businesses) and EMC agreed not to acquire certain patents related to virtualization (a market in which it had significant market power) that read on its dominant virtualization product. All of the acquirers, meanwhile, agreed to take the patents subject to the license Novell had previously granted to the Open Invention Network (OIN), which grants a royalty-free cross-license to developers and users of specified forms of Linux systems who are willing to grant other participants similar rights under their patents.³⁵

Shortly thereafter, Apple, Microsoft, RIM, and Oracle moved to acquire approximately 6,000 patents from Nortel through the Rockstar consortium, after outbidding Google's stalking-horse bid. Significantly, Nortel was an important telecommunication company and had a number of SEPs; although inconsistent with the hold-up hypothesis, it had failed to generate a significant amount of royalties from these

patents. Although the DOJ reviewed the acquisition, there was no formal remedy. Instead, Apple and Microsoft made a series of commitments with regard to their use of the acquired SEPs.³⁶

Microsoft, for example, promised not to seek injunctions on the acquired SEPs and agreed that this promise would travel with any SEPs that it transferred to third parties.³⁷ Microsoft's relief left open the possibility that it would seek injunctions on non-SEPs even if they are subject to a RAND obligation. Nor did Microsoft promise that it would not involve itself in transactions that transfer SEPs to trolls. This latter gap is significant because in 2012, Nokia, after receiving \$1 billion from Microsoft, transferred approximately 1,200 SEPs to a troll, which, in turn, shares royalties with Microsoft and Nokia.³⁸

Apple, for its part, wrote to ETSI committing that it would not seek injunctions on SEPs, provided that the counterparty adopted Apple's favored royalty base—a "basic communications device."³⁹ This proposal would have the effect of reducing the resulting royalty by a factor of up to ten, when compared with the prevailing industry norm of charging royalties on the net selling price of the actual licensed device.⁴⁰ In other words, Apple promised it would not seek injunctions on SEPs provided that the other party agreed to charge no more than what Apple was willing to pay. This, of course, is no different than a firm saying that it will not seek an injunction if the counterparty agrees to pay exactly what it demands.

At the same time, the DOJ was also investigating Google's acquisition of Motorola Mobility. Like Nortel, Motorola Mobility had a significant portfolio of SEPs. It was also actively engaged in litigation with Microsoft and Apple before it was acquired by Google. As the European Commission recognized, Google acquired these patents so that it would be able to defend itself against continued attacks by Microsoft, Apple, and other proprietary source firms.⁴¹

For a number of reasons, Google did not have a greater incentive than Motorola Mobility to assert the acquired patents. Motorola Mobility itself had an incentive to assert these patents and was already involved in litigation with Microsoft and Apple. Further, Google had a strong disincentive against using the acquired patents aggressively against other members of the Android ecosystem, such as Samsung or HTC. Moreover, Google had far greater downside in continuing a patent war that raised prices and reduced output as it, unlike Microsoft, Apple, and even Motorola, had an interest in maximizing smartphone penetration—and the use its mobile web services—regardless of device manufacturer.

Further, Google, like Microsoft and Apple, made several promises to SSOs that helped address some of the DOJ's concerns.⁴² Specifically, Google promised that it would not increase the rate it charged for SEPs beyond Motorola's published 2.25 percent of the end device price for the acquired patents. Google also promised that it would not seek injunctions against willing licensees. In the end, the DOJ conclud-

ed that Google would not have a greater incentive than Motorola Mobility to use these patents aggressively against Microsoft and Apple and cleared the transaction.⁴³

The FTC Acts

After the Motorola Mobility transaction closed, the FTC opened an investigation into whether Google's use of SEPs to seek injunctions violated its FRAND commitments to ETSI, the Institute of Electrical and Electronics Engineers (IEEE), and the International Telecommunication Union (ITU) (three major SSOs).⁴⁴

In some respects, the FTC's focus on FRAND commitments was not surprising. The FTC had a long history of enforcement action against holders of FRAND-encumbered patents whose unfair or deceptive conduct had willfully created monopoly power. For example, in *Rambus*, the FTC concluded that Rambus's misrepresentation to JEDEC (an SSO in which it participated) that Rambus did not have patents reading on the DRAM standard, when it actually did, violated Section 2 of the Sherman Act.⁴⁵ The Commission reached a similar conclusion in the *Unocal* case, in which Unocal misrepresented its patent holdings to the State of California, leading a state agency to impose a regulatory standard that made Unocal's patents essential and thereby gave the company otherwise unavailable market power.⁴⁶ Despite the absence of a traditional SSO, the Commission unanimously concluded that the alleged conduct violated Section 2 and Unocal agreed to settle the proceeding, after considerable pre-trial proceedings, through a consent order.⁴⁷

The *Motorola* case was different, however, because there was no allegation that Motorola had failed to disclose its relevant patent holdings to the SSOs.⁴⁸ Nor had Motorola promised not to seek injunctions and then breached that promise. In fact, as the district court found, ETSI rules did not prohibit firms from seeking injunctions on their SEPs.⁴⁹

Instead, the FTC argued that it was a breach of Section 5 for a firm to seek an injunction on a valid and enforceable patent even where there was no misrepresentation to an SSO or the public at large and even when the relevant SSO rules did not prohibit injunctions.⁵⁰ In short, the FTC used Section 5 to rewrite the SSO rules to include a prohibition on injunctive relief that the SSOs and their members had not themselves adopted.

Whatever the merits of the FTC's Section 5 theory,⁵¹ the FTC's ultimate resolution rewrote SSO rules in a balanced way. The resulting consent order protects against hold-up by requiring Google and Motorola, as a precondition to seeking injunctive relief on any FRAND-encumbered SEPs, to provide a prospective licensee with both an offer to license the relevant SEPs and an opportunity to submit the reasonableness of their requested license terms to binding, neutral arbitration.⁵²

Conversely, the order protects against hold-out by permitting Motorola and Google to seek any relief otherwise permitted by law—including injunctive relief—against a

firm that, notwithstanding those offers, declines to enter into a license or to be bound by the result of binding arbitration (or, in certain circumstances, a court's determination of a FRAND royalty rate).⁵³ While it remains to be seen whether the FTC will impose similar restrictions on other firms, the consent order provides a model for both SEP holders that want to enforce their essential patent rights and for SSOs looking to modify their own patent policies to more specifically balance hold-up and hold-out.

Conclusion

Some progress has been made in the smartphone patent wars. The FTC has made it clear that firms will not be able to seek injunctions on SEPs against willing licensees. That is not, however, a panacea.

The FTC's *Motorola* analysis appears, on its face, to allow firms to continue to seek injunctive relief even against willing licensees of FRAND-encumbered patents that were developed outside of the standard setting context. To that extent, the Commission's *Motorola* analysis appears to contract the scope of its earlier *Unocal* analysis and may inadvertently undermine the enforceability of statements by firms outside of the standard-setting context that they will license their proprietary technology on FRAND terms.

Moreover, the continued transfer of patents (including SEPs) to patent assertion entities—which are immune to countersuit and therefore are more likely to use these patents aggressively rather than to negotiate broad cross-licenses—makes a peaceful resolution of the current patent wars unlikely any time soon.

Some of these problems may be solved by antitrust authorities. For example, the antitrust agencies could institute rules comparable to those established in *Motorola* to protect willing licensees of all FRAND-encumbered patents, even if standardized outside a formal SSO context. Similarly, the antitrust agencies could examine whether dominant firms that pay others to sell their patents to trolls are engaging in privateering that raises rivals' costs and maintains market power. Specific attention is warranted where the sale is designed to evade a publically announced royalty cap covering those SEPs.

Some of these problems, however, will need to be resolved by Congress. For example, changing the rules that have permitted patents on frivolous design and software claims may reduce the ability of firms to use these non-SEPs to exclude rivals and raise prices to consumers. Similarly, allowing fee shifting may reduce the incentives of trolls to extort settlements by bringing infringement claims on weak patents.

What is clear, however, is that the patent wars were never about SEPs, the competitive effects of which have always been muted by well-recognized FRAND licensing norms. Instead, it was about patent aggression by dominant incumbent software firms that were threatened by new competition (in this case from open source Android), with SEPs drawn into play solely as a defensive measure by the targets of that aggression. But unfortunately, it is often the effort to defend

oneself that draws the attention and the punishment, whether in the schoolyard or in the real world. Thankfully, instead of punishing one side or the other, the FTC improved the rules of the playground. ■

¹ Stanley H. Kober, *Soviet Political Responses to Trident and TLAM-N*, Center for Naval Analyses Research Memorandum 87-7 (Dec. 1986), available at <http://www.cna.org/sites/default/files/research/2787000700.pdf>. The author would like to credit Susan Creighton for this historical analogy.

² See, e.g., Int'l Trade Comm'n, *In re Certain Personal Data and Mobile Communications Devices and Related Software*, Inv. No. 337-TA-710 (Dec. 19, 2011) (Notice of the Commission's Final Determination Finding a Violation of Section 337, Issuance of a Limited Exclusion Order, Termination of Investigation).

³ See, e.g., Nick Wingfield, *Jury Awards \$1 Billion to Apple in Samsung Patent Case*, N.Y. TIMES (Aug. 25, 2012), available at http://www.nytimes.com/2012/08/25/technology/jury-reaches-decision-in-apple-samsung-patent-trial.html?_r=0.

⁴ See, e.g., Steven D. Jones, *Android Licensing Pacts Ring Up Microsoft's Phone Revenue*, DOW JONES BUSINESS NEWS (Apr. 26, 2013), <http://www.nasdaq.com/article/android-licensing-pacts-ring-up-microsofts-phone-revenue-20130426-00607>; Trefis Team, *Android Could Be a Billion-Dollar Business, for Microsoft*, FORBES (July 11, 2011), available at <http://www.forbes.com/sites/greatspeculations/2011/07/11/android-could-be-a-billion-dollar-business-formicrosoft/>; *How Android Could Generate Microsoft's Next Billion Dollars*, INT'L BUS. TIMES (July 18, 2011), available at <http://www.ibtimes.com/how-android-could-generate-microsofts-next-billion-dollars-299701>; Ryan Kim, *Can Android Be Microsoft's Next \$1 Billion Business?*, GIGAOM (July 6, 2011), <http://gigaom.com/2011/07/06/can-android-be-microsofts-next-1-billion-business/>.

⁵ See, e.g., Ryan Paul, *Linux Foundation to Microsoft: Stop Secretly Attacking Linux*, ARS TECHNICA (Sep. 10, 2009), <http://arstechnica.com/information-technology/2009/09/linux-foundation-to-microsoft-stop-secretly-attacking-linux/>; Dr. Roy Schestowitz, *Microsoft Is Still Attacking Free/Open Source Software with Security FUD*, TECHRIGHTS (Feb. 17, 2010), <http://techrighs.org/2010/02/17/microsoft-on-many-eyeballs/>.

⁶ See Press Release, U.S. Dep't of Justice, CPTN Holding LLC and Novell Inc. Change Deal in Order to Address Department of Justice's Open Source Concerns (Apr. 20, 2011), available at http://www.justice.gov/atr/public/press_releases/2011/270086.htm.

⁷ See U.S. Dep't of Justice, Statement of the Department of Justice's Antitrust Division on Its Decision to Close Its Investigations of Google Inc.'s Acquisition of Motorola Mobility Holdings Inc. and the Acquisitions of Certain Patents by Apple Inc., Microsoft Corp. and Research in Motion Ltd. (Feb. 13, 2012), available at <http://www.justice.gov/opa/pr/2012/February/12-at-210.html>.

⁸ Zach Epstein, *Apple Claimed a Staggering 80% of Mobile Profit in Q4*, BGR (Feb. 7, 2012), <http://www.bgr.com/2012/02/07/apple-claimed-a-staggering-80-of-mobile-profit-in-q4/>.

⁹ See Microsoft's Comment to the FTC for the Patent Standards Workshop 13, 16 (June 14, 2011), available at <http://www.ftc.gov/os/comments/patent-standardsworkshop/00009-60523.pdf>.

¹⁰ Opinion of the Commission on Respondent's and Complaint Counsel's Petitions for Reconsideration of the Final Order at 5, *In re Rambus Inc.* (Apr. 27, 2007) (recognizing that even if Rambus had made a FRAND commitment as required by JEDEC's rules, "Rambus would have been able to seek injunctions against those who infringed without seeking licenses, and to collect compensatory damages, and possibly even treble damages against willful infringers").

¹¹ See Decision and Order, *In re Motorola Mobility* (Jan. 3, 2013), available at <http://ftc.gov/os/caselist/1210120/130103googlemotorolado.pdf>.

¹² Where there is less need for royalties to incentivize investment in research and development, some SSOs have chosen to forgo royalties altogether and require participants to license their SEPs on royalty-free terms. While such

- royalty-free licensing requirements are, for example, common for Internet standards, they are rare in the mobile telecommunications industry.
- ¹³ See Maïssa Bahsoun, *Status of Discussions: Overview of the Possible Scenarios, Associated Historical Information and Wording Proposals Where Appropriate*, ETSI/IPR (12) 12_002, at 14 (Oct. 17, 2012).
- ¹⁴ See JOHN RAWLS, *A THEORY OF JUSTICE* (Harvard Univ. Press 1999) (1971).
- ¹⁵ See, e.g., *Apple, Inc. v. Motorola Mobility, Inc.*, No. 11-cv-00178 (W.D. Wis. Aug. 10, 2012) (Opinion and Order) (finding that as a potential user of the standards at issue, Apple is a third party beneficiary of the agreements between Motorola and IEEE and Motorola and ETSI); *Microsoft Corp. v. Motorola Inc.*, No. 10-cv-01823 (W.D. Wash. Jun. 6, 2012) (Order) (summarizing the previous findings by the court that “as a member of the IEEE and the ITU and as a prospective user of both the H.264 Standard and the 802.11 Standard, Microsoft is a third-party beneficiary of those contracts”).
- ¹⁶ See *Microsoft Corp. v. Motorola, Inc.*, No. 2:10-cv-01823 (W.D. Wash. 2010).
- ¹⁷ See U.S. Dep’t of Justice & U.S. Patent & Trademark Office, *Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary FRAND Commitments* (Jan. 8, 2013) (“We recognize that the risk of a refusal to license . . . increases where the putative licensee believes its worst-case outcome after litigation is to pay the same amount it would have paid earlier for a license.”), available at <http://www.justice.gov/atr/public/guidelines/290994.pdf>.
- ¹⁸ For a general discussion of the role of injunctive relief in the context of *FRAND-encumbered patents*, see James Ratliff & Daniel L. Rubinfeld, *The Use and Threat of Injunctions in the RAND Context*, 9 J. COMPETITION L. & ECON. 1 (2013).
- ¹⁹ See *Apple Inc. v. Motorola Inc.*, No. 11-cv-00178 (W.D. Wis. Nov. 8, 2012) (Opinion and Order) (Crabb, J., dismissing Apple’s FRAND rate-setting action because Apple stated “that it would be willing to pay a rate of no more than \$ 1 for each Apple device going forward, while it retained the right to appeal any award higher than \$1, as well as to refuse any such rate and proceed to further infringement litigation”).
- ²⁰ See Mark A. Lemley, *Ignoring Patents*, 2008 MICH. ST. L. REV. 19, 19–20 (“[T]elecommunications and software companies” . . . “must aggregate hundreds or thousands of different components to make an integrated product. Each of those components may be patented, some by many different people.”).
- ²¹ It is, of course, true that some of the patents in the portfolio are either invalid or not infringed, over a given size of portfolio. However, it is virtually impossible that all of the patentee’s patents are invalid or not infringed.
- ²² Eric Stasik, *Royalty Rates and Licensing Strategies for Essential Patents on LTE (4G) Telecommunication Standards*, LES NOUVELLES 114–19 (Sept. 2010), available at <http://www.investorvillage.com/uploads/82827/files/LESI-Royalty-Rates.pdf>.
- ²³ ETSI, ETSI IPR Online Database, <http://webapp.etsi.org/IPR/>.
- ²⁴ For example, according to each firm’s 2010 Annual Report, Google invested approximately \$3.8 billion in R&D (12.8% of its sales), as compared with Apple’s R&D investment of \$1.8 billion in 2010 (approximately 2.7% of sales).
- ²⁵ U.S. Design Patent 504,889.
- ²⁶ U.S. Patent 8,046,721.
- ²⁷ See Chris Ziegler, *Apple Asked Samsung to Pay as Much as \$30 Per Android Phone, \$40 Per Tablet for Patent Licenses*, THE VERGE (Aug. 10, 2008), available at <http://www.theverge.com/2012/8/10/3234909/apple-samsung-patent-royalty-rates>. Average price of a Samsung smartphone was approximately \$360. See also Zach Epstein, *Apple Sold More Smartphones in Two Quarters than Samsung Sold in Two Years in the U.S.*, BGR (Aug. 10, 2012), <http://bgr.com/2012/08/10/samsung-smartphone-tablet-sales-us/>.
- ²⁸ *Supra* notes 15, 19.
- ²⁹ See, e.g., Reuters, *Microsoft Wants Samsung to Pay Smartphone License: Report* (July 6, 2011), available at <http://www.reuters.com/article/2011/07/06/us-samsung-microsoft-idUSTRE7651DB20110706>; Horace Dediu, *Microsoft Has Received Five Times More Income from Android than from Windows Phone*, ASYMCO (May 27, 2011), available at <http://www.asymco.com/2011/05/27/microsoft-has-received-five-times-more-income-from-android-than-from-windows-phone/>.
- ³⁰ See *supra* note 4 (articles cited).
- ³¹ See Epstein, *supra* note 8.
- ³² See, e.g., Hugo Miller, *Motorola Mobility Drops as Profit Forecast Trails Estimates*, BLOOMBERG (July 29, 2011), <http://www.bloomberg.com/news/2011-07-28/motorola-mobility-s-forecast-misses-estimates-amid-rising-competition.html>; Tarmo Virki, *Nokia Profits Dive as New Phones Slow to Take Off*, REUTERS (Jan. 26, 2012), available at <http://www.reuters.com/article/2012/01/26/us-nokia-idUSTRE80P00820120126>; *Nortel Sales Decline As Customers Cut Spending*, REUTERS (Mar. 12, 2010), available at <http://www.reuters.com/article/2010/03/13/us-nortel-results-idUSTRE62C05I20100313>.
- ³³ See Martin LaMonica, *Novell Lines Up Behind Open Source*, ZDNET (Apr. 16, 2003), available at <http://www.zdnet.com/news/novell-lines-up-behind-open-source/128766>; Sean Michael Kerner, *Novell’s Open Source Rex Talks Linux*, INTERNET NEWS (Feb. 26, 2009), available at <http://www.internet-news.com/dev-news/article.php/3806886/Novell+Open+Source+Rex+Talks+Linux.htm>.
- ³⁴ Press release, *supra* note 6.
- ³⁵ *Id.*
- ³⁶ See *id.*; Microsoft, *Microsoft’s Support for Industry Standards* (Feb. 8, 2012), <http://www.microsoft.com/en-us/legal/intellectualproperty/IPLicensing/ip2.aspx>; Letter from Bruce H. Watrous, Jr., VP and Chief IP Counsel, Apple, Inc. to Luis Jorge Romero Saro, ETSI Director-General (Nov. 11, 2011), available at <http://blog.ksnh.eu/de/wp-content/uploads/2012/02/80899178-11-11-11-Apple-Letter-to-ETSI-on-FRAND.pdf>.
- ³⁷ *Id.*
- ³⁸ See Alastair Sharp, *MOSAID Sees Rescue In Its Nokia-Microsoft Deal*, REUTERS (Sep. 1, 2011), available at <http://www.reuters.com/article/2011/09/01/us-mosaid-idUSTRE78030920110901>.
- ³⁹ *Id.*
- ⁴⁰ *Id.*
- ⁴¹ No. COMP/M.638—Google/Motorola Mobility, Commission Decision of 13/02/2012 Declaring a Concentration to Be Compatible with the Common Market (“[T]he documents on the file show clearly that Google’s rationale for the transaction is to create ‘patent balance.’”), available at <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32012M6381:EN:HTML>.
- ⁴² See, e.g., Letter from Allen Lo, Deputy General Counsel, Google, Inc. to Gordon Day, President, IEEE (Feb. 8, 2012), available at http://static.googleusercontent.com/external_content/untrusted_dlcp/www.google.com/en/us/press/motorola/pdf/sso-letter.pdf.
- ⁴³ U.S. Dep’t of Justice Statement, *supra* note 7.
- ⁴⁴ *In re Motorola Mobility*, FTC File No. 121-0120.
- ⁴⁵ See Rambus, Inc. (FTC Aug. 2, 2006) (Commission opinion) (emphasis added), available at <http://www.ftc.gov/os/adjpro/d9302/060802commissionopinion.pdf>.
- ⁴⁶ See Statement of the Federal Trade Commission, *In re Union Oil Co. of Cal.* (June 10, 2006), available at <http://www.ftc.gov/os/adjpro/d9305/050610statement9305.pdf>.
- ⁴⁷ *Id.*
- ⁴⁸ See Complaint, *In re Motorola Mobility* (Jan. 3, 2013), available at <http://www.ftc.gov/os/caselist/1210120/130103googlemotorolacmpt.pdf>.
- ⁴⁹ See *Apple Inc. v. Motorola Inc.*, No. 11-cv-00178 (W.D. Wis. Oct. 29, 2012) (Opinion and Order) (“There is no language in either the ETSI or IEEE contracts suggesting that Motorola and the standards-setting organizations intended or agreed to prohibit Motorola from seeking injunctive relief”).
- ⁵⁰ Complaint, *supra* note 48.
- ⁵¹ As the concurring and dissenting statements filed in connection with the Commission’s decision to accept a consent order make clear, there are significant statutory and *Noerr-Pennington* issues in play.
- ⁵² See Decision and Order, *In re Motorola Mobility* (Jan. 3, 2013), available at <http://ftc.gov/os/caselist/1210120/130103googlemotorolado.pdf>.
- ⁵³ *Id.*