



Should FRAND Excuse “Efficient Infringement”?

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Twenty or so years ago, when my focus on the competitive issues facing tech-driven companies expanded to include intellectual property issues, the concept of fair, reasonable, and nondiscriminatory (FRAND) royalties for standard-essential patents (SEPs) was so undefined that the guidance I could provide to clients was limited to the observation that FRAND is an ostensibly objective standard that remained vaguely defined, and that there was remarkably little case law anywhere in the world that provided much in the way of guidance. Since then, and particularly in the past decade or so, there has been an intense worldwide focus—by antitrust agencies, public policymakers, and courts—on providing increasingly detailed guidance.

My purpose in these comments is not to rehash or dissect those policy pronouncements and court decisions. Rather, it is to discuss from a public policy perspective the development over the past decade of FRAND as a set of increasingly detailed rules that apply to the licensing of SEPs. And, in particular, I want to discuss distortions in the marketplace for SEP licensing that have resulted from that development and that are producing results contrary to what public policy would want to achieve.

I. COMPETITIVE MARKETS, STANDARDS, AND SEPs

To discuss the SEP public policy issues and the concept of FRAND, it is first necessary to have working definitions of a competitive market, of a standard, and of a standard-essential patent.

A competitive market can be thought of as one in which the seller does not need to sell and the buyer does not need to buy. Where the product is a

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patent, that would mean a market in which the implementer (buyer) is free to choose whether to use (buy) the patented technology and the patentee (seller) is free to choose whether to license (sell) the technology. This freedom of both sellers and buyers results in prices that reflect an appropriate compromise between the desire of buyers to have the products at the lowest possible price and the desire of sellers to receive the highest possible price. That compromise is the competitive market price, the price that prevails in a competitive market.

We live and work in an environment in which electronic communications devices play a significant, even dominant, role and, therefore, we tend to think about patent issues as unique to such devices. But that is not correct. Many years ago, a client purchased pagers from a manufacturer in Korea. When the pagers landed in New York, they were seized by U.S. Customs and Border Protection as infringing the patents of a prominent brand of paging equipment. The infringement notice stated that more than a dozen patents applied not to the electronics of the pager itself, but rather to the holster for the pager that could be clipped to the user's belt. Several of those patents covered the spring-mounted clip, including the shape of the indentation at the top of the clip, and the striations in that indentation, which made it less slippery.

Of course, the manufacturer from which my client bought the pagers could have designed around the patents, making a non-infringing holster, without diminishing its ability to compete in the pager business. But the situation is quite different when a product implements a standard, and when the patents applicable to that product are standard-essential.

We will limit this discussion to voluntary industry standards. These are industry-wide standards that are not imposed by a government entity, but rather are formulated in discussions and negotiations among inventors and implementers participating, or planning to participate, in the manufacture and sale of devices and the provision of services in that industry.

This value of standards is easiest to understand outside our world of electronic devices. Walk into any hardware store and you will find that all the nuts and bolts are specified by two numbers, such as 6-32. Those numbers indicate the diameter size and thread-pitch of both the nuts and the bolts. Any 6-32 bolt made by any manufacturer will fit with any 6-32 nut made by any other manufacturer.¹ All 6-32 nuts and bolts are interoperable.

Similarly, standards for electronic devices are detailed specifications about particular functions of the devices. For example, the mobile communications

¹ ASTM is the standard-setting organization (SSO) that promulgates these standards. "ASTM's fastener standards are instrumental in specifying, testing, and evaluating the material, dimensional, mechanical, and metallurgical properties of the various forms of hardware fasteners." *Fastener Standards*, ASTM INT'L, <https://www.astm.org/Standards/fastener-standards.html>.

industry has set standards for the radio frequency (RF) functions of devices, sometimes called the air interface, which is the manner in which various mobile user devices communicate over RF—that is, wirelessly—with the mobile network base stations. Consumer mobile devices adhering to a certain RF standard will be interoperable with standard-compliant network base stations, regardless of who makes them: any standard-compliant end-user device made by any manufacturer will work with any base station made by any other manufacturer using the same RF standard.

Thus, standards serve a strongly procompetitive public policy purpose: by establishing rules governing core functions (mechanical ones in the case of nuts and bolts, electronic ones in the case of mobile networks and devices), standards help ensure that the market will operate in a way that benefits consumers by enabling an ecosystem of competing manufacturers, which in turn ensures that the market will produce the variety of devices at the variety of price points that satisfy consumers’ preferences.

Once a technical standard has been set, it becomes just what its name implies, the standard with which all devices must comply in order to be usable, and therefore able to be sold to consumers.² It is possible to make mobile devices that handle the air interface differently than is prescribed by the standard, and such devices might even be “better,” for example in preserving battery life or working in weak signal locations, but no one would buy them because they could not be used on the networks that comply with the standard.³

Once an industry standard is set, it will turn out that some number of companies—not surprisingly including some large number of the companies that participated in the standard setting—will have patented some piece or pieces of one or more of the technologies that accomplish functions specified in the standard. Because a patent will not be granted for a technology that is not an invention—that is, will only be granted for something new—most of the patents relevant to the standard will have been applied for at some earlier time, at least before the standard became final.

Some of those patents will provide alternative ways of accomplishing a function called for by the standard, or alternative ways of accomplishing a function found in devices that comply with the standard, or will cover a function that the standard simply states must be accomplished but without

² This discussion does not deal with *de facto* standards, which apply in those situations where certain features have been determined by consumer preference to be the minimum feature set a device must have for consumers to be willing to buy it.

³ It is possible to build multiple networks, each operating on its own standard, as has been and continues (to some extent) to be the case in the United States, but the interoperability issue remains the same: each device must comply with the standards of the network on which it is intended to operate to be usable by a consumer using that network’s services. A device that is interoperable with network *A* will not be interoperable with network *B*. Therefore, customers of network *B* will not buy network *A* devices, even if they are “better” than the network *B* devices.

specifying in detail exactly how it must be accomplished. Device makers and other implementers can pick and choose among these alternatives in close conformance to our accepted model of a competitive market.

But other functions specified by the standard will be mandatory in meaningful ways, describing functions that a device must perform, and perform in a specified way, for the device to be considered compliant with the standard. And some patents will cover a technology that turns out to be the *only* way to accomplish that functionality; that is, there is no possible design-around for the patented technology. Those patents will be necessarily or unavoidably infringed by practicing the standard: any implementation that complies with the standard will infringe those patents. Such patents are deemed to be SEPs. The “essential” element of the term standard-essential patent has a very specific meaning.

Returning to our model of a competitive marketplace, it is apparent that the existence of a standard, and of standard-essential patents, is inconsistent with the model. In a competitive market, an implementer can choose to make devices that are different from others in fundamental ways and still be able to sell them to consumers, because consumers will still find them useful. In a market in which standards determine functionality, a device that is “different” in the sense that it does not comply with the core functionality set by the standard will not be interoperable, and therefore consumers will not find it useful. In a given wireless network, for example, a device with a non-standard air interface will not be able to communicate with the network, and, therefore, no consumer will buy it.

Therefore, the most basic premises of a competitive market will not be true in a market where functionality is determined by standards and in which some patents are standard-essential. A buyer (implementer) will not be free to refuse to buy (license) at all, or to buy (license) from a seller (patentee) other than the SEP holder. In order to make devices that are interoperable with others in the market, an implementer’s devices will have to comply with the standard, and the implementer will have to use technologies that are protected by standard-essential patents.

II. FRAND ROYALTIES AND HOLDUP

This fundamental difference from a competitive market gives rise to a concern that patentees of SEPs will have the power to charge above-market prices, that is, prices higher than would prevail in a competitive market. That is the “holdup” concern.⁴ From a public policy perspective, the holdup

⁴ See Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991 (2007); Mark A. Lemley & Carl Shapiro, *A Simple Approach to Setting Reasonable Royalties for Standard-Essential Patents*, 28 BERKELEY TECH. L.J. 1135 (2013). *But see* J. Gregory Sidak, *Is Patent Holdup a Hoax?*, 3 CRITERION

concern would be addressed by a rule that will result in outcomes that simulate the outcomes that would be obtained in a competitive market. FRAND is the rule, or set of rules, that have evolved to lead to outcomes on royalty rates that would prevail in a competitive market.

Put another way, FRAND is essentially a regulatory concept, a form of market regulation, that, like any regulation, steps in to address a market failure. From a public policy perspective, the goal of this type of marketplace regulation is to offset any pricing power that the seller would have that exceeds the power a seller would have in a competitive market.

Thus, in a market subject to standards, the only goal of a regulatory scheme should be to offset any extra pricing power an SEP holder may have, in order to produce outcomes that simulate or mimic those that would obtain in a competitive market—that is, so that the implementer does not pay *more* than it would pay in a competitive market. In a legitimate regulatory scheme, that is the only goal. A legitimate regulatory scheme should not seek to give extra pricing power to the buyer or to enable a buyer to pay *less* than it would pay in a competitive marketplace.

And that brings us to the concepts of “fair” and “reasonable.” These terms recognize that the legitimate goal of the FRAND regulatory scheme is to put *both* the seller *and* the buyer in the position they would occupy in a competitive market; not simply to ensure a competitive price to the buyer, but also to ensure a competitive price to the seller. In other words, the goal is an outcome that is fair to *both* the patentee *and* the implementer.

A price that is “fair” and “reasonable” to both sides is a price that simulates the outcome that would result in a competitive market. From the patentee’s perspective, that price rewards the inventor sufficiently to provide the incentive for the inventor to innovate and to participate in setting voluntary standards. From the implementer’s perspective, that price enables equally efficient implementers to make and sell devices at the prices dictated by the market. Indeed, this is also a description of a competitive market price: it sufficiently rewards the seller to incent the seller to continue producing and selling the good, and it enables the buyer to acquire the good at an acceptable price, whether as an end user or a reseller.

But FRAND has additional implications that differ from the rules of a competitive market. In a competitive market, just as a buyer is free to not buy at all, so a seller is free to not sell at all. In markets for standards, most standard-setting forums require participants to declare whether they have patents that may be essential to the standard being set, and often to declare, or commit to, not only their willingness to offer to license those patents, but also the prices at which they will offer to license them, for example

J. ON INNOVATION 401 (2018); J. Gregory Sidak, *Mandating Final-Offer Arbitration of FRAND Royalties for Standard-Essential Patents*, 18 STAN. TECH. L. REV. 1 (2015).

on FRAND terms and conditions. The commitment⁵ to offer to license at FRAND rates thus is held to be two commitments: first, a commitment to offer to license, and second, a commitment to offer to license at FRAND rates.⁶

So, despite the fact that the most fundamental right of a patent holder is to exclude others from practicing the patented invention, a participant in setting a standard who has made a FRAND commitment, is required to permit others to practice the patented invention if they are willing to take a license on FRAND terms, and to charge no more than a “reasonable” rate, the rate that it would be able to charge in a competitive market.⁷

III. HOLDOUT

Another fundamental concept of a competitive market is that a buyer and seller agree to a price before the buyer takes possession of the goods. This ensures that the market price, the “fair” price, is agreed between the buyer and the seller before the goods are out of the hands of the seller.

And this brings us to a second marketplace failure or distortion in the patent world that is much less discussed. Unlike in a competitive marketplace, and unlike in the markets for any other component in an implementer’s product, in a market for SEPs, implementers are free to “take” the technology

⁵ This commitment to the SSO is the basis of the committing entity’s FRAND obligation. The FRAND obligation is a private contractual obligation between the SSO and those SSO contributors who sign up to it and is defined by the terms of the commitment. As a further matter of contract law (in most countries) implementers are third-party beneficiaries (or the equivalent doctrinal beneficiaries) of that commitment and therefore have legal standing to enforce the commitment.

⁶ The FRAND commitment made by a participant in standards setting, and the resulting contractual obligation to which that participant may be held as a patentee is meaningful only as expressing the patentee’s unilateral obligation to offer licenses at FRAND rates; that is, the obligation can only determine the patentee’s conduct. By definition, the patentee cannot be obligated to ensure that an implementer will accept the license offer at FRAND rates; the decision to accept the offer is entirely within the control of the implementer. But because FRAND governs the conduct of both parties, courts are increasingly recognizing that implementers also have an obligation, which is to be willing to execute a license on rates and terms that are determined to be FRAND, and to participate in good faith in an effort to reach that result. See *Sisvel v. Haier*, Bundesgerichtshof [BGH] [Federal Court of Justice] May 5, 2020, KZR 36/17, ¶ 70 (Ger.), https://www.arnold-ruess.com/fileadmin/user_upload/2020_07_07_FCJ_SisvelvHaier_English.pdf [hereinafter *Sisvel v. Haier*] (“In turn, the obligation to license presupposes that the person who intends to use or has already used the patent and has already brought patent-compliant products onto the market although he does not have a license is also prepared to take a license for this patent on reasonable and non-discriminatory terms. Even the patent holder with market power does not have to impose the taking of a licence on anybody and has no legal means to do so, as the potential licensee can demand the conclusion of a licence agreement from him, but the patent holder is not entitled to such a claim, instead, he is referred to enforce claims for patent infringement against those who want to use the teaching in accordance with the invention, but do not want to conclude a license agreement for this.”) (citations omitted) (first citing Case C-170/13, *Huawei Techs. Co. v. ZTE Corp.*, ECLI:EU:C:2015:477, ¶ 54 (July 16, 2015); and then citing *Orange Book Standard*, Bundesgerichtshof [BGH] [Federal Court of Justice] May 6, 2009, 180 Entscheidungen des Bundesgerichtshofes in Zivilsachen [BGHZ] 312 (¶ 27), 2009 (Ger)).

⁷ The German patent courts use the term “compulsory license” to refer to this obligation. See, e.g., *GE v. MAS*, Landgericht Düsseldorf [LG] [Düsseldorf Regional Court] May 14, 2020, 4c O 56/18 (Ger.) [hereinafter *GE v. MAS*] (“In connection with the antitrust law compulsory license objection[.]”).

goods (the patented technologies) and incorporate them into their products, without having first agreed to a price, in fact, without having agreed to pay at all. This, of course, is true whether the goods—the patents—are essential or not essential; it is built into the marketplace for intellectual property.

It is as if patentees, unlike any other property owners, were prohibited from locking up their stock, and instead are required to leave those goods out on the loading dock for anyone to take and use, leaving the IP owners with the task of finding out who is using the goods, and then pursuing them for payment.

This anomaly—the inability of the patent holder to prevent an implementer from taking and using the technology without having agreed to pay—has significant ramifications for both the patent holder and the implementer. If and when the implementer is finally tracked down and asked to pay, the implementer can refuse to pay, requiring the patent holder to spend significant resources in time, effort, and money, to sue the implementer in an effort to force the implementer to pay. The implementer will be free to increase the implementer’s enforcement costs by challenging both whether its products infringe the patents, and whether the patents are valid.

This is the issue of “holdout.” And just as there is a legitimate concern that an SEP holder’s ability to engage in holdup can give it the leverage to charge prices higher than those that would prevail in a competitive market, the implementer’s ability to engage in holdout can give it the leverage to pay less than the price that would prevail in a competitive market.

In the case of patents that are not SEPs, the “holdout” problem is addressed, albeit imperfectly and after-the-fact, by the ability of a patent owner to obtain an injunction that effectively prevents an implementer from using the technology—or at least prevents the implementer from continuing to sell its goods that incorporate the technology—until the implementer and the patent holder agree on a price. Granting such an injunction is simply a court’s affirmation of a patent holder’s right to exclude anyone from practicing the patented invention.⁸

In this context, an injunction is effectively the equivalent of a regulatory approach—to address the market failure that the implementer can take the intellectual property without having agreed to pay for it—working to achieve an outcome similar to that which would result in a competitive marketplace: ensuring the buyer agrees to pay, and agrees that it will pay a reasonable price.

But it is an imperfect mechanism, in that the agreement takes place after the implementer has taken the goods and incorporated them into products, and in most cases after the implementer has begun selling those products.

⁸ Where the patent is not an SEP, courts can impose enhanced damages if the implementer’s infringement is found to be willful. But that additional remedy—and incentive for the implementer to take a license—is not available where the infringed patent is an SEP. This is discussed further below, in Part IV.

And that imperfection can distort the determination of what price the implementer should be required to pay.⁹

IV. CURRENT FRAND POLICIES ENCOURAGE HOLDOUT

The ability of a patent holder to obtain an injunction for addressing holdout is an even more complicated question if the patents at issue are SEPs. Where an SEP holder has made a FRAND commitment the SEP holder is seen as having voluntarily relinquished its right to exclude, at least where the implementer has committed to taking a license at FRAND rates. As a result, competition authorities and courts around the world long have held¹⁰ views ranging from “no” to “maybe” on the question of whether an SEP owner can obtain an injunction against holdout. In addition to the general legal issues governing injunctions for infringement, the courts have prescribed a set of actions and reactions by each of the parties in an after-the-fact negotiation between an SEP holder and an implementer that will determine whether the patent holder can get an injunction.¹¹

Those views and court decisions have had the effect of encouraging holdout. Across industries and standards, what we see today is that, at least for implementers with deep pockets, the most efficient course of action is to exercise its power to hold out, a course of action accurately described as “efficient infringement.”¹² Several factors encourage implementers to

⁹ This issue is discussed in Part VI, below.

¹⁰ More recently, the Antitrust Division of the U.S. Department of Justice and the Patent and Trademark Office have modified their views on injunctions for SEPs. See U.S. DEP’T OF JUSTICE & U.S. PATENT & TRADEMARK OFFICE, POLICY STATEMENT ON REMEDIES FOR STANDARD-ESSENTIAL PATENTS SUBJECT TO VOLUNTARY FRAND COMMITMENTS (2013), <http://www.justice.gov/atr/public/guidelines/290994.pdf>. And the German patent courts have increasingly taken the view that to avoid injunctions an implementer must do more than simply announce an “intention” to take a license at FRAND terms; it must also demonstrate by its conduct that its intention is genuine. See *Dolby v. MAS*, LG Düsseldorf May 14, 2020, 4c O 44/18 (Ger.); *GE v. MAS*, *supra* note 7; *Philips v. MAS*, LG Düsseldorf May 14, 2020, 4c O 69/18 (Ger.) (ruling that, in negotiating for a patent pool license, the implementer must ask each pool licensor for a bilateral license if it does not agree to the offered pool license); *Sisvel v. Wilco*, LG Mannheim May 8, 2018, 7 O 115/16 (ruling that failure by the implementer to agree to a nondisclosure agreement (NDA) with the patent owner indicates that the implementer is not acting in accord with its obligation to promote the negotiations); *Sisvel v. Haier*, *supra* note 7, ¶¶ 91–100 (exploring the issue of holdout by Haier); see also LG München I, Hinweise zur Handhabung des kartellrechtlichen Zwangslizenzverfahrens nach Huawei v. ZTE innerhalb des Münchner Verfahrens in Patentstreitsachen [Notice on Handling the Defense of Compulsory License Under Antitrust Law According to Huawei v. ZTE within Munich Proceedings in Patent Litigation] (Feb. 2020), https://www.justiz.bayern.de/media/images/behoerden-und-gerichte/landgerichte/muenchen1/hinweise_frاند_und_m%C3%BCnchner_verfahren_stand_februar_2020_.pdf (Ger.) (issued on behalf of the two Patent Chambers of the Regional Court of Munich).

¹¹ See, e.g., Case C-170/13, *Huawei Techs. Co. v. ZTE Corp.*, ECLI:EU:C:2015:477 (July 16, 2015); *Unwired Planet Int’l Ltd v. Huawei Techs. Co.* [2017] EWHC (Pat) 2988 [5] (Birss, J.), *aff’d*, [2018] EWCA (Civ) 2344, *argued*, UKSC 2018/0214 (Eng.).

¹² See Adam Mossoff & Bhamati Viswanathan, *Explaining Efficient Infringement* (Ctr. for the Prot. of Intell. Prop., George Mason Univ., Antonin Scalia L. Sch., May 11, 2017), <https://cpip.gmu.edu/2017/05/11/explaining-efficient-infringement/> (discussing Joe Nocera, *The Patent Troll*

conclude that infringement and holdout are the most efficient courses of action.

First, because it is difficult for the patent holder to get an injunction, there is less of a threat that the implementer will lose its right to continue infringing, building and selling products that rely on the patented technology without paying.

Second, if the patent at issue is not an SEP, and if the patentee tracks down the infringer, and if the patentee sues for infringement, and if the patentee wins, then the infringing implementer could be liable not only for damages for the infringement, but also for enhanced damages for willful infringement. Not so if the patents are SEPs. If an SEP holder tracks down the infringer, and if the SEP holder sues for infringement, and if the SEP holder wins, then the only consequence the implementer will face is that it will be required to pay a FRAND price, the same FRAND price it would have paid if it had negotiated *before* taking and using the technology.¹³

So even though patent litigation is expensive for both implementers and patent holders, many implementers with significant resources have concluded that holdout is more efficient than agreeing to take a license when it first begins making and selling products that infringe the SEPs. The public policy issue is not just the expense to both sides of litigation; it is that, emboldened by the dynamics of SEP licensing as discussed here, some of the most influential and largest implementers seemingly have adopted holdout as their policy for dealing with SEPs, with at least the resulting harms to the market discussed below.

V. EFFICIENT INFRINGEMENT HARMS BOTH PATENTEES AND “GOOD-FAITH” IMPLEMENTERS

From a public policy perspective, holdout—efficient infringement—is troubling, because far from simulating the outcomes of a competitive market, it incentivizes conduct that is contrary to what would be obtained in a competitive market. And it is further troubling because efficient

Smokescreen, N.Y. TIMES, Oct. 23, 2015 (“[A]ccording to Robert Taylor, a patent lawyer who has represented the National Venture Capital Association, a new phrase has emerged in Silicon Valley: ‘efficient infringing.’ That’s the relatively new practice of using a technology that infringes on someone’s patent, while ignoring the patent holder entirely. And when the patent holder discovers the infringement and seeks recompense, the infringer responds by challenging the patent’s validity.”).

¹³ An SEP holder also faces enforcement issues faced by other patentees: It likely will be many years, if ever, before any particular implementer is required to pay. And it is rarely the case that an SEP holder can track down, sue, and win against every infringing implementer, given that each patent case will take 30 or more months to reach a verdict, and a year or more to receive a decision on appeal, and will cost a significant amount. Thus, enforcement against holdout infringers increases the patent holder’s costs with no benefit to the licensing ecosystem.

infringement broadly harms the market in several ways that should concern us from the perspective of public policy.

First, by raising the costs of licensing SEPs, efficient infringement may harm innovation by discouraging companies from investing in R&D and participating in voluntary standards setting, in turn depriving the market of useful inventions that never make it into standards and therefore never appear as features in standardized products and services.

Second, efficient infringement harms the implementers who recognized their obligations and voluntarily took a license early in their production of standard-compliant products or services. These “good-faith” implementers have been paying license fees for all the years they have been competing with the holdout implementers. As a result, the good-faith implementers have been at a cost disadvantage in competing with the holdout infringers throughout the duration of holdout: the costs faced by the good-faith implementers have been higher by the amount of the license fees than the costs faced by the holdout infringers. So effectively, throughout the period that the efficient infringers have held out, these good-faith implementers have been “punished” for fulfilling their legal obligations while the holdout infringers have been being rewarded for ignoring theirs.¹⁴

This distortion caused by holdout creates exactly the effect that FRAND, as a public policy, was intended to prevent. In effect, it permits the holdout implementer to award itself a subsidy not available to the good-faith implementer. The effect on the good-faith implementer is the same as if the holdout implementer were permitted to raise its rivals’ costs directly.

VI. HOLDOUT DISTORTS THE DETERMINATION OF FRAND RATES

There is an additional distortion that has developed in implementing FRAND: the ability of implementers to engage in holdout distorts the notion of what is a “reasonable” rate.

The patented technology in an implementer’s product is a component of that product, like any other component, except that it is intangible. But the patented technology components are not treated the way other components are treated when courts determine FRAND rates for SEPs. As a thought experiment, compare the judicial record of determining FRAND rates with a case in which an implementer is accused of using any other component, such as the chips in the device, or the LED screen, or the battery, without

¹⁴ This issue was recently recognized by the German Federal Court of Justice in *Sivvel v. Haier*, *supra* note 7, ¶ 80 (“Otherwise, by using the patent without concluding a license agreement, the infringer could gain an advantage in competition with those companies which use or intend to use the patent on the basis of a license agreement on reasonable and non-discriminatory terms.”).

the owner’s permission, without paying, and without having agreed to pay. There is a common term for such usage: stealing, and it is treated as such by the courts.

Without getting into the “unauthorized usage” dimension of the issue, courts that have determined FRAND rates uniformly fail to perform the analysis on the basis that the IP at issue is a component like any other. Rather, courts routinely have adopted the implementers’ view that the reasonableness of the rates should be determined on the basis that the royalties to be paid should be seen as a “tax” on the product, that is as an externality rather than as a component, and should be measured or constrained by such concepts as “margin” and “affordability.” It is unimaginable that a lawsuit over the value of a component, such as an LED screen or a battery, would be driven by an analysis under which the price to be paid for such a component is appropriately viewed as a “tax” or that the price to be determined for the component should be constrained not by its inherent value, but by its “affordability” to the device maker.

The common view that the price to be paid by the implementer for the IP is an externality, a “tax,” invariably does not recognize that, as with any other component, the cost of the IP should have been factored into the bill of materials, as part of the total cost of goods sold. Moreover, by treating IP costs as an externally imposed “tax” on the total cost of the product, that “tax” is determined by calculating the total cost of the product *excluding* the cost of the IP. The effect of this calculation is to make any set amount of “tax” appear to be a larger percentage of the total cost of the product, and therefore less “reasonable.”

Not only does this approach distort the determination of the appropriate price to be paid for the IP, but also calibrating that price to the implementer’s “margin” encourages courts to determine FRAND rates on a base that ignores the very IP costs at issue, rewarding implementers for ignoring their obligation to pay for the IP they use. And it can lead courts to conclude that implementers with the lowest margins should pay the least, with the result that the least efficient producer gets the best outcome, a reward for inefficiency that is certainly contrary to public policy.

VII. HOLDOUT DISTORTS THE APPORTIONMENT OF THE VALUE OF THE STANDARD BETWEEN THE PATENTEE AND THE IMPLEMENTER

An additional distortion in the current analysis of FRAND relates to how the value of the standard is divided between the buyer (the implementer) and the seller (the SEP holder). In a competitive market, the outcome of a negotiation on price between a willing seller and a willing buyer will be some

allocation between the two parties of the value of the object of the negotiation. Depending on a large number of factors, such as how price-sensitive the buyer is compared with how much the seller “needs” to complete the sale, that split may not be 50-50, but each side will capture some of that value.

Public policy—and economics—would say that a market-based price would be one in which the patentee and the implementer share the value of the standard in the implementation in recognition of the fact that each has contributed to the total market value of the implementation, the patentee by contributing the technology that makes the device standard-compliant, and the implementer by contributing the physical embodiment and sale of that technology’s functionality.

But that is not how the issue is treated in FRAND analysis, at least in the United States. Instead, it has become a bedrock principle of FRAND analysis in the United States that “the patentee’s royalty must be premised on the value of the patented feature, not any value added by the standard’s adoption of the patented technology.”¹⁵ This is so bedrock a principle that you will see it repeated nearly verbatim in scores of policy pronouncements from competition agencies and decisions of courts.

But if the patent holder is not permitted to capture any of the value of the standard, then the necessary result is that the implementer is permitted to capture all of it; indeed, not just permitted, but entitled. That is certainly a felicitous outcome for the implementer, and so it is not surprising to find that implementers strongly endorse, and have consistently argued for, the proposition that the patent holder should not be permitted to capture any of the value of the standard.

And it is a fact that the implementers do capture the value of the standard. The market value of a standard-compliant product or service is without question driven by the technologies that make it standard-compliant. That fact is not only obvious, it is indisputable, and indeed is the basis of the holdup argument, namely that the implementer’s products *must be* standard-compliant for the implementer to be able to compete.

Yet there is no recognition of these facts in the analysis of FRAND rate setting, at least in the United States. On the patentee side there is the proposition that the patentee must not be permitted to capture the value of the standard; there is no similar argument on the implementer side. On the patentee side, there is the proposition that the FRAND rate should be based on the *ex ante* value of the technology, the value of the technology before it is incorporated into the standard; there is no similar argument on the implementer side, that the price charged by the implementer should be based on

¹⁵ *Ericsson Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1232 (Fed. Cir. 2014).

the price a willing buyer would be willing to pay if the product or service did *not* comply with the standard.

A standard defines a feature in the product; that feature is enabled by the technology adopted into the standard; the fact that the product is standard-compliant is integral to what gives it value to the consumer. Those points are inextricably interrelated. Separating out the value of the technology from the value of its having been adopted in the standard, and allocating the value between the technology in the standard and the technology in the standardized product or service, are at best highly artificial goals and at most likely impossible tasks. As Alexander Galetovic and Stephen Haber have observed:

[A]sking what portion of the economic surplus created by consumer demand for a standardized technology is caused by standardization itself, and what portion is caused by the SEPs is akin to asking what portion of jackrabbit speed is due to the fact that coyotes hunt them, and what portion is due to the fact that jackrabbits live on flat, open terrain. For a biologist, this is a meaningless question: jackrabbits, coyotes, and the mixed shrub-grasslands that they inhabit co-evolved; each is an emergent property of a complex adaptive system that biologists call a grassland ecosystem. So it is with patented technologies, technical standards, and the consumer products that require compatibility and interoperability: they co-evolved; each is an emergent property of a complex adaptive system that economists call a market.¹⁶

CONCLUSION

After more than a decade of public policy makers, competition agencies, courts, and government authorities around the world developing an increasingly detailed set of rules governing and defining FRAND, it is time to take a step back, to think hard about where we are, and to recognize that some core propositions need to be reconsidered to better align FRAND analysis and policy with good public policy.

¹⁶ Alexander Galetovic & Stephen Haber, *SEP Royalties: What Theory of Valuation and Distribution Should Courts Apply?* 27, 29–30 (Hoover IP² Working Paper Series No. 19001, 2019), <https://www.hoover.org/sites/default/files/ip2-19001-paper.pdf>.