

Patent Damages: What Reforms Are Still Needed?

By Gregory K. Leonard and Mario A. Lopez

In the ongoing attempts to reform the U.S. patent system, one of the key areas of contention is whether new rules are needed to govern how damages are calculated in patent litigation. Congress appears to be struggling with the question of whether there is a common approach that can be used for calculating damages that does not benefit some industries to the detriment of others. For example, the Patent Reform Act of 2009 (“2009 PRA,” Bills S. 515 and H.R. 1260) made it out of committee in the Senate only after controversial provisions regarding patent damages were scrapped (as of this writing, the 2009 PRA was still pending before Congress). In their place, new, weaker language called upon judges to play a more prominent “gatekeeper” role in determining what damages methodologies could be presented to juries.

A Tale of Two Positions

The damages debate has sharply divided industries into two camps. On one side are high-tech companies that develop complex products to bring together multiple technologies on which hundreds, if not thousands, of patents read. On the other side are pharmaceutical and manufacturing companies, whose products are more often covered by one or only a few patents.

Companies in high-tech industries express frustration over high litigation costs and large damage awards related to patents that cover only a small feature of the overall product. These large damage awards, they argue, are unreasonable because they disregard the role that other inputs, including other technologies, play in the research, development, and commercialization of products. Moreover, because these “minor” patents are often asserted against high-tech products only after they have been launched, the problem of patent “hold up” is magnified: a company that has committed to a technology may find it hard or costly to disentangle the potentially infringing technology from its product, leading to higher royalty payments in those cases that settle. The risk of being held up or forced to pay an unreasonably large damage award creates uncertainty that reduces the incentives of companies to develop new products, according to the high-tech industries. Accordingly, they have led a drive to rewrite the rules for damage calculation so that the fact finder would be required to “apportion” the value of a product across the various inputs that contribute to the product. This would serve to limit the value attributed to any one patent and thus would tend to lower damage awards. The effect of these rules would spill over into settlement negotiations, lowering the expected payments to patent owners that brought patent infringement lawsuits. Overall, the high-tech industries argue, the “tax” they currently pay to bring products to market would be reduced and there would be greater certainty. All of this would lead to more product development.

On the other side of the divide are the pharmaceutical and manufacturing industries. Companies in these industries

maintain that full patent protection is necessary to protect the substantial sunk-cost investments they are required to make into research and development. The situation faced by pharmaceutical companies is particularly illustrative. Given the length of time required to conduct the clinical trials necessary for FDA approval, and the high likelihood that any given drug development project will fail, patent protection for those projects that actually succeed in producing a marketable product is crucial. Without such protection, the pharmaceutical companies say, they will have substantially reduced incentives to invest in these long-term risky development projects. At the same time, a pharmaceutical product is typically covered by one or only a few patents. These patents are often “blocking”—the product could not be marketed without infringing the patents. The pharmaceutical companies fear that any “apportionment” requirement will reduce the damages they could collect from infringers because fact finders will tend to understate the “value” of their patents.

While both camps are focused on the same issue—the impact the framework for calculating damages has on their incentives to bring products to market—they have taken polar opposite views of whether there is a need to change the current framework. The reason for their divergent views is the different role that patents play in their respective industries. In high-tech industries, patents are, to some degree, a hindrance to product development. Many high-tech companies use their patent portfolios primarily defensively to stave off patent lawsuits brought against their products by other companies. In contrast, in the pharmaceutical industry, companies use patents offensively to protect their own products from competition from infringers.

Getting It Right

Is there a common framework for calculating reasonable royalty damages that would satisfy both camps, or are different frameworks needed for different industries or different contexts? The answer is that an analysis of the value of the patented technology that is based on sound business and economic principles will give the “right” answer regardless of the industry or context. Such an analysis can certainly be conducted within the current legal framework that governs the calculation of patent damages. However, the problem that exists today, and that has fueled the debate regarding patent damages, is that the legal framework does not do enough to specify the principles required for a sound damages analysis, so that too often litigants employ unsound methodologies that

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result in unreasonable damages claims being put before juries.

In our discussion, we will specifically address reasonable royalty damages, although similar conclusions would apply to lost profits damages. The current framework for calculating reasonable royalty damages involves the application of the *Georgia Pacific* factors.¹ One of the *Georgia Pacific* factors is the analysis of a “hypothetical negotiation” assumed to take place at the time of first infringement between the plaintiff and the defendant regarding a license to the patented technology. In our view, the analysis of the hypothetical negotiation provides an economically sound approach to determining reasonable royalty damages. Thus, the current legal framework, as reflected by the *Georgia Pacific* factors, can certainly produce an economically sound calculation of damages if applied in accordance with economic principles. However, because the *Georgia Pacific* factors are presented as only a (possibly non-exhaustive) list of factors that one might consider, instead of a set of principles for conducting the analysis, the current legal framework unfortunately also gives damages experts wide latitude to misapply the factors and reach an economically unsound calculation of damages. Thus, for example, we see the use of “comparable” licenses that are not actually comparable, and “rules of thumb,” such as the “25 percent rule,” that typically have no basis in economic reality.²

The solution to the debate over patent damages—a solution that should satisfy both camps in the debate—is for courts to focus on the analysis of the hypothetical negotiation, as is often currently done, but additionally to require explicitly that damages experts use sound economic principles when conducting the analysis. In some sense, this solution does not require any further legislation because the hypothetical negotiation is already a *Georgia Pacific* factor, and the requirement that experts use sound economic principles is mandated by Federal Rules of Evidence 701, which requires that expert testimony must be reliable to be admissible. The change our proposed solution would involve is greater enforcement by courts of the reliability standards for expert testimony. In particular, courts can and should use their “gatekeeping” function under *Daubert* to exclude damages experts who stray from sound economic principles in the analysis of the hypothetical negotiation.³ In our experience, however, courts have been hesitant to apply *Daubert* in IP cases.⁴ This stands in contrast to antitrust cases, where *Daubert* challenges are often seriously entertained by courts. An increased scrutiny of expert testimony under *Daubert* is also consistent with the 2009 PRA’s revised provisions regarding patent damages.

We are cognizant, however, that judges without a strong economic background may not feel comfortable excluding an expert’s testimony, particularly when doing so would be a determinative factor in the outcome of the litigation. Thus, we further propose that Congress request that a government agency with expertise in economic analysis, such as the Federal Trade Commission, develop a set of guidelines for patent damages calculation.⁵ These guidelines would lay out the basic set of economic principles that should govern any sound damages methodology. The guidelines could be used both by judges to help determine whether a given

methodology is sound and also by litigants when they undertake their damages analyses.⁶

Economic Principles and “Apportionment”

How would the application of sound economic principles in the calculation of reasonable royalty damages satisfy both camps in the debate over “apportionment”? In short, a correctly done economic analysis will identify a “minor” patent and will assign a small royalty accordingly and, at the same time, will identify a “major” patent and assign a large royalty. Economic analysis does this by focusing on the “next best (noninfringing) alternative” that was available to the defendant at the time of the hypothetical negotiation. This is best seen via examples.

Suppose a defendant sells a product that has a component covered by the plaintiff’s patent. For example, the product might be a cellular handset where the patent covers a particular feature of the handset that gives some functionality to users. The defendant sold 1,000 units of the product, each at a price of \$10 and a cost of \$5. Suppose that the product could be made noninfringing by dropping the patented component. The remaining product would be marketable but would be slightly less attractive to customers. Specifically, if the defendant had offered this noninfringing version of the product for \$10, it would have sold 995 units instead of the 1,000 units it actually sold of the accused product. For simplicity, we assume cost would still have been \$5. In that case, the value to the defendant of being able to offer the small patented component is the difference in profit with and without the component, or $[(\$10 - \$5) \times 1,000] - [(\$10 - \$5) \times 995] = \$25$. The maximum royalty rate that the defendant would be willing to pay for a license is $\$25/\$10,000 = 0.25\%$ of the revenue of the accused product. A reasonable royalty should necessarily be bounded at 0.25% of sales. The royalty rate is low in this example because the defendant had available to it a next best alternative—namely, the product without the infringing component—that was a close substitute for the product that used the patented technology. Having this alternative available would have strengthened the defendant’s bargaining position substantially and thus limited the royalty that it would be willing to pay. This is an example of a “minor” patent.

Suppose alternatively that, while the product could be sold without the patented feature, the resulting product would be so unattractive that no consumer would want to buy it. For example, if the product were a pharmaceutical product, the defendant could remove the patented active ingredient and attempt to sell a sugar pill to treat an indication, but likely would have little luck doing so. The next best alternative in this example is not a very close substitute for the product that used the patented technology, and thus the entire profit of the product would be at risk if the defendant were not able to use the patented technology. The upper bound that this defendant would be willing to pay would be $(\$10 - \$5) \times 1,000/\$10,000 = 50\%$ royalty. This is an example of a “major” patent.

The preceding examples show that the application of the same set of economic principles led to the “right” answer in both cases. The key was the identification of the next best

alternative to the patented technology, and the assessment of the implications for the defendant's profitability of using that next best alternative instead of the patented technology. In this way, the patented technology can be appropriately valued, whether the patent is "major" or "minor."

Closing Thoughts

There remain some additional issues that Congress may want to address through patent reform legislation. For example, current law mandates that the date of the hypothetical negotiation be set at the time of first infringement. In some cases, the defendant may have incorporated the technology of the patent-in-suit before the patent actually issued. Thus, the defendant's choice to incorporate the technology was noninfringing at the time the decision was made. In a reasonable royalty analysis, however, the hypothetical negotiation would be set at the date of patent issuance since that is the time of first infringement, rather than when the defendant incorporated the technology. At that later time, the defendant may have been "locked" into the patented technology, so that it would have been more costly to switch to the next best alternative at that point than it would have been when the technology decision was made. Being locked in can weaken the defendant's negotiating position in the hypothetical negotiation and increase the royalty that it would be willing to pay. In that case, the resulting reasonable royalty damage award may incorporate "lock-in value" in addition to the inherent value of the technology. Congress may want to determine whether this is a good outcome, as a policy matter. The alternative is to set the hypothetical negotiation at the earlier time when the defendant first decided to incorporate the technology and therefore was prior to the defendant being locked in.

While such issues are important, they are secondary to the issue of establishing the basic framework for calculating patent damages. The result may not necessarily signify consistently lower damage awards—important patents in either high-tech or pharmaceutical industries should receive higher-than-average royalties to provide incentives to innovate. But implementing such changes would reduce the uncertainty surrounding the outcomes of the litigation process to both

patent owners and potential infringers.

As we have argued in this article, it would go a long way toward solving the damages problem while satisfying both camps in the debate if (1) reasonable royalty experts were required to focus on the analysis of the economic factors surrounding the hypothetical negotiation, rather than "rules of thumb" or "comparable licenses"; (2) courts more stringently enforced the *Daubert* standard for admissibility of expert testimony in patent cases; and (3) judges were aided in the application of *Daubert* by the FTC or other agency developing guidelines for sound patent damages calculation. ■

Endnotes

1. *Georgia Pac. Corp. v. U.S. Plywood Corp.*, 18 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

2. In recent cases, the Court of Appeals for the Federal Circuit has demonstrated skepticism regarding the use of rules of thumb and questionable comparable licenses. For example, during oral argument in *i4i Limited Partnership v. Microsoft Corp.*, 2009 WL 4911950 (Fed. Cir. 2009), one of the judges questioned whether the "25% rule" was a methodology that was "just something pulled out of the air" (Audio Transcript 1 at 0:51:30, *i4i Limited Partnership v. Microsoft Corp.*, No. 2009-1504-1 (Fed. Cir. Sept. 23, 2009), available at <http://oralarguments.ca9.uscourts.gov/searchscript.asp>). In *Lucent*, the court determined that some of the supposedly comparable benchmark licenses relied on by Lucent were in fact "radically different from the hypothetical agreement under consideration." *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1327 (Fed. Cir. 2009).

3. *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579 (1993). Indeed, while the 2009 PRA proposes that the courts play a greater gatekeeping role, they already have substantial ability to limit expert testimony from trial. For example, the *Handbook for Federal District Court Judges* states, "no issue in a patent trial cries out for strict application of the gate-keeping tools of Federal Rules of Evidence 702, 703 and 705 and the Supreme Court's *Daubert* decision more than damages." See COMPENSATORY DAMAGES ISSUES IN PATENT INFRINGEMENT CASES: A HANDBOOK FOR FEDERAL DISTRICT COURT JUDGES (Jan. 2010), <http://www.nationaljuryinstructions.org/documents/DamagesHandbookFinal.pdf>.

4. This may be in part due to the existence of the *Georgia Pacific* factors themselves. As previously noted, no priority or weight is assigned to the various factors. This may make it difficult for courts to exclude testimony in which an expert has applied some of the *Georgia Pacific* factors to arrive at a royalty, even if it is not consistent with basic economic principles.

5. The FTC would appear to be well-positioned to perform this task since it has been holding hearings on the "Evolving IP Marketplace" over the last year, including a session on the calculation of damages. See Fed. Trade Comm'n, The Evolving IP Marketplace, <http://www.ftc.gov/bc/workshops/ipmarketplace/>.

6. The role of such damages guidelines could be similar to the role played by the Department of Justice and Federal Trade Commission Merger Guidelines; see DEP'T OF JUSTICE & FED TRADE COMM'N, HORIZONTAL MERGER GUIDELINES (Apr. 1997), http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html. The Merger Guidelines are often cited by courts in antitrust cases, although they are not binding.