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Intellectual Property

Surviving, or Failing, in a Hypothetical World

When a patent infringement case shifts to damages, the focus shifts from what really occurred to what might have been

By Charles P. Kennedy

To litigants in a patent infringement action, the cost of any infringement is normally determined only after trial. But damages demand careful preparation well before the last moment. The hypothetical context of a damage determination — what would have happened but for the infringement — allows for considerable judgment in how to create and present a damages case.

To the patent owner, the prospect of a huge damage award holds a potential for a significant windfall on top of an injunction against infringement. To the defendant, damages are a troubling concern that one instinctively would rather put off until the last moment. When a patent case goes badly for the defendant, the damages verdict usually appears in the headline of the news story.

The typical patent lawsuit starts in a familiar "real" world of the patented invention and the defendant's product or process accused of infringement. Even the defenses of patent invalidity normally focus on real world facts relating to prior inventions or prior work that might invalidate the patent.

When the case shifts to damages, usually for the last part of the trial, the focus also shifts from what really occurred to what might have been. This forces a shift in both subject and perspective. To assess damages, one must reconstruct a hypothetical world to demonstrate what would have occurred in the market without the infringement. From this world, the trier of fact is able to determine damages, that is, what the patent owner lost because of the infringement.

The stakes riding on this hypothetical world are quite high. Topped by Polaroid's 1991 award of more than $800 million against Eastman Kodak for infringement of instant photography patents, numerous damage awards have exceeded $100 million. Damage awards in excess of $100 million have been gained for patents on such varied technologies as oil well drilling bits, computer software, chemicals and an array of medical products.

Companies paying or receiving such sizable verdicts include such corporate giants as Hughes Tool, Microsoft, Johnson & Johnson and General Electric. These high damages awards reached after verdicts considerably understate the significance of the payments made for patent infringement.

The great majority of patent lawsuits are settled. The reported settlements of patent lawsuits include payments or licenses exceeding $500 million by such highly successful companies as Intel, Roche, Toshiba and Genentech. Even the average patent damages award has been high. An analysis of reported district court decisions over the past 20 years showed the average damages award in reported patent infringement cases to approach $10 million. See Russell L. Parr, *Intellectual Property Infringement Damages* (2d ed. 1999).

Considering what is at stake, it is essential for patent litigants to construct a credible model of the market for the patented products that would have unfolded absent the infringement. This hypothetical world should include a

Kennedy is a member of Lerner, David, Littenberg, Krumholz & Mentlik of Westfield.

candid, economically based assessment of what the parties to the case and any other relevant competitors would have done in a world without infringement.

The 'But For' World

Upon proof of infringement, the patent owner is entitled to damages. The patent statute provides that the patent owner is entitled to "damages adequate to compensate for infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer." See 35 U.S.C. §284.

The Supreme Court has stated that the statutory measure of damages is "the difference between [the patent owner's] pecuniary condition after the infringement, and what his condition would have been if the infringement had not occurred." *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476 (1964). Thus, the determination of patent infringement damages is made from what is referred to as a but-for inquiry.

A patent owner may assert damages by lost profits, a reasonable royalty, or a combination of both. Typically, lost profits allow for a higher recovery. A patent owner who exploits his patent by selling patented products usually makes a higher profit per unit than he could gain from licensing his patent to others to make and sell the patented products. If not, a patent owner would license his patent and avoid the costs and risks of making and selling products.

For a patent owner who does not manufacture product, lost profits would be speculative and damages should be measured as a reasonable royalty for the infringer's use of the invention.

One can be sure that lost profits damages are higher than a reasonable royalty because some patent owners who are not manufacturers have tried to qualify for lost profits. The most prominent and persistent attempt was by Robert Kearns, the inventor of certain intermittent windshield wiper patents.

When suing the automobile industry for infringement of his patents, Kearns asserted that his damages should be measured by the lost profits that he would have achieved had his company "Kearns Engineers" sold intermittent wipers. According to Kearns, his company could not get off the ground because automobile manufacturers infringed his patents and took away the market for intermittent wipers.

Finding that Kearns did not demonstrate that Kearns Engineering had the capacity to manufacture, market and sell intermittent wipers, the courts rejected Kearns' request for lost profits. See *Kearns v. Chrysler Corp.*, 32 F.3d 1541 (Fed. Cir. 1994). Nevertheless, his damages — measured as a reasonable royalty for the use made of his invention by just Chrysler — exceeded $18 million.

Lost Profits — Two-Supplier Market

To measure lost profits where competitive products are involved, the patent owner will typically submit evidence of a two-supplier market in which the patent owner's product competed head-to-head with the infringing product. The most straightforward attempt to reconstruct the market for a lost profits recovery finds support from the four-part test of *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152 (6th Cir. 1978):

(1) demand for the patented product;

(2) absence of acceptable noninfringing substitutes;

(3) manufacturing and marketing capability to exploit the demand; and

(4) the amount of the profit the patent owner would have made.

Where the *Panduit* test is met, it is reasonable for the court to infer that the infringing sales caused lost profits to the patent owner.

While one can most easily establish lost profits where the patent owner sells the patented product in direct competition with the infringing product, a lost profits recovery is not ruled out for a patent owner who markets a nonpatented product in competition with the infringing product.

In *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538 (Fed. Cir. 1995), the holder of a patent on a mechanism for restraining trucks to the loading dock during loading and unloading was found entitled to a lost profits recovery for lost sales of its vehicle restraints that did not use the patented mechanism.

The patent owner established that its vehicle restraint, which did not use the patented feature, competed head-to-head with the infringer's vehicle restraints that used the patented feature. The court determined that, absent the infringing sales, the patent owner would have made those sales of its own vehicle restraint that did not practice the patent.

Lost profits awarded to a patent owner who does not practice his invention should be relatively rare because the patent in such a case will not define the market or bar noninfringing competition from that market. In *Rite-Hite*, it could not be said that the purchasers of the infringing vehicle restraints, absent infringement, would have purchased the patent owner's vehicle restraints for the advantages provided by the patent.

Nevertheless, a patent owner may be able to recover lost profits if he can establish that the infringement caused lost sales for products that do not use the patented invention.

Any effective analysis of the hypothetical market without infringement must consider the effect of substitutes available during the period of infringement. Whether there are substitutes that break the two-supplier market logic will often depend on whether or not the substitutes are acceptable to consumers.

Virtually any product has substitutes of varying degrees of acceptability. The key issue is whether purchasers are motivated to buy the product at issue because of the patented advantages or features. If so, any substitutes lacking these advantages or features are not acceptable from a consumer standpoint and would not be considered to be an acceptable noninfringing alternative. This issue comes down to the realities of the market as measured by consumer preferences.

Even when a two-supplier market cannot be constructed for damages, patent owners should not, and invariably do not, give up on obtaining at least a partial lost profits recovery. When the patent owner can construct a hypothetical market absent infringement in which the patent owner enjoys a sizable market share diluted by noninfringing substitutes, the patent owner may be entitled to an award of lost profits on the portion of the infringing sales represented by the patent owner's share of the market.

For example, if the market including the infringer is distributed 40 percent for the patent owner, 40 percent for the infringer and 20 percent for all noninfringing substitutes, the patent owner may be able to establish an entitlement to a lost profits recovery for two-thirds of the infringer's sales. The patent owner would be entitled to recover a reasonable royalty on the remaining one-third of the infringer's sales. See *State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573 (Fed. Cir. 1989).

Of course, a patent owner will not be entitled to a lost profits recovery even in accordance with his market share if the infringing product is far more similar to noninfringing substitutes than to the patent owner's product. Under those circumstances, lost profits for the patent owner's market share would be considered speculative, since those sales most probably would have gone to noninfringing substitutes.

For lost profits, the patent owner need not stop at the sales lost on the patented product. As the *Rite-Hite* court noted, a lost profits recovery may also include lost sales of components that have a functional relationship with the patented invention. For instance, infringement of a patent covering one component of a knee brace might warrant damages from lost sales of all the other components of the knee brace that work together to form a functioning unit.

Many bases exist upon which a patent owner may assert entitlement to lost profits by reconstructing the market absent infringement. As long as the patent owner reconstructs the market through sound economic proof, not speculation, trial courts have permitted patent owners to recover damages for all the ways in which they would have been better off in the hypothetical world.

The plaintiff may be entitled to a recovery for price erosion damages by establishing that the infringement caused the plaintiff to lower (or not increase) prices on the sales made by the plaintiff in competition with the infringer. See *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559 (Fed. Cir. 1992).

Price erosion damages can provide a patent owner with the best of both worlds. The patent owner gets lost profits for the sales that the patent owner did not make due to the infringement and lost profits from price erosion on the sales the patent owner did make at a lower price, due to the infringement.

A patent owner may even obtain price erosion damages due to depressed prices from the infringer's marketing activities that preceded actual introduction of the infringing product. See *Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555 (Fed. Cir. 1992).

On the other hand, if the reduced prices caused by the infringement increased sales of the patent product, that could cause a reduction in the amount of lost sales to be awarded as damages. See *Crystal Semiconductor Corp. v. Tritech Microelectronics Int'l, Inc.*, 246 F.3d 1336 (Fed. Cir. 2001).

Infringers' Alternatives

The hypothetical world works both ways. A defendant to a patent infringement claim must attempt to reconstruct the market in a way that lost profit damages are not appropriate.

The defendant should provide evidence regarding any acceptable noninfringing substitutes that may have satisfied the infringer's customers instead of the patent owner's products. An important potential acceptable noninfringing substitute may be found from the defendant's own noninfringing products.

To avoid lost profits damages, a defendant may submit evidence establishing that, in the hypothetical world absent infringement, he would have marketed an acceptable noninfringing alternative available to him. In effect, the infringer will urge that even without the infringement, he would have made the same sales by a substitute product that was not infringing.

This defense of the infringer's own alternative to a claim for lost profits damages was upheld by the United States Court of Appeals for the Federal Circuit in *Grain Processing Corp. v. American Maize-Products*, 185 F.3d 1341 (Fed. Cir. 1999).

Grain Processing owned a patent on maltodextrins having particular attributes. Maltodextrins are a versatile family of food additives made from starch that are used in a wide variety of products such as frosting, syrups, drinks, cereals and frozen foods. Grain Processing sold maltodextrins covered by the patent during the same time that American Maize sold its infringing maltodextrins.

In constructing the hypothetical world, American Maize was able to rebut the inference — that but for the infringement, consumers who had purchased product made by the infringing process would have purchased Grain Processing's patented product — by establishing that American Maize had available during the time of infringement an alternative process that produced an acceptable substitute for the claimed invention.

Noting that a "fair and accurate reconstruction of the 'but for' market" must take into account relevant, alternative actions the infringer foreseeably would have undertaken had he not infringed, the court held that the infringer's available technology during the period of infringement would have provided an acceptable noninfringing substitute.

The court was careful not to create any easy defense to lost profits by any infringer who would merely contend that, of course, he would have gone to a noninfringing substitute during the period of infringement. To prevent the hypothetical market reconstruction from lapsing into pure speculation, the court stated that acceptable substitutes available during the period of infringement can preclude or limit lost profits, but "substitutes only theoretically possible will not."

To substantiate availability, American Maize had submitted evidence that it had the necessary equipment, know-how and experience to use the alternative process, and the parties agreed that consumers would discern no difference between the infringing maltodextrin and the noninfringing maltodextrin. By this proof, the acceptable noninfringing substitute defeated the patent owner's case for lost profits, and the district court's determination of a 3 percent reasonable royalty for use of the invention was upheld.

Royalty Damages

The patent statute provides that damages, at a minimum, will be measured by a reasonable royalty. To measure the amount of the reasonable royalty, the trier of fact must indulge a further hypothetical scenario.

Using evidence based on 14 factors from *Georgia-Pacific v. United States Plywood Corp*., 318 F. Supp. 1116 (S.D.N.Y. 1970), the trier of fact will determine a reasonable royalty from the perspective of a hypothetical negotiation between the licensor (the patent owner) and the licensee (the defendant) at the time infringement began.

This hypothetical negotiation requires that the parties recreate a licensing negotiation between a licensor and licensee, both of whom are presumed to have been acting reasonably and voluntarily to reach an agreement. It is presumed that the parties accept the patent as valid and that the defendant will need a license to manufacture and sell its intended products.

The extent to which the reasonable royalty inquiry is also rooted in a hypothetical scenario is emphasized by the court's description of the process, in *Mahurkar v. C.R. Bard, Inc*., 79 F.3d 1572 (Fed. Cir. 1996), as considering "hypothetical results of hypothetical negotiations between the patentee and infringer (both hypothetically willing) at the time infringement began." In an earlier decision, the Federal Circuit referred to the setting of a reasonable royalty as a difficult chore, "seeming often to involve more the talents of a conjurer than those of a judge." *Fromson v. W. Litho Plate & Supply Co*., 853 F.2d 1568 (Fed. Cir. 1988).

The stakes in creating the hypothetical royalty negotiation are also quite high. Reasonable royalty awards have been upheld at rates as high as 50 percent of the patent owner's lost profits. As the *Rite-Hite* court noted, in appropriate circumstances, a reasonable royalty may be at a rate higher than the infringer's actual profits and even as high as the price of the infringing unit.

At the other end of the spectrum, an award of a reasonable royalty on an improvement patent measured as 0.75 percent of the sales price of bi-fold doors, plus cost savings in making the infringing doors, was upheld. See *Slimfold Mfg. Co. v. Kinkead Indus., Inc*., 932 F.2d 1453 (Fed. Cir. 1991).

Experts

When creating a hypothetical market or hypothetical royalty negotiation, the parties may find it useful to obtain expert input and testimony.

The appearance of damages experts in a patent case has become commonplace. It is now typical for each side to use economists, accountants or marketing experts to aid in recreating the market and computing the amount of damages. Damages experts have built up track records to rival even the most seasoned trial lawyers. Some have their own support staffs to analyze evidence and data and recreate a market using economic and accounting principles.

Even when not needed to help recreate the hypothetical market, expert testimony may be useful to compute the amount of lost profits by analyzing what additional costs would have been incurred in order to have made the additional lost sales. Expert testimony may also be needed for the computation of the extent of price erosion and to analyze what effect increasing the patent owner's price would have had in reducing sales. And experts on licensing may provide an analysis of related licenses to aid in determining reasonable royalty damages.

Regardless how potentially helpful to one's case an expert's intended testimony might be, it will be useless at trial unless it is based on sufficient facts and data; it is the product of reliable principles and methods; and the expert applied the principles and methods reliably to the facts of the case. See Fed. R. Evid. 702. Operating within these guidelines, expert testimony should assist in reconstructing the market from available market facts or data.

Damages in a patent litigation require care and attention to creating a hypothetical world. Although this effort will be meaningless if no liability is established, when the patent owner wins, the magnitude of the victory will depend on how credibly each party has established a hypothetical market absent infringement. ■