

## **CHAPTER 6**

### **Patent Infringement Damages: Royalties and Lost Profits**

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**§ 6.01 Introduction**

Patents such as Velcro® or Gore-Tex® relate to products that often become ubiquitous in people's everyday lives. We frequently use or see a product that utilizes Velcro® or Gore-Tex® technology. In fact, both of these inventions have been available for quite some time. That is, Velcro® was originally patented in the U.S. in 1955, with the last of the original patents expiring in 1979.<sup>1</sup> A search on "Velcro" in the USPTO patent database discloses over 22,000 patents. Gore-Tex® fabric was originally patented in the U.S. in 1976,<sup>2</sup> and over 300 patents cite the original 3,962,153 patent. What would the Velcro® or the Gore-Tex® patent "franchises" have been worth prior to the expiration of the original patents?

How the value of patent franchises is affected by infringement is the central question of estimating patent damages.<sup>3</sup>

Infringement of such popular and commercially successful products (as measured by sales revenues and/or profitability) can lead to substantial patent infringement damages claims. Ultimately, patent damages are a function of a limited number of key variables:

- (1) the sales price of the patented and infringing products;
- (2) the incremental sales margin of the patented and infringing products;
- (3) the volume of infringing sales;
- (4) the market for patented and infringing products; and
- (5) the reasonable royalty rate.

Although only a limited number of variables must be determined, the actual calculation of such damages can be complex. Estimation of patent infringement damages requires the reconstruction of events, and possibly markets, because markets may have developed differently absent the infringer's actions.

The remaining sections of this chapter will focus on how to estimate these key variables.

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<sup>1</sup> See <http://www.hookandloop.com/extra/inventionnew.html> (last visited February 18, 2009).

<sup>2</sup> See U.S. Patent No. 3,962,153, issued June 8, 1976, available at <http://www.patentstorm.us/patents/3962153/description.html> (last visited August 26, 2013).

<sup>3</sup> While the valuation of damages can utilize common valuation methodologies (such as the income approach, the market approach, and the asset-based approach), the standard of value is based, in large part, on the economic value to the specific parties in the litigation.

**§ 6.02 Injunctive or Coercive Remedies**

Remedies in a patent infringement action can be broadly divided into two categories: nonmonetary and monetary. Nonmonetary remedies are usually coercive in nature. A coercive remedy is an order commanding a party that has committed a civil wrong to stop under threat of criminal punishment. An injunction is one of the most well-known coercive remedies.<sup>1</sup> Federal law allows for, but does not require, injunctive relief.<sup>2</sup>

Monetary remedies include compensatory damages and augmented damages.<sup>3</sup> Compensatory damages are intended to make the patent holder whole for his recognized loss.<sup>4</sup> Punitive or enhanced damages, although paid to the patent holder, penalize the defendant for harmful acts already committed or act as a deterrent against the commission of infringing acts.<sup>5</sup>

The statute imposing patent infringement damages states that:

“Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.

“When the damages are not found by a jury, the court shall assess them. In either event the court may increase the damages up to three times the amount found or assessed. Increased damages under this paragraph shall not apply to provisional rights under section 154(d) of this title [35 U.S.C. § 154(d)].

“The court may receive expert testimony as an aid to the determination of damages or of what royalty would be reasonable under the circumstances.”<sup>6</sup>

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<sup>1</sup> Ross, *Intellectual Property Law: Damages and Remedies*, §§ 10.01 and 10.02 (Law Journal Press 2006), updated biannually.

<sup>2</sup> Title 35 U.S.C. Section 283 provides that:

“The several courts having jurisdiction of cases under this title *may* grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable.” (Emphasis added.)

<sup>3</sup> Augmented damages include both punitive and statutory enhanced damages. See Ross, N. 1 *supra* § 1.03[2].

<sup>4</sup> *Id.* § 1.03[2][a].

<sup>5</sup> *Id.* § 1.03[2][c]. And see the discussion on trademark infringement in this treatise at §§ 7.02 and 7.03 *infra*.

<sup>6</sup> 35 U.S.C. § 284.

Prior to the Supreme Court's 2006 ruling in *eBay, Inc. v. MercExchange, L.L.C.*, the general rule was that "courts will issue permanent injunctions against patent infringement absent exceptional circumstances."<sup>7</sup> The certainty of a permanent injunction was often a key factor used by some experts in determining reasonable royalty damages.<sup>8</sup> The Supreme Court held in *eBay* that "[t]he decision to grant or deny [permanent injunctive relief [for patent infringement] is an act of equitable discretion by the district court, reviewable on appeal for abuse of discretion."<sup>9</sup>

The threat of a permanent injunction is only relevant in determining the amount of a reasonable royalty if the plaintiff uses this threat as a factor in determining the negotiating position of the parties in constructing a hypothetical negotiation,<sup>10</sup> i.e., the amount a licensee would have agreed upon *not to have to exit the market*.

In patent litigation, prior to the Supreme Court's decision on discretionary injunctive relief, some damage experts took the position that the value of a naked patent license<sup>11</sup> is not the value of the patented technology, but the value of *not being sued*. Assuming validity and infringement, the value of not being sued is that the alleged infringer gets a "free pass" to practice what the patent covers without being shut down. In this framework, the value of the invention is not based on market demand for the patented technology, price premiums, or cost savings. Rather, the value of the invention is tied directly and solely to the harm that would come to the alleged infringer from an injunction. This harm could be considerable, assuming the inability of an alleged infringer to remove the patented feature or technology from its product in a timely and nondisruptive manner.<sup>12</sup> What the Supreme Court may have done in *eBay* is to refocus the question of

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<sup>7</sup> *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 126 S.Ct. 1837, 1838, 164 L.Ed.2d 641 (2006).

<sup>8</sup> See also, Lemley and Shapiro, "Patent Holdup and Royalty Stacking," Stanford L. & Economics Olin Working Paper No. 324 (July 10, 2006), also published at 85 Tex. L. Rev. 1991 (2007), available online at [http://www.utexas.edu/law/journals/tlr/sources/Issue 7/Rai/fn40,Lemley&Shapiro.pdf](http://www.utexas.edu/law/journals/tlr/sources/Issue%207/Rai/fn40,Lemley&Shapiro.pdf) (last visited August 26, 2013).

<sup>9</sup> *eBay, Inc. v. MercExchange, L.L.C.*, N. 7 *supra*, 547 U.S. 889-890.

<sup>10</sup> This strategy is Factor 15 of the so-called "Georgia-Pacific Factors," established in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 166 U.S.P.Q. (BNA) 235 (S.D.N.Y. 1970). See the discussion in § 6.06[15] *infra*.

<sup>11</sup> A "naked patent license" is the colloquial term for a patent license where only the rights to the patent are being licensed, e.g., if there are no additional obligations for the licensor for technology transfer, technological support, implementation assistance, or training from the licensor.

<sup>12</sup> Other experts argue that "damages adequate to compensate for infringement" should be related to the value of the technology (the theme of *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 166 U.S.P.Q. (BNA) 235 (S.D.N.Y. 1970)). The value of an injunction, i.e., "value" based on the potential harm to the infringer, is not damage to the patent holder.

damages on the value of the technology and away from the potential harm to the alleged infringer that would result from an injunction.

As stated, the Court unanimously ruled that “[t]he decision to grant or deny permanent injunctive relief is an act of equitable discretion by the district court, reviewable on appeal for abuse of discretion.”<sup>13</sup> It further stated that “the Patent Act expressly provides that injunctions ‘may’ issue ‘in accordance with the principles of equity.’”<sup>14</sup> Continuing, the Court held that:

“According to well-established principles of equity, a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief. A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.”<sup>15</sup>

The Court then concluded that:

“[T]he decision whether to grant or deny injunctive relief rests within the equitable discretion of the district courts, and that such discretion must be exercised consistent with traditional principles of equity, in patent disputes no less than in other cases governed by such standards.”<sup>16</sup>

The ultimate impact of the *eBay* decision on patent damages is unclear. Although the Court reached a unanimous decision, it also offered two separate concurring opinions. One concurring opinion stated that “a major departure from the long tradition of equity practice [of issuing permanent injunctions] should not be lightly applied.”<sup>17</sup> This could be taken to mean that the district courts should continue to issue permanent injunctions in most infringement cases. However, this position was countered by another concurring opinion stating:

“For these firms [firms that do not produce or sell goods, but primarily obtain licensing fees], an injunction, and the potentially

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<sup>13</sup> *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 388-390, 126 S.Ct. 1837, 164 L.Ed.2d 641 (2006).

<sup>14</sup> *Id.*, 547 U.S. at 389 (citing 35 U.S.C. § 283).

<sup>15</sup> *Id.*

<sup>16</sup> *Id.*, 547 U.S. at 393.

<sup>17</sup> *Id.*, 547 U.S. at 396 (Roberts, C. J., concurring) (citing *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 320, 102 S.Ct. 1798, 72 L.Ed.2d 91 (1982)).



serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent. When the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest. In addition injunctive relief may have different consequences for the burgeoning number of patents over business methods, which were not of much economic and legal significance in earlier times.

“For these reasons it should be recognized that district courts must determine whether past practice fits the circumstances of the cases before them.”<sup>18</sup>

Given the uncertainty over whether courts will issue permanent injunctions, it should be much more difficult for a plaintiff to try to establish a reasonable royalty by tying the value of a patent to the harm an injunction could bring upon a defendant.

While not a new forum, the emergence of Standard and Essential (“SEP”) patents, whether or not under F/RAND<sup>19</sup>-related licensing terms for patents that have become part of industry standards are impacting both monetary and non-monetary patent infringement remedies. As the U.S. Department of Justice and the U.S. Patent and Trademark Office recognize:

“ . . . when a standard incorporates patented technology owned by a participant in the standards-setting process, and the standard becomes established, it may be prohibitively difficult and expensive to switch to a different technology within the established standard or to a different standard entirely. As a result, the owner of that patented technology may gain market power and potentially take advantage of it by engaging in patent hold-up, which entails asserting the patent to exclude a competitor from a market or obtain a higher price for its use than would have been possible before the standard was set, when alternative technology could have been chosen.”<sup>20</sup>

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<sup>18</sup> *Id.*, 547 U.S. at 398 (Kennedy, J., concurring).

<sup>19</sup> Fair/Reasonable and Non-Discriminatory refers to the licensing terms that patent-holders pledge to adopt when offering patented technology for inclusion as part of voluntary consensus standards of standards-developing organizations (SDOs) and standards setting organizations (SSOs). While patent-holding firms pledge to license on F/RAND terms, there is no consensus regarding the definitions of fair, reasonable, and, to a lesser degree, non-discriminatory.

<sup>20</sup> “Policy Statement on Remedies for Standards-Essential Patents Subject to Voluntary F/RAND Commitments,” The United States Department of Justice and the United States Patent & Trademark Office, January 8, 2013, p. 4, <https://www.justice.gov/sites/default/files/atr/legacy/2014/09/18/290994.pdf> (last visited March 18, 2016).

To minimize this type of exploitation by patent holders following the adoption of voluntary consensus standards, some SDOs have relied on voluntary F/RAND licensing commitments by participants.<sup>21</sup> Voluntary F/RAND commitments of a patent holder may affect “the appropriate choice of remedy for infringement of a valid and enforceable standards-essential patent.”<sup>22</sup> While the Department of Justice and the USPTO recognize that there may be circumstances that would warrant an injunction, their concern is that a F/RAND-encumbered patent holder could use the threat of injunction to extract “more onerous licensing terms than the patent holder would be entitled to receive consistent with the F/RAND commitment.”<sup>23</sup> It is the government’s position that, generally, “[s]uch an order may harm competition and consumers by degrading one of the tools SDOs employ to mitigate the threat of such opportunistic actions by the holders of F/RAND-encumbered patents that are essential to their standards.”<sup>24</sup>

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<sup>21</sup> *Id.*, p. 5.

<sup>22</sup> *Id.*, p. 6.

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

### § 6.03 The Damages Period

Generally, one might suppose that the period for which patent infringement damages can be awarded to a patent holder would be limited to the period from when the patent first issues to when the patent expires. Although the patent issue date is, generally, the earliest date at which damages can begin, the end date for patent damages is not clearly limited to the expiration of the patent.<sup>1</sup> As a result, in certain circumstances, the damages period can extend beyond the expiration of the patent.

#### [1]—Beginning of the Damages Period

The damage period for most patent infringement actions is usually a period between the date when the patent first issues and the date when the patent expires. Infringement can only occur when patent rights have been granted (when the patent issues).<sup>2</sup> Patent rights expire when the patent expires—although damages can, under certain circumstances, continue past the patent expiration date.<sup>3</sup>

In addition to the normal bounds on the damage period, there are several statutory and equitable doctrines that can impose limits on the recovery of damages by the patent holder.<sup>4</sup> These limitations are discussed below in detail.

The starting date for the damage period begins with the date of first infringement. This date is defined as being on or after the date the infringed patent(s) was issued, when the infringing product was first made, used, or sold.<sup>5</sup> The date of first infringement, however, does not necessarily dictate the beginning of the damages period.<sup>6</sup>

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<sup>1</sup> *State Contracting & Engineering Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1073-1074 (Fed. Cir. 2003.)

<sup>2</sup> Title 35 U.S.C. Section 154(d) creates provisional rights for obtaining reasonable royalty damages for the period beginning on the date the patent application is published and ending on the date the patent is issued. For provisional rights to be granted, the invention claimed in the patent must be substantially identical to the invention claimed in the published patent application, and the infringer must have actual notice of the published patent application. Provisional rights are available in an action brought not later than six years after the patent is issued.

<sup>3</sup> See, for example, the case of lost profits from price erosion, discussed below. *State Contracting & Engineering Corp. v. Condotte America, Inc.*, N. 1 *supra*, 346 F.3d at 1073-1074.

<sup>4</sup> See Ross, *Intellectual Property Law: Damages and Remedies*, § 3.11 (Law Journal Press 2006), updated biannually.

<sup>5</sup> *Applied Medical Resources Corp. v. United States Surgical Corp.*, 435 F.3d 1356, 1364 (Fed. Cir. 2006). See also, *Wang Laboratories Inc. v. Toshiba Corp.*, 993

It is possible to have a situation where a product infringes and either no damages or only limited damages are recoverable. To determine when the damage period begins, several factors must be considered: (1) notice and (2) patent marking requirements.

That is, the patent infringer must be notified of its infringement to ensure that damages accrue from the date of first infringement.<sup>7</sup> Notice to the infringer can be accomplished either by actual notice, i.e., the patent holder actually contacts the infringer, or, where relevant, by marking products (or packaging) with relevant patent numbers.

In cases where a patent holder has a duty to mark (where the patentee or authorized others make, offer for sale, or sell the patented article within the United States), but fails to print or apply such a mark, damages prior to actual notification of infringement by the patent holder cannot be recovered.<sup>8</sup>

Where patent marking is not required (where neither the patentee nor authorized others make, offer for sale, or sell the patented article within the United States), the recovery of damages is limited to six years prior to actual notice of infringement.<sup>9</sup>

This six-year time limitation is distinct from the related equitable doctrine of *laches*.<sup>10</sup> A *laches* defense has two underlying elements. First, the patent holder's delay in bringing suit must be "unreasonable and inexcusable."<sup>11</sup> Second, the alleged infringer must have suffered "material prejudice attributable to the delay."<sup>12</sup> A presumption of *laches* arises if the patent holder delays bringing a suit for more than six years after acquiring knowledge of the infringing activity.<sup>13</sup>

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F.2d 858 (Fed. Cir. 1993). As explained in N. 2 *supra*, 35 U.S.C. Section 154(d) creates provisional rights for obtaining reasonable royalty damages for the period beginning on the date the patent application is published and ending on the date the patent is issued. For provisional rights to be granted, the invention claimed in the patent must be substantially identical to the invention claimed in the published patent application and the infringer must have actual notice of the published patent application. Provisional rights are available in an action brought not later than six years after the patent is issued.

<sup>6</sup> Ross, N. 4 *supra*, § 3.11[1].

<sup>7</sup> 35 U.S.C. § 287(a).

<sup>8</sup> *Id.*

<sup>9</sup> See: 35 U.S.C. § 286 and *Standard Oil Co. v. Nippon Shokubai Kagaku Kogyo Co., Ltd.*, 754 F.2d 345, 347-348 (Fed. Cir. 1985).

<sup>10</sup> Ross, *Intellectual Property Law: Damages and Remedies*, § 3.11[1] (Law Journal Press 2006), updated biannually.

<sup>11</sup> *Intirtool, Ltd. (d/b/a Mass-Tex Ltd.) v. Texar Corp.*, 369 F.3d 1289, 1297 (Fed. Cir. 2004).

<sup>12</sup> *Id.*

<sup>13</sup> *State Contracting & Engineering Corp. v. Condotte America, Inc.*, 346 F.3d 1057 (Fed. Cir. 2003).

A time limitation on the recovery of patent infringement damages provides an incentive for the patent holder to enforce its legal monopoly over its patented technology in a timely manner rather than “sleep on its rights.”<sup>14</sup> It also protects the infringer from being sued well after the infringer began selling the product and after it has utilized earnings on infringing sales. In addition, a patent holder’s delay in bringing suit can prejudice the infringer in that relevant defense-related fact witnesses and documents may no longer be available when a suit is eventually filed.<sup>15</sup> Finally, the doctrine of *laches* limits the ability of the patent holder to allow the infringer to invest in the infringing technology and develop the market while the patent holder waits until the market is fully developed before claiming damages.<sup>16</sup>

#### [2]—End of the Damages Period

A patent grants its owner a legal monopoly for a particular technology over a defined period of time, i.e., twenty years from the filing of an application in the United States.<sup>17</sup> Upon the expiration of the patent, anyone and everyone is entitled to use the information in the patent.<sup>18</sup> However, damages may accrue to the patent holder after expiration of the patent when it is technically no longer in effect for infringing activity that occurred prior to expiration of the patent.<sup>19</sup> Certain forms of harm from patent infringement may extend beyond the term of the patent. These types of damages include price erosion, market spoliation, and accelerated market re-entry.<sup>20</sup>

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<sup>14</sup> A.C. Aukerman Co. v. R. L. Chaides Construction Co., 960 F.2d 1020, 1028 (Fed. Cir. 1992).

<sup>15</sup> *Id.*, 960 F.2d at 1033.

<sup>16</sup> *Id.*

<sup>17</sup> 35 U.S.C. § 154(a)(2). If the filed application specifically references a prior filed application, then the twenty-year term is typically tied to the date of the predecessor application(s). Design patents, however, have a fourteen-year term.

<sup>18</sup> *Bonito Boats v. Thunder Craft Boats*, 489 U.S. 141, 152, 109 S.Ct. 971, 103 L.Ed.2d 118 (1989).

<sup>19</sup> *Merck & Co. v. Mediplan Health Consulting, Inc.*, 434 F. Supp.2d 257, 265 (S.D.N.Y. 2006).

<sup>20</sup> For a discussion of these specialized damages, see § 6.08 *infra*.

### § 6.04 Products Affected

One of the first steps in determining patent infringement damages is to determine what products are affected by the patent infringer's use of the patent(s) at issue. Although this seems simplistic, it is anything but. In order to fully delineate the information necessary to determine the products affected by infringement, the infringer and patent holder products will be separately addressed.

#### [1]—Infringing Products

The patent owner typically lists in the complaint the patents allegedly infringed and the infringing products made, used, or sold by the infringer.<sup>1</sup> This initial list may not be complete. Additional infringing products may be added as discovery progresses and the patent holder learns more about the infringer's products. Therefore, significant discovery regarding all potential infringement is necessary in order to establish a complete list of infringing products. Once this information is gathered, patent attorneys and technical experts who are focused on infringement must coordinate efforts to create the final list of infringing products. Knowing the full extent of product infringement is a first step in determining both the date of first infringement as well as the period of damages. If there are multiple infringing products, wherein each infringes a different subset of patents and claims, there may be multiple dates of first infringement and multiple damage periods.<sup>2</sup> In instances where certain patents are found to be either invalid or not infringed, the expert may have to estimate damages for a different subset of patents than were originally alleged to have been infringed.<sup>3</sup>

Establishing a complete list of infringing products also allows the plaintiff to more accurately calculate revenues and profits earned by the infringer. This seemingly straightforward exercise can be quite involved and require significant lead time in order to gather the proper information from the infringer. The complexity of establishing the revenues and profits associated with the sales of infringing products requires detailed discovery of the infringer's accounting records. Accounting systems can be exceptionally complex and based on very sophisticated software. Obtaining input from a financial expert on

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<sup>1</sup> Fed. R. Civ. P. 8(a).

<sup>2</sup> Wang Laboratories, Inc. v. Toshiba Corp., 993 F.2d 858 (Fed. Cir. 1993).

<sup>3</sup> Glenayre Electronics, Inc. v. Jackson, 2003 U.S. Dist. LEXIS 11720 (N.D. Ill. July 22, 2003), *aff'd* 443 F.3d 851 (Fed. Cir. 2006).

how to request particular information, the form in which it should be stored, and the levels of detail that should be available are important steps in determining an accurate calculation of either lost profits or a reasonable royalty. Without a proper accounting of the revenues and costs associated with infringing sales, a damages expert's ability to prove the full extent of the damages may be undermined, or the expert may need to perform several complementary (and time-consuming) analyses in order to supplement incomplete financial records. The Federal Rules of Civil Procedure related to discovery require a sophisticated litigation team to ensure that both parties obtain information they desire, no less and no more.<sup>4</sup>

Establishing a complete list of all infringing products and all associated revenues, costs, and profits is also the first step in determining what revenues and profits were earned by the infringer through the sale of non-infringing products that would not have been made but for the sale of the infringing product(s). Such sales are referred to as *collateral* (or *convoyed*) sales because these sales are linked directly to sales of the infringing products.<sup>5</sup>

Determining convoyed sales requires detailed financial and marketing information that extends beyond, but is dependant upon, the infringing products list.<sup>6</sup> For example, if General Electric were sued for patent infringement related to its airplane engines, potential convoyed sales from the sale of engine service contracts and/or replacement parts may be relevant areas for discovery. The list of infringing products would help the damages expert determine which airplane engines allegedly infringe, and therefore help the expert to focus on other relevant revenue streams that may be identified as convoyed sales. In the extreme, it is hard to see how General Electric's sale of residential light bulbs would be considered convoyed sales to an airplane engine. However, a determination would ultimately be based upon discovery.

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<sup>4</sup> For example, Fed. R. Civ. P. 34(b) concerning electronic discovery allows for the requesting party to demand information in its native format. This request, however, must be carefully thought through. If the accounting records of a Fortune 500 company are requested, the requester may get the data in a proprietary SAP database that would require both an expensive license fee paid to SAP and an expert in the software to interpret that data. Understanding that the data in SAP can exist in several native formats and, therefore, requesting the most logical, easily accessible format can avoid being provided with exceptionally complex, expensive discovery.

<sup>5</sup> Gaughan, *Measuring Business Interruption Losses and Other Commercial Damages*, pp. 310-311 (2004).

<sup>6</sup> See § 6.08[6][b] *infra*. See also, *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1549-1550 (Fed. Cir. 1995).

In any event, there must be a clear marketplace link between infringing revenues and convoyed revenues.<sup>7</sup>

**[2]—Patent Owner Products**

In order to establish the relevance of and amount of lost profit, price erosion, and/or reasonable royalty damages, it is necessary to determine which products made by the patent owner, if any, incorporate the features taught by the patent(s) at issue. Once the list of products is finalized, revenues and profits associated with these products—as well as relevant marketing, research and development, and other corporate information regarding these products—can be gathered through discovery. As with convoyed sales, information about sales of non-patented products sold together or associated with sales of the patented product should also be gathered from the patent holder. This information, if available, may assist in supporting any conclusions made about the infringer's revenues, profits, and convoyed sales as well as serve as sources for any lost profit and price erosion calculations. For example, if it can be shown that the patent owner experiences convoyed sales from the sale of its products that use the patented invention, this information may be applicable to the infringer's infringing sales. In order to accomplish this nexus, it may be necessary to show that the patent holder's products are sold to similar customers as the infringer and that those customers behave similarly to the patent holder's customers.<sup>8</sup>

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<sup>7</sup> In *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1550 (Fed. Cir. 1995), the court states that “to allow inclusion of physically separate unpatented components normally sold with the patented components,” the unpatented and patented components need to be “components of a single assembly or parts of a complete machine, or they together constituted a functional unit.”

<sup>8</sup> Frank, O'Brien, and Wagner, “Patent Infringement Damages,” p. 22.24, in Weil, Frank, Hughes, and Wagner, eds., *Litigation Services Handbook: The Role of the Financial Expert* (4th ed. 2007).



**§ 6.05 A Reasonable Royalty****[1]—The Federal Statute**

Patent law allows for the recovery of the patent owner's actual harm including actual losses on any sale of an infringing product that a patent holder would have made but for the infringer's sale of its infringing product.<sup>1</sup> However, patent law also provides a damages floor for any infringing units sold for which actual harm to the patent holder cannot be proved.<sup>2</sup> This "backstop" is a reasonable royalty. The statute further provides that a patent holder is entitled to receive damages based on its actual harm, but in no case less than a "reasonable royalty."<sup>3</sup> Reasonable royalty damages are the only alternative for a patent owner that does not manufacture its product and thus would otherwise be unable to prove actual harm as a measure of damages.<sup>4</sup>

However, even where the patent owner does manufacture a product that uses the patent technology at issue, any sales made by the infringer that cannot be claimed by the patent holder as lost sales would still be included in the calculus of reasonable royalty damages.<sup>5</sup> In many instances, there is a division of infringing units whereby lost profit damages applies to certain unit sales, and a reasonable royalty applies to all unit sales not included in the lost profits calculation.<sup>6</sup> In addition, because the proof for lost profits is separate from the proof of a reasonable royalty,<sup>7</sup> damages experts often offer both a lost profits opinion for all or some units, and a reasonable royalty opinion as an alternative in case the trier of fact finds that lost profit damages are not warranted.<sup>8</sup> Even if the trier of fact disagrees with the offered analysis for a lost profit calculation, as set forth in *Panduit Corp. v. Stahlin Bros. Fibre Works*,<sup>9</sup> reasonable royalty damages are guaranteed for every infringing unit.

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<sup>1</sup> 35 U.S.C. § 284.

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> Ross, *Intellectual Property Law: Damages and Remedies*, § 3.02[2] (Law Journal Press 2004), updated biannually.

<sup>5</sup> *Id.* at § 3.03[6].

<sup>6</sup> *Id.*

<sup>7</sup> Ross, N. 4 *supra*, at § 3.02[2].

<sup>8</sup> Gaughan, *Measuring Business Interruption Losses and Other Commercial Damages*, p. 309 (2004).

<sup>9</sup> *Panduit Corp. v. Stahlin Bros. Fibre Works*, 575 F.2d 1152 (6th Cir. 1978). And see § 6.08 *infra*.

**[2]—Multiple Patents and the Apportionment of Damages**

At times, the alleged infringer is accused of infringing multiple patents. This presents a challenge to the proper determination of damages in that certain products may infringe only some of the allegedly infringing claims. To the extent this subset of claims covers a different set of market relevant features than the entire set of claims asserted by the plaintiff, sufficient discovery is necessary in order to appropriately apportion damages to particular infringed claims. In addition, certain case events, such as a crucial *Markman v. Westview Instruments, Inc.*<sup>10</sup> decision or summary judgment motions relating to infringement and validity, can result in the elimination of certain claims being litigated and in a different subset of claims being valued, and can occur after damage reports are filed and depositions are taken. Failure to properly disaggregate damages among patents and or patent claims has been used as a basis to exclude damages experts pursuant to the standards set forth in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*<sup>11</sup> In *Daubert*, the Supreme Court discusses the judge's role as a gatekeeper to "ensure that any and all . . . testimony or evidence admitted is not only relevant, but reliable," and delineated five requisite factors for the admissibility of expert testimony:

- (1) whether the hypotheses can be tested for accuracy;
- (2) whether the methodologies have been peer reviewed in the publication process;
- (3) whether the known rate of error of the analysis has been established (and is acceptable);
- (4) whether the existence and maintenance of standards and controls has been established; and
- (5) whether the method or technique is generally accepted.<sup>12</sup>

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<sup>10</sup> *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). This case resulted in an exercise within patent cases in which the Court interprets the scope and meaning of each claim. Depending on the court's findings, certain claims may be removed due to subsequent findings of non-infringement or invalidity.

<sup>11</sup> *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993). And see *Glenayre Electronics, Inc. v. Jackson*, 2003 U.S. Dist. LEXIS 11720 (N.D. Ill. July 22, 2003), *aff'd* 443 F.3d 851 (Fed. Cir. 2006).

<sup>12</sup> *Id.* (*Daubert v. Merrell Dow Pharmaceuticals, Inc.*), 509 U.S. at 589, 595-596. *Daubert* and related cases are discussed in detail in Chapter 13 *infra*.

**[3]—“Reasonable Royalties” and Court Precedents**

The determination of what constitutes a reasonable royalty in a patent infringement matter has evolved over time through court precedent, through advancements in economic and financial analytics, and through increased access to relevant information. As access to information in the business world has continued to expand significantly, so too has the information available for damages determination. By combining court precedents and better analysis of relevant information, experts are now able to provide more sophisticated and information-rich opinions regarding how much the infringer should pay. Various court precedents that govern the determination of a reasonable royalty as well as the techniques used and information necessary to prove such an award are discussed in detail below.<sup>13</sup>

Reasonable royalty as a remedy for patent infringement is appropriate when the patent owner cannot prove lost profits for all or some of its sales. There are many methods that can be used to assist in determining a reasonable royalty; however, one established method is common to all expert analysis. This method is based on the analysis of the District Court for the Southern District of New York in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*<sup>14</sup>

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<sup>13</sup> See: §§ 6.06 and 6.07 *infra*.

<sup>14</sup> *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 166 U.S.P.Q. (BNA) 235 (S.D.N.Y. 1970).

§ 6.06 *Georgia-Pacific Corp. v. U.S. Plywood Corp.*

The most fundamental guide to proving reasonable royalty damages in a patent infringement matter was issued in 1970 by the District Court for the Southern District of New York in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*<sup>1</sup> As part of its decision in *Georgia-Pacific*, the Court stated that the trier of fact should consider fifteen factors in determining a reasonable royalty:

“1. The royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.

“2. The rates paid by the licensee for the use of other patents comparable to the patent in suit.

“3. The nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold.

“4. The licensor’s established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.

“5. The commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter.

“6. The effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of his nonpatented items; and the extent of such derivative or convoyed sales.

“7. The duration of the patent and the term of the license.

“8. The established profitability of the product made under the patent; its commercial success; and its current popularity.

“9. The utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results.

“10. The nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention.

“11. The extent to which the infringer had made use of the invention; and any evidence probative of the value of that use.

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<sup>1</sup> *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 166 U.S.P.Q. (BNA) 235 (S.D.N.Y. 1970).

“12. The portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions.

“13. The portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.

“14. The opinion testimony of qualified experts.

“15. The amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement. . . .”<sup>2</sup>

Since this decision, a technique known as the *Georgia-Pacific* factors analysis has become standard in all patent infringement reasonable royalty damages determinations. This has occurred not only because the *Georgia-Pacific* factors are a valid, but not exhaustive, list of relevant considerations, but also because courts subsequent to the *Georgia-Pacific* decision have demanded that these factors be analyzed as part of an expert’s opinion. Courts have even excluded expert testimony that has not explicitly shown that it considered these factors.

Because the *Georgia-Pacific* factors have become all but mandatory in establishing any reasonable royalty damages claim, this section discusses those factors in the order they were proffered by the court. Areas of overlap between factors are noted, including duplication in the information necessary to support the opinion related to each factor. Note that although the various analyses and source material necessary to conduct such assessments for each factor bear discussion, the specific facts of the case may yield insufficient information for some or all of the factors or may result in a more complete data set for some factors than for others. Like patents themselves, not all *Georgia-Pacific* factors are given the same weight in the damages analysis. Rather, each is dependent on the facts and circumstances of the case and the total information available to the expert.

A relatively new and developing area of reasonable royalty damages relates to infringement of SEP patents, especially patents subject to F/RAND licensing commitments.<sup>3</sup> Even when a patent holder agrees to license under F/RAND terms in order to have its patented technology included in a standard, no license to operate is granted until the parties can agree on what those fair, reasonable, and non-discriminatory

<sup>2</sup> *Id.*, 318 F. Supp. at 1120-1121.

<sup>3</sup> Contreras, “The Frand Wars: Who’s on First?,” *PatentlyO*, April 17, 2012, available at <http://www.patentlyo.com/patent/2012/04/the-frand-wars-whos-on-first.html> (last visited March 18, 2016).

terms are. If an agreement cannot be reached, the frustrated potential licensee can either wait to implement the standard or risk infringing the patent. The result is often litigation.<sup>4</sup> As would be expected, a reasonable royalty for patents under voluntary F/RAND licensing commitments might be different than a reasonable royalty for patents without such a commitment.

In April 2013, Judge Robart issued his “Findings of Fact and Conclusions of Law” (“the Microsoft Order”) in *Microsoft Corp v. Motorola, Inc., et al.*<sup>5</sup> The Microsoft Order is the first time a U.S. District Court has determined what RAND terms mean for a standard and essential patent in determining a reasonable royalty. The effect of RAND licensing terms on a *Georgia Pacific* factors analysis is discussed below, in this section. While not faulting Judge Robart, the Federal Circuit, in *Ericsson, Inc. v. D-Link Systems, Inc.*, cautions against the creation of “a new set of *Georgia-Pacific*-like factors for all cases involving RAND-encumbered patents.”<sup>5.1</sup>

Not all SEP patents are offered on F/RAND licensing terms. The Federal Circuit, in *CSIRO v. CISCO*, established important guidelines for the determination of a reasonable royalty even when SEPs are not subject to F/RAND licensing obligations.<sup>5.2</sup> The Federal Circuit found that Eastern District of Texas Judge Davis erred by not separating the value of the technology covered by the patent from the value related to the fact that the patent was part of a standard.<sup>5.3</sup>

This section concludes with a discussion of other relevant economic considerations that can be necessary to determine a reasonable royalty that were not explicitly delineated in the *Georgia-Pacific* factors, including subsequent court precedents that impact the ultimate outcome of the reasonable royalty determination.

#### **[1]—Factor 1: The Royalties Received by the Patentee for the Licensing of the Patent in Suit, Proving or Tending to Prove an Established Royalty**

Information typically considered by an expert and the court in analyzing Factor 1 includes licenses entered into by the patent owner for the patents at issue and the value placed on the patents at issue by the patent owner for accounting or other financial purposes. Each

<sup>4</sup> *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 166 U.S.P.Q. (BNA) 235 (S.D.N.Y. 1970).

<sup>5</sup> *Microsoft Corp v. Motorola, Inc., et al.*, No. C10-JLR1823 (W.D. Wash. 2013). The District Court’s decision was affirmed on July 30, 2015 by the Court of Appeals for the Ninth Circuit.

<sup>5.1</sup> *Ericsson, Inc. v. D-Link Systems, Inc.*, 773 F.3d 1201, 1232 (Fed. Cir. 2014).

<sup>5.2</sup> *CSIRO v. CISCO Systems, Inc.*, 809 F.3d 1295, 1304-1305 (Fed. Cir. 2015).

<sup>5.3</sup> *Id.* at 1305-1306.

data source and its potential impact on a reasonable royalty are discussed below.

**[a]—Other Licenses Entered Into for the Same Patents**

The existence of other license agreements for the same patent(s) at issue in litigation is considered by many experts to be the most important factor in determining a reasonable royalty. In such a circumstance, the rates established for such licenses together with the payment terms may be all that is necessary to determine a reasonable royalty. The court in *Georgia-Pacific* acknowledged the importance of established licenses when it discussed the need to “resort to a broad spectrum of other evidentiary facts probative of a reasonable royalty” in light of the fact that “the parties agree there was no ‘established royalty.’ . . .”<sup>6</sup>

However, although using the patent holder’s licenses to establish a royalty rate may sound simple, it can actually prove to be difficult.

First, other license agreements entered into by the patent holder may include licenses to patents or other intellectual property that is not at issue in the litigation. For example, even though a company may be alleging that seven claims related to four patents are infringed, its licenses with others may include all claims for all these patents. Therefore, the rates negotiated for such third-party licenses are not necessarily *de facto* rates for use in any current litigation because the third-party licensees receive access to broader intellectual property rights than the infringer in the current litigation case needs to obtain. An expert may still conclude that such licenses prove an established royalty if there is supporting analysis showing that the other claims and patents included in the third-party licenses had little or no value to the licensees.

Second, some licenses entered into by the patent owner may be lump-sum paid-up amounts for the entire life of the patents, whereas the license contemplated in litigation would extend only to the date of trial when an injunction could issue from the court.<sup>7</sup>

Third, these licenses may contain other forms of consideration including product purchase commitments, patent cross-licensing, or covenants not to sue.

<sup>6</sup> *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. at 1121.

<sup>7</sup> As is discussed in § 6.02 *supra*, court precedents such as *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 126 S.Ct. 1837, 1838, 164 L.Ed.2d 641 (2006), raise the question as to whether the parties should automatically assume in their damages analyses that reasonable royalty damages cease at the end of trial. However, in this context it is simply being assumed to be the case for convenience sake in explaining the complexity of determining if an established royalty exists.

Finally, these licenses may have been entered into with some doubt as to the validity and infringement of the patents at issue. In a reasonable royalty analysis there is no such doubt.

For each of the above limitations, a detailed study of further information can unlock some of the uncertainty as to value. For example, correspondence between the patent owner and the licensee that culminates in a license could reveal the royalty base and royalty rate used in deriving a lump-sum payment. This would allow experts to use those royalty bases and rates as comparisons in their reasonable royalty analyses, whereas a lump-sum amount stated, with no explanation, in the license itself may not prove useful.

All of these additional features in licenses typically result in something less determinative than an *established* royalty rate. In addition, courts often determine that licenses entered into by the patent owner that were negotiated in the context of litigation (actual litigation or threatened litigation) should be excluded from consideration by experts in arriving at their damages opinions.<sup>8</sup> The primary rationale is that the court encourages parties to settle litigation without trial whenever possible. Because such settlement requires compromise from each party, the court would not want to create a disincentive to settle litigation by imposing the terms of such settlement on either party in the next litigation by allowing the trier of fact to be swayed by these licenses. However, this strategy appears to be in direct contrast to the spirit of Factor 1. Any patent license entered into has, at minimum, the implied risk of litigation. The only variable is how far down the path to litigation the parties have progressed prior to executing the license agreement. If all licenses entered into in the context of litigation were excluded from consideration in setting a reasonable royalty, no licenses might ever be considered under Factor 1 since the context of litigation is present at some level in virtually every patent-only license.<sup>9</sup>

Rather than excluding such licenses from a reasonable royalty analysis, it is better that such licenses be considered as useful comparable data because they contain at least some value related to the patents at issue and thus can perhaps serve as ceilings or floors for the potential royalty rate. In addition, such licenses can be instructive as to how royalties are paid in the particular industry or technology sector (i.e., percentage of revenues, dollars per unit, etc.).

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<sup>8</sup> See *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978).

<sup>9</sup> The rule against using settlement license agreements is not “iron clad.” In *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 872 (Fed. Cir. 2010), the Federal Circuit stated that “the most reliable license in this record arose out of litigation.” In its opinion, the court faulted ResQNet.com’s damage expert for relying on licenses that were unrelated to the technology at issue when more relevant and reliable licenses existed, i.e., those that arose out of litigation.



**[b]—Value Placed on Patents at Issue in Accounting or  
Other Financial Documents**

Accounting and financial valuations are performed for patent owners for various reasons and are at times valuable sources of information as to what the patent owner believed the patents to be worth at a particular time. One such source of information is a company's IRS Section 482 transfer pricing study. In transfer pricing studies, typically performed by an outside accounting or consulting firm, a company places a value on certain intellectual property which is used by one business unit of the patent owner, but which is technically owned by another business unit. These studies are commissioned in order to comply with IRS tax rules to determine the market value of these assets and are, therefore, perceived to be rigorous analyses of value.<sup>10</sup> If such an analysis exists for the patents at issue in an infringement matter, that analysis is potentially probative information that an expert and the court would consider in establishing a reasonable royalty.

Other financial studies that may place a value on the subject patents include fairness opinions, purchase price allocations, and impairment studies. These studies are also undertaken by patent holders (often public companies) in the context of the purchase of business assets where fairness opinions and purchase price allocations are relevant. Impairment analyses are then performed on these assets over the course of time to comply with accounting standards. Again, if the patents at issue are the sole or major intellectual property assets in a transaction, a value would be placed on them. This provides another data point as to what the patent owner believed the patent(s) were worth at a specific point(s) in time. Sources for fairness opinions, purchase price allocations, and impairment analyses are included as notes to a company's public SEC filings and also as part of the independent auditor work papers.

In addition to these accounting-related valuations, other valuations may have been performed by or for the patent owner to provide guidance in making financial decisions. Companies may commission valuations or perform such valuations themselves to assist decision-making. Business events such as merger and acquisition due diligence, out-licensing analyses, the use of IP as collateral for financing, and valuation studies related to ongoing R&D investment decision-making also involve placing a value on particular intellectual property assets. The likelihood that relevant valuation information may be available

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<sup>10</sup> In addition to IRS Section 482 valuation guidelines, IRS Section 6662 penalties can be imposed if the IRS believes the assets at issue have been incorrectly valued. Also, even though Section 482 valuations are perceived to be rigorous, damages experts should evaluate the entire Section 482 study to determine whether they feel it is based on sound economics and supported by evidence produced in the litigation.

to the expert and the court is greater where the subject patents are a significant part of the transaction or portfolio.

One example of a situation where such information may be directly related to the patent(s) at issue is a study commissioned by early-stage companies. Early in its life cycle, a company may have few assets other than intellectual property. Where such companies are attempting to raise money from venture capital firms, it is not uncommon for valuations of a company's intellectual property to be prepared. Because the company is in a nascent stage, the likelihood of specific value being placed on the subject patent(s) is greater than with the valuation of a more established company with many more assets (including patents), as well as ongoing operations.

Although many of these sources of information will not lead to a specific established royalty rate for the patent(s) in suit, the court in *Georgia-Pacific* did not make this a requirement in Factor 1. Rather, even though the court clearly stated the objective of finding an exact match for an established royalty rate, the court also included the language "or tending to prove" in Factor 1, which suggests an explicit acknowledgment that useful information that may not be an exact match can still be instructive in the Factor 1 analysis.

#### **[c]—RAND Considerations**

"In the RAND context," royalties received by the patentee for the patent(s) at issue "must be comparable to RAND licensing circumstances." In order to "prove an established royalty rate for an SEP, the past royalty rates for a patent must be negotiated under the RAND obligation or a comparable negotiation . . . where the parties clearly understood the RAND obligation. . . ."<sup>11</sup>

#### **[2]—Factor 2: The Rates Paid by the Licensee for the Use of Other Patents Comparable to the Patent in Suit**

Information typically considered by experts and the trier of fact in analyzing this factor relates to comparable license agreements entered into by the licensee, other comparable licenses entered into by third parties for similar technology, and other valuations performed or commissioned by the licensee for comparable technology.

#### **[a]—Licenses Entered Into by the Licensee**

As *Georgia-Pacific* Factor 2 states, only the licenses entered into by the licensee for patents comparable to the patent in suit should be considered in establishing a fair license value. The process of

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<sup>11</sup> Microsoft Order, paragraph 100.

determining which patents are comparable must not only include an analysis by the reasonable royalty expert, but may also require input from technical experts. Comparable patents can be determined by considering whether the technology taught under the patents is related to similar features in comparable technology areas, and should also consider whether the patented technology included in these other licensee licenses is of comparable importance in terms of being seminal or enabling technology versus simple incremental improvements made to other enabling technology. Determining the comparable importance of technology may require information from technical experts and may also require a study of patent analytics for the patent landscape of the technology area that includes comparable patents. Several patent analytic tools exist that assist in such an exercise. Sources of patent analytic data include service providers Delphion, Derwent World Patents Index®, MicroPatent, and M-Cam, as well as free government sources including the U.S. Patent and Trademark Office (“USPTO”), the Japan Patent Office (“JPO”), and other intellectual property-issuing authorities around the world.

Court decisions have considered the appropriate use of license agreements and reached inconsistent conclusions as to the licenses’ reliability. In *ResQNet.Com, Inc. v. Lansa, Inc.*, the Federal Circuit rejected the parties’ unrelated licenses, even though those licenses were ResQNet’s own licenses, which included the patented technology and rights to other intellectual property, holding that evidence of royalty rates from licenses without a relationship to the claimed invention could not form the basis of a reasonable royalty calculation.<sup>12</sup> The court noted that the most reliable of the seven licenses used by ResQNet’s damages expert was a license that arose out of litigation, but added that other court decisions have suggested that the license sought which is derived from a hypothetical negotiation (i.e., the one used to determine a reasonable royalty) can differ significantly from a license entered into as a result of litigation.<sup>13</sup> The court did not suggest, however, how the expert in ResQNet should have adjusted for these possible differences.

The dissenting opinion described the majority as having

“create[d] a new rule whereby no licenses involving the patented technology can be considered, in determining the value of the infringement, if the patents themselves are not directly licensed or if the licenses include subject matter in addition to that which was infringed by the defendant here.”<sup>14</sup>

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<sup>12</sup> *ResQNet.Com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 870-872 (Fed. Cir. 2010).

<sup>13</sup> *Id.*, 594 F.3d at 872.

<sup>14</sup> *Id.*

This decision opens the debate as to what licenses can be considered in determining a reasonable royalty and what adjustments, if any, must be made to these comparable transactions to achieve a reliable outcome in the eyes of the court.

Further, in *Wordtech Systems, Inc. v. Integrated Networks Solutions, Inc.*, the Federal Circuit rejected licenses to the patents in suit entered into by the patentee. The court clearly indicated that there must be a factual basis to associate the royalty rates used in prior licenses to the particular hypothetical negotiation at issue.<sup>15</sup> What is unclear are the criteria used by the court in determining the comparability of royalty rates used in prior licenses to the reasonable royalty determined by the hypothetical negotiation.<sup>16</sup> It seems that the court is trying to redefine the term comparability in a potentially unworkable narrow way.

The use of comparables in the valuation of intellectual property (and more generally in the valuation of other assets or entire businesses) is a generally accepted methodology.<sup>17</sup> The use of comparables in the market approach uses two categories of analytical procedures to indicate value.<sup>18</sup> The first analytical procedure relates to the “collection and analysis of market-derived empirical transactional data; that is, data regarding the sale or licensing of the subject intangible asset [e.g., patent] itself and of *comparative* intangible assets [i.e., comparable licenses].”<sup>19</sup> Following the gathering of market data, the patent valuation expert must analyze and account for differences between market data and circumstances surrounding the hypothetical negotiation. This analysis should include an assessment of market conditions and changes in market conditions between the dates of the comparable transaction and the subject transaction.<sup>20</sup> In addition, the expert must consider, among other factors, any differences in the nature of the technologies being licensed (including the characteristics of the relevant markets), the scope of licenses granted, and any additional rights or obligations contained in possible comparable licenses. These are the types of analyses that actual patent licensing parties use in the negotiation of actual licensing agreements.

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<sup>15</sup> *Wordtech Systems, Inc. v. Integrated Networks Solutions, Inc.*, 609 F.3d 1308 (Fed. Cir. 2010) (as cited in *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1317 (Fed. Cir. 2011)).

<sup>16</sup> It seems that the court is trying to redefine the term “comparability” in a potentially unworkable, narrow way.

<sup>17</sup> The use of comparables falls under the market approach, one of three accepted valuation methodologies, the other two approaches being the income approach and the cost approach. See, for example, Reilly and Schweihs, *Valuing Intangible Assets*, at pp. 96 and 101-102. (1998).

<sup>18</sup> Reilly and Schweihs, *id.*, at p. 102.

<sup>19</sup> *Id.*, at p. 102. (Emphasis added.)

<sup>20</sup> *Id.*

An analysis of comparable license agreements is not only used in real world licensing, but is also prescribed by the Internal Revenue Service to companies in the setting of intercompany transfer prices related to company-owned patents and other intellectual property.<sup>21</sup> This approach is also reflected in the International Tax Institute (“ITI”) prescription in using the Comparable Uncontrolled Price Method (“CUP”) for valuation, which is designed to allow appraisal experts to use transactions between unrelated parties as comparable agreements in a transfer pricing, or related party analysis.<sup>22</sup>

Because of uncertainty in the courts as to what constitutes a “reliable”—i.e., comparable—license agreement, patent valuation experts use all available comparable license agreements to assist in determining the value of patents and/or the measure of harm a patent holder may experience due to infringement. These comparable license agreements often concern different patents or even different technology from the subject patent. However, these other agreements are commonly used as benchmarks (or data points) by valuation experts to assist in the determination of value of the subject patented technology.

After ensuring the patents are in fact reasonably comparable, the expert must also judge the comparability of the license terms to those set forth in the *Georgia-Pacific* analysis. For example, do the prospective licensee’s licenses include intellectual property other than the patents which would not be part of the hypothetical license envisioned in a *Georgia-Pacific* analysis? Are the licensee’s licenses for comparable patents exclusive licenses since a *Georgia-Pacific* analysis typically envisions a nonexclusive license? These and other questions may affect the relevance of the data point provided by the licensee’s licenses as compared with the hypothetical license anticipated in a *Georgia-Pacific* analysis.

As with the licensor’s licenses for patents other than the subject patent(s), other existing licenses of the licensee will not always be especially helpful in determining a reasonable royalty, but again they may provide valuable data points to guide an expert in ultimately making such a determination.

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<sup>21</sup> See IRS Code Section 482, specifically Treas. Reg. §§ 1.482-1(c)(2)(i) and 1.482-1(d), available at [http://www.irs.gov/pub/irs-apa/482\\_regs.pdf](http://www.irs.gov/pub/irs-apa/482_regs.pdf) (last visited August 26, 2013). See also the IRS examining process for the development of Section 482 cases, available at [http://www.irs.gov/irm/part4/irm\\_04-061-003.html](http://www.irs.gov/irm/part4/irm_04-061-003.html) (last visited August 26, 2013).

<sup>22</sup> See <http://www.itinet.org/transferpricing/methods.htm> (last visited August 26, 2013).

**[b]—Published Royalty Rates for the Industry and for Similar Products**

Although an analysis of third-party licenses for patents that are deemed similar to those at issue in the particular matter or which relate to the same or similar products as those that are alleged to infringe is not explicitly stated in *Georgia-Pacific* Factor 2, many experts consider such analyses. Sources for comparable licenses include corporate Form 10-Ks and other public filings, license aggregators such as RoyaltySource®, and simple Internet search engine results from specific queries. All of the analyses used to ensure proper comparability as detailed in our discussion of Factor 1 apply here as well and should be used.

Again, although not explicitly required under *Georgia-Pacific* Factor 2, experts often consider valuations performed or commissioned by the licensee for patents similar to those at issue in the particular litigation. These valuations for accounting and financial decision-making purposes are the same as those discussed in *Georgia-Pacific* Factor 1.<sup>23</sup>

**[c]—SEP and RAND Considerations**

While the court did not specifically address this factor in the Microsoft Order, based on Factor 1, it is reasonable to assume that rates paid by the licensee for comparable SEP and/or RAND patents would be most applicable (i.e., most comparable). By definition, royalty rates for non-SEP and non-RAND patents would reflect different market dynamics than rates for SEP and RAND patents. While non-SEP and non-RAND patents may be relevant, the expert should discuss their applicability to a SEP and/or RAND reasonable royalty analysis.

**[3]—Factor 3: The Nature and Scope of the License, as Exclusive or Nonexclusive, or as Restricted or Nonrestricted in Terms of Territory or with Respect to Whom the Manufactured Product May Be Sold**

Many of the considerations under *Georgia-Pacific* Factor 3 are based on legal requirements. For example, because patent infringement is a unilateral action, the license typically anticipated in a *Georgia-Pacific* analysis is a nonexclusive license.<sup>24</sup> In addition, the territory of the license contemplated under the *Georgia-Pacific* analysis is dictated

<sup>23</sup> See § 6.06[1] *supra*.

<sup>24</sup> Frank, O'Brien, and Wagner, "Patent Infringement Damages," in Weil, Frank, Hughes, and Wagner, eds., *Litigation Services Handbook: The Role of the Financial Expert*, p. 22.22 (4th ed. 2007).

by the jurisdiction of the court. If only United States patents are at issue, then the rights granted would include the right to make, use, or sell infringing products in the United States. In addition, unless unique facts dictate otherwise, the licensee would be free to sell its product to any willing customer.

The information gathered in this analysis is often used to ensure that the license contemplated in the litigation can be properly measured against the list of comparable licenses. The same can be said for Factors 4, 5, and 7 below.

The court did not discuss this factor in the Microsoft Order. Based on the court's discussion of Factor 4, it is reasonable to assume that the hypothetical RAND license would not be an exclusive or otherwise restrictive license.

**[4]—Factor 4: The Licensor's Established Policy and Marketing Program to Maintain Its Patent Monopoly by Not Licensing Others to Use the Invention or by Granting Licenses Under Special Conditions Designed to Preserve That Monopoly**

The purpose of Factor 4 is to establish whether the patent owner freely licenses its technology or whether past behavior indicates that the patent owner guards its legal monopoly by not licensing, whether or not the patent owner actually practices the patented technology itself. There are several analyses and sources of information an expert can explore to determine the licensor's actual or expected patent licensing policy. One simple analysis is to determine whether the patent owner competes in any way, shape, or form with the alleged infringer. If it does not, and the patent owner is more akin to an inventor and the infringer more akin to a promoter of the product, then it would be illogical to assume that the patent owner would be expected to have a policy of not licensing its patents. It would be economically irrational for a patent owner with no market for its intellectual property to prevent another from putting that intellectual property into the marketplace.

To the extent that the licensor does have the ability and desire to put its patented technology into the marketplace, several other analyses and information sources can determine if the licensor would likely have entered into a license with the alleged infringer and, ultimately, under what terms.

First, the licensing policies of the patent owner should be requested and reviewed to determine if the patent owner has a written patent licensing policy. If it has, this information will lead to an initial answer to Factor 4. Second, the expert should review all of the patent owner's licenses. If the patent owner has freely licensed the patent(s) at issue or other similar patents, this would suggest that it did not have

such a nonlicensing policy or, if it did have such a policy, that it did not have a history of abiding by its nonlicensing policy. A review of all licensing correspondence with potential licensees would provide similar insights as the license review. Last, to the extent licenses have been entered into or licensing offers have been made to others, a review of any special conditions of those licenses or offers should be undertaken.

If the licensor typically provides licenses only in certain noncompetitive fields of use, or territories, or puts certain time or volume restrictions on its licensees, then this would suggest the patent owner does have a policy of protecting its patent monopoly. Many believe that this entire exercise is necessary because, all else being equal, if the patent owner typically refuses to grant licenses to its patent(s) at issue, the royalty rate demanded for such a license would be higher. Some courts have agreed that this will increase the royalty rate.<sup>25</sup> However, even a company's historic, real-world policy of not licensing does not prevail over the hypothetical negotiation licensing assumption that is part of a *Georgia-Pacific* analysis.<sup>26</sup> In addition, the purpose of the *Georgia-Pacific* analysis is to determine the reasonable royalty that would encourage the parties to enter into a transaction. Whether the patent owner typically licenses its patents—or fails to do so—the economic theory underlying *Georgia-Pacific* is to determine the income stream related to the licensing of products sold by the infringer, i.e., the sale of such products that the patent holder would otherwise not have made.

In the RAND context, “this factor is inapplicable . . . because the licensor has made a commitment to license on RAND terms and may no longer maintain a patent monopoly by not licensing to others.” A RAND commitment “requires the SEP owner to grant licenses on RAND terms to *all implementers*<sup>27</sup> of the standard.”<sup>28</sup> It is important to note that not all SEP owners have necessarily agreed to RAND licensing terms.

**[5]—Factor 5: The Commercial Relationship Between the Licensor and Licensee, Such as, Whether They Are Competitors in the Same Territory in the Same Line of Business; or Whether They Are Inventor and Promoter**

The competitive positions of the licensor and licensee are often determined early in an expert's analysis, especially when determining

<sup>25</sup> *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978).

<sup>26</sup> See Factor 15 discussion at § 6.06[15] *infra*.

<sup>27</sup> The implementer is the prospective licensee and accused infringer.

<sup>28</sup> Microsoft Order, paragraph 101, emphasis added



whether lost profits are warranted. As Factor 5's description suggests, there are various levels at which the parties may or may not compete. It is possible that the parties consider themselves competitors at the most abstract level, but in fact, do not compete for sales of the relevant products. Conversely, the parties may only compete on the sales of the particular products at issue in the litigation. Establishing the nature of competition is important in determining the bargaining positions of the two companies.

Sources of information for such a competitive analysis include the parties' marketing or strategic plans, their advertising and promotional materials, company Form 10-K SEC filings at Part II Items 7 and 7A,<sup>29</sup> third-party market reports, and internal company documents that show distribution channels, sales force structure, geographic territories and customer lists. Each of these documents can contain information related to market players, competing products, market share information and customer segmentation.

Factor 5 does not apply in the RAND context. "[H]aving committed to license on RAND terms, the patentee no longer may discriminate against its competitors in terms of licensing agreements." "[T]he patent owner is obligated to license all implementers on reasonable terms."<sup>30</sup>

**[6]—Factor 6: The Effect of Selling the Patented Specialty in Promoting Sales of Other Products of the Licensee; the Existing Value of the Invention to the Licensor as a Generator of Sales of His Nonpatented Items; and the Extent of Such Derivative or Convoyed Sales**

**[a]—Convoyed Sales**

Factor 6 calls for an expert to determine if sales of the products that incorporate the patented technology lead to sales of other products that do not incorporate the patented technology. The only sales that can be considered convoyed are those that result from the sale of a product that uses the patented technology.<sup>31</sup> The relationship cannot exist in reverse, i.e., if nonpatented products drive sales of the products that

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<sup>29</sup> These sections relate to Forward Looking Statements and Qualitative and Quantitative Disclosure about Market Risk.

<sup>30</sup> Microsoft Order, paragraph 102.

<sup>31</sup> See discussion in § 6.04[1] *supra*. The entire market value rule, originally defined as related to lost profits damages, is equally applicable to the determination of a reasonable royalty. See *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1336-1339 (Fed. Cir. 2009).

See also, e.g.:

*First Circuit: Bose Corp. v. JBL, Inc. and Infinity Systems Corp.*, 112 F. Supp.2d 138, 165 (D. Mass. 2000), *aff'd* 274 F.3d 1354, 61 U.S.P.Q.2d (BNA) 1216 (Fed. Cir. 2001).

use the patented technology, such sales of nonpatented items would not be considered convoyed.<sup>32</sup>

Although the relevant convoyed sales are those of the infringer, analyses of both the patent owner's and infringer's sales of nonpatented products and their link to sales of products that use the patented technology can help prove the causal relationship that is an element of convoyed sales. Most important, one must prove a *causal* link to establish convoyed sales. If a customer buys two products from the same company, e.g., a product that incorporates the teachings of the patent(s) at issue and a product that does not, these purchases do not necessarily establish a link between those two sales. For the purposes of lost profits, the Federal Circuit defines convoyed sales as nonpatented products that, if sold together with the patented product, were "considered to be components of a single assembly or parts of a complete machine, or they together constituted a functional unit."<sup>33</sup>

The mere presence of additional sales does establish convoyed sales. An analysis showing a consistent trend over periods of time where the same infringing products are being sold with the same nonpatented items is more persuasive to demonstrate convoyed sales. In addition, a review of marketing information, both internal and external, where the infringer is acknowledging or promoting such a link between the sale of patented and nonpatented products would be another means of substantiating convoyed sales. Other sources to consider would include (1) information from corporate or industry experts who have analyzed these trends over time, (2) detailed invoice information used to create statistical analyses, (3) customer interviews or feedback, and (4) sales personnel logs. In conducting discovery, it is important to obtain information about sales, profits, and market information related not only to the infringing products, but also to the sale of non-infringing products.

The effect of convoyed sales on determining a reasonable royalty is likely to manifest itself in *either* (1) the royalty rate that is applied to the infringing product revenues or (2) the royalty base to which the royalty rate is applied. Although application varies from case to case, note that it is unlikely that *both* the royalty rate and royalty base will increase due to the same convoyed sales, since applying both would likely lead to double counting of the value of convoyed sales. That

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*Second Circuit:* Fonar Corporation v. General Electric Co., 902 F. Supp. 330 (E.D.N.Y. 1995), *aff'd in part and rev'd in part* 107 F.3d 1543, 1552-1553 (Fed. Cir.), *cert. denied* 522 U.S. 908 (1997).

<sup>32</sup> See discussion in § 6.04[1] *supra*. The entire market value rule, originally defined as related to lost profits damages, is equally applicable to the determination of a reasonable royalty. See, for example, Fonar Corporation v. General Electric Co., *id.*, and Bose Corp. v. JBL, Inc. and Infinity Systems Corp., *id.*

<sup>33</sup> Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538, 1550 (Fed. Cir. 1995) (*en banc*).

said, courts have varied on the appropriate adjustment to be made to the reasonable royalty calculation in light of convoyed sales, with at least one decision suggesting adjustments be made to *both* the royalty rate and the royalty base.<sup>34</sup>

#### [b]—Royalty Base

The topic of determining the appropriate royalty base has been the subject of continuing Federal Circuit decision-making.<sup>34.1</sup> In its recent *Ericsson, Inc. v. D-Link Systems, Inc.*<sup>34.2</sup> decision, the Federal Circuit helps to ease what some have seen as conflicting guidance on this topic. In its 2009 decision in *Lucent Technologies, Inc. v. Gateway, Inc.*, the Federal Circuit stated:

“There is nothing inherently wrong with using the market value of the entire product, especially when there is no established market value for the infringing component or feature, so long as the multiplier accounts for the proportion of the base represented by the infringing component or feature.”<sup>35</sup>

However, in its 2011 decision in *Uniloc USA, Inc. v. Microsoft Corp.*, the Federal Circuit stated:

“The Supreme Court and this court’s precedents *do not allow* consideration of the entire market value of accused products for minor patent improvements simply by asserting a low enough royalty rate.”<sup>36</sup>

In its 2014 decision in *Ericsson, Inc. v. D-Link Systems, Inc.*, the Federal Circuit clarified and provided additional insight into the court’s view of acceptable reasonable royalty methodologies. The court stated that:

“where multi-component products are involved, the governing rule is that the ultimate combination of royalty base and royalty rate must reflect the value attributable to the infringing features of the product, and no more.”<sup>36.1</sup>

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<sup>34</sup> *Interactive Pictures Corp. v. Infinite Pictures, Inc.*, 274 F.3d 1371, 61 U.S.P.Q.2d (BNA) 1152 (Fed. Cir. 2001), *cert. denied* 537 U.S. 1046 (2002).

<sup>34.1</sup> For a summary of Federal Circuit decision-making in this area, see McDuff and Skinner, “Reasonable Royalties: All About That Base . . . or That Rate,” Law360 (Dec. 18, 2014), available at <http://www.law360.com/articles/603598> (last visited February 16, 2015).

<sup>34.2</sup> *Ericsson, Inc. v. D-Link Systems, Inc.*, 773 F.3d 1201 (Fed. Cir. 2014).

<sup>35</sup> *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed. Cir. 2009).

<sup>36</sup> *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1320 (Fed. Cir. 2011). (Emphasis added.)

<sup>36.1</sup> *Ericsson, Inc. v. D-Link Systems, Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014).

The Federal Circuit’s concern is that using the entire market value of a multi-component product tends to mislead the jury as to the importance of the patented feature(s).

“It is not that an appropriate apportioned royalty award could never be fashioned by starting with the entire market value of a multi-component product-by, for instance, dramatically reducing the royalty rate to be applied in those cases—it is that reliance on the entire market value might mislead the jury, who may be less equipped to understand the extent to which the royalty rate would need to do the work in such instances.”<sup>36.2</sup>

Using “too high” a royalty base carries the risk of misleading a jury into overcompensating the patent holder by making the plaintiff’s “proffered damages amount appear modest by comparison” to the total value of the multi-component product.<sup>36.3</sup> Experts and counsel should pay close attention to this issue when establishing a rate and ensure they develop proper support if they plan to use the entire market value rule in their reasonable royalty analysis.

One approach to applying the effect of convoyed sales or the use of the entire market value rule is to analyze how the marketplace has chosen to handle this phenomenon in past licensing. Companies often choose a royalty base that includes nonpatented products both because this simplifies payment tracking and to acknowledge the presence of convoyed sales. If it is routine in an industry to add convoyed sales or the entire accused product(s)—even when there are minor patented improvements at issue—to the royalty base, then this practice can also be considered in the reasonable royalty analysis at hand.

#### [c]—SEP and RAND Considerations

Factor 6 is relevant to a reasonable royalty in the SEP and RAND context. As the court in its Microsoft Order states, “it is important to focus the analysis of [this factor] on the value of the patented technology *apart from the value associated with incorporation of the patented technology into the standard*.”<sup>37</sup> The court further stated:

“[B]ecause there is substantial value in the agreed standard itself apart from any contribution of the patented technology to the standard . . . a reasonable royalty would not take into account the value to the licensee created by the existence of the standard

<sup>36.2</sup> *Id.*, 773 F.3d at 1227.

<sup>36.3</sup> *Id.* (quoting *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1320 (Fed. Cir. 2011)).

<sup>37</sup> Microsoft Order, paragraph 103, emphasis added.

itself, but would instead consider the contribution of the patent to the technical capabilities of the standard and also the contribution of those relevant technological capabilities to the implementer and the implementer's products."<sup>38</sup>

An analysis of whether the patented feature(s) drove sales of the product (independent of the standard) or could not have been replaced with a non-infringing feature that achieved the same technical result could be instructive in determining what apportionment of value should occur.

**[7]—Factor 7: The Duration of the Patent and the Term of the License**

Factor 7 is a two-part proposition. First, it requires the expert to determine the duration of the patent. Current United States Patent and Trademark Office regulations state that a patent's duration is generally:

" . . . 20 years from the date on which the application for the patent was filed in the United States or, if the application contains a specific reference to an earlier filed application under 35 U.S.C. 120, 121 or 365(c), from the date [when] the earliest such application was filed, and subject to the payment of maintenance fees as provided by law."<sup>39</sup>

Determining the beginning of the term of the license then depends on the date of the hypothetical negotiation required under *Georgia-Pacific*. The court in *Wang Laboratories v. Toshiba Corp.* determined this date to be the date of first infringement of the patent.<sup>40</sup>

The second part of the proposition is to determine when the license term ends. The end of the term of the license depends on the date on which it is established that infringement has ceased. Historically, this has typically been based on (1) when the patent expires; (2) the date of trial when an injunction is assumed to be issued; or (3) the date at which the licensee has shown its ability to have implemented a non-infringing design, or "design around," and ceased using the patent(s). The impact of the term of the license on the hypothetical negotiation and resulting reasonable royalty can be quite varied. Some experts posit that if there exists a short term for the hypothetical

<sup>38</sup> Microsoft Order, paragraph 104.

<sup>39</sup> See U.S. Patent and Trademark Office, "Nature of Patent and Patent Rights," *General Information Concerning Patents*, available online at [http://www.uspto.gov/patents/resources/general\\_info\\_concerning\\_patents.jsp](http://www.uspto.gov/patents/resources/general_info_concerning_patents.jsp) (last visited March 19, 2014).

<sup>40</sup> *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1993).

license, the reasonable royalty would be less because licensees would typically benefit less from a shorter license. However, this is far too simplistic a rule of thumb.

That is, saying that a shorter license term will result in a lower royalty is meaningless unless there is a basis of comparison. The appropriate question is therefore, “What will the royalty be lower than?” If the expert is relying on five market licenses as the basis for a royalty in the hypothetical negotiation, then the term of those licenses provides a basis for comparison. It may be that the term of the license in the hypothetical is four years and the term of the comparable licenses is five years. Unless an important event is known to have occurred in the market in that first year of comparable licenses that does not exist in the hypothetical license, it is possible there would be no change in the royalty rate due to the short term of the license. Conversely, a license term of nineteen years in a hypothetical license would not necessarily imply a higher royalty in the market with rapid technological development and a short-term technological value. In such a market, a licensee may only have an expectation of use for five years even though comparable licenses have terms well beyond the life of the technology.

As is true for every *Georgia-Pacific* factor, a detailed review of the market and technological landscape affecting the use of the patent(s) at issue is required in order to assess whether any one factor would lead to an adjustment of the royalty or royalty base.

The court in its Microsoft Order states that “[t]he analysis concerning Factor 7 is greatly simplified in the context of a dispute over a reasonable royalty for a RAND-committed patent because the term of the license would equate to the duration of the patent.” The court adds that, “[i]n many circumstances, this factor will have little influence on what constitutes a reasonable royalty under the RAND commitment.”<sup>41</sup>

**[8]—Factor 8: The Established Profitability of the Product  
Made Under the Patent; Its Commercial Success; and  
Its Current Popularity**

Factor 8 requires separate analyses and conclusions regarding one theme: How much money has been made by those who have used the teachings of the patent(s) in their products? Although that is the overall theme of Factor 8, there are three subsidiary questions to be addressed:

**[a]—Made Under the Patent**

How does one determine what products have been “made under the patent”? This portion of Factor 8 appears to be focused on what

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<sup>41</sup> Microsoft Order, paragraph 105.

profits are made selling products that use the teachings of the patent. Rather than focusing just on the profits made selling the subject product, however, an expert must focus on the “made under the patent” requirement. This suggests that the expert must determine what profits are related to the adoption of the teaching of the patent(s) at issue as distinguished from the profits that would have been made without the use of the patented technology. In order to isolate the profits attributable to the use of the patent(s) at issue, an expert could examine whether the patent owner or infringer makes and sells similar products, i.e., products that do not use the patented technology. If such an analysis is possible, the profits from the products that use the patented technology can be compared with products that do not. This would allow for the quantification called for in Factor 8. However, experts must consider any other factors that may affect the difference in profit profitability. For example, (1) are the products marketed to different customer groups, (2) is the patented feature the only feature difference between the products, and (3) did the patented product replace the non-patented product, thus requiring time-based considerations? All of these factors, and others, could affect profitability differentials, and it is therefore incumbent on the expert to perform the necessary analyses to segregate these potentially competing effects.

An analysis of the unit sales of both companies (patent owner and alleged infringer), and their revenue and cost data (including convoyed sales, if appropriate), can be performed to determine the profits made using the patent. Such an analysis can also be used to determine if the parties earn different levels of profits from the use of the patent(s). Some experts rely heavily on profitability information in setting a hypothetical royalty and, although this information can be instructive, undue reliance on what profits are expected to be made or have been made by the infringer can lead to erroneous conclusions. For example, suppose an infringer has made little or no profit from the sale of a product that is alleged to infringe, does this mean there should be no royalty? No. As stated earlier, the law provides for “damages adequate to compensate for the infringement *but in no event* less than a reasonable royalty.”<sup>42</sup>

The infringer should not be able to benefit from its inferior business performance at the expense of the patent holder by obtaining a lower than market value royalty in the hypothetical negotiation. In contrast, if the alleged infringer has a superior cost model to that of the patent owner or other licensees, and therefore a higher profitability on the allegedly infringing products, the value of the patent to those products does not necessarily increase because the infringer has made more money on those units.

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<sup>42</sup> 35 U.S.C. § 284. (Emphasis added.)

**[b]—Established Profitability**

How does one measure or determine “established profitability” of the product made under the patent? This is both an instructive and challenging requirement. At the date of the hypothetical negotiation previously defined as “on or just before the date of first infringement,” the alleged infringer has made *no* established profits from the sales of products made under the patent. Therefore, the only possible measure of established profitability would be from the sale of such products made by the patent owner or, if the information is available, the patent owner’s other licensees.

Although the patent owner’s profitability is relevant, experts certainly want to know the profitability of the product marketed by the alleged infringer. Therefore, documents must be available at the date of the hypothetical that show the expected profitability of the products made under the patent(s) may be useful to an expert. The probative value of expectations documents can vary widely. For example, if such expectations documents were created by a start-up company with little experience selling the subject product(s) and whose target audience were companies that provide capital (i.e., angel or venture capitalists), then it might be the case that the profits detailed in these documents would tend toward overstatement because people who are seeking money are not well-served if their expectations for business prospects are diminished. One way to measure the accuracy of these types of projections is to compare them to both the patent owners’ own experience and to the market experience as a whole gleaned through industry studies and reports that are available at the time of the hypothetical.

If, however, the expectation documents were prepared by an established business with a long history of accurately forecasting prior generations of this type of product sales, these expectation documents may be less susceptible to unrealistic outcomes and, therefore, would be less likely to require adjustment. Again, some further study of these expectations, including comparing forecasts for the same or similar products made before the hypothetical negotiation to actual outcomes, if possible, is another useful data point of confidence in the accuracy of the forecasts.

Although the use of historical accuracy analyses and reconciliation with third-party market studies are useful sources by which to gauge the accuracy of the expectations documents that exist at or before the date of the hypothetical, no source of information is better for comparison than the actual sales and profits that occurred after the date of the hypothetical negotiation. Even though the infringer’s actual sales were undoubtedly not known at the date of the hypothetical negotiation, they are almost always available to the expert in patent litigation. Use of the actual sales and profit information of the infringer



will show the inaccuracies embedded in the underlying assumptions of the expectations documents. This ability to see the future can assist the expert in understanding whether the expectations had any ties to reality, and also allow that expert to adjust mistakes that would have been made in setting a royalty or royalty base from use of the expectations documents only. In a decision of the Federal Circuit Court, *Fromson v. Western Litho Plate and Supply Company and Bemis Company, Inc.*, the court recognized the utility of using actual sales information in enhancing the accuracy of the damages analysis.<sup>43</sup> In its decision, the court stated:

“As had been said by the Supreme Court: ‘At times the only evidence available may be that supplied by testimony of experts as to the state of the art, the character of the improvement, and the probable increase of efficiency or savings of expense. . . . This will generally be the case if the trial follows quickly after the issue of the patent. But a different situation is presented if years have gone by before the evidence is offered. Experience is then available to correct uncertain prophecy. Here is a book of wisdom that courts may not neglect. We find no rule of law that sets a clasp upon its pages, and forbids us to look within. . . .’”<sup>44</sup>

In the same opinion, the Federal Circuit realized that in order to not abandon the statutory standard of damages “adequate to compensate” for the infringement, a court is often required “to look to events and facts that occurred thereafter and that could not have been known to or predicted by the hypothesized negotiators.”<sup>45</sup>

Use of data subsequent to the date of the hypothetical negotiation is commonly referred to as the “Book of Wisdom,” and allows the expert to look forward from the date of the hypothetical negotiation and review actual results of the infringer, thus providing the “wisdom” to overcome an uncertain prophecy that may have existed at the hypothetical negotiation date.

Although the use of actual sales via the “Book of Wisdom” can correct the uncertain prophecy of expectations documents, where no such expectations documents exist, actual sales can also be used as support for the infringer’s anticipated profitability.

As noted throughout this discussion, sources for measuring the established profitability of the product made under the patent include:

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<sup>43</sup> *Fromson v. Western Litho Plate and Supply Company and Bemis Company, Inc.*, 853 F.2d 1568 (Fed. Cir. 1988).

<sup>44</sup> *Id.*, 853 F.2d at 1575.

<sup>45</sup> *Id.* The Federal Circuit also reiterated its position to not exclude “evidence of subsequent events” in *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1257 (Fed. Cir. 2005).

(1) financial documents that detail both the expected revenues and profits made from the products that use the teachings of the patent(s);

(2) market reports and other third-party studies used to reconcile or supplement those expectations at the time of the hypothetical;

(3) internal and external product development and marketing documents that provide information as to the importance of the allegedly infringing technology to the overall profitability of the products; and

(4) financial and marketing information related to products that compete with the patented product(s) but do not use the patent(s) for purposes of determining the but-for profits of the patented products without the use of the patents.

#### [c]—Commercial Success and Current Popularity

Establishing the product's commercial success and current popularity also relies on the "Book of Wisdom" when the infringer's impact on this factor is measured. However, a consideration of the patent owner's experience leading up to the date of the hypothetical negotiation can assist in this analysis as well. Measures of success and profitability can be presented in (1) the form market share analysis (third-party market reports, internal customer surveys, etc.), (2) industry trade publications (articles on what is "hot" and what is driving sales in the market), and (3) current and prospective customer feedback (customer surveys, sales personnel logs, customer support logs, etc.). The patent owner's history of licensing the patented technology to others can also be a good indication of commercial success. The key difference in this subcategory of Factor 8 is that profitability is not necessarily a determinative issue. For example, a product can be a huge commercial success (large market share, high customer loyalty) in part because it is priced low and, consequently, is a low-profit product.

However, as with the profitability analysis, the expert must ensure that what he or she is measuring is the success of the *feature(s)* that are covered by the patent(s), not just the *product* generally. For example, Dell™ Computer sells billions of dollars in laptop computers every year. If there existed a particular patented feature that Dell™ supposedly used to its advantage in its laptop computers, what is it and how should it be measured for success and popularity? What about the billions of dollars in sales of those laptops? That is irrelevant unless an analysis of the market factors which led to those sales revealed that the sales would not have been made but-for the patented feature at issue or that sales of those laptops would have been less. In today's product market, offerings are often so feature-rich that significant effort must be spent to ensure that only the relevant features (i.e., the ones covered by the patents at issue) are being measured, not all of the features.

**[d]—SEP and RAND Considerations**

The court in its Microsoft Order treats Factors 6 and 8 together. As with Factor 6, this factor is relevant to a reasonable royalty in the SEP and RAND context. However the focus of analysis should be on the value of the patented technology rather than the value of the standard.<sup>46</sup>

**[9]—Factor 9: The Utility and Advantages of the Patent Property Over the Old Modes or Devices, if Any, That Had Been Used for Working Out Similar Results**

In many ways the conclusions reached in this factor are closely related with the discussion in Factor 8 above. The purpose of studying the utility and advantages of the patented property over the old modes is to enable the expert to segregate the features of the new technology and its effect so that the patent can be analyzed for its relative importance and impact on the market. By definition, a patentable invention must add something over the prior art and one of the first sources for determining the utility and advantages of the patent is the patent file itself. The patent, which presumptively covers the accused product, will explain the prior technology and its limitations as part of the explanation of how this newly patented invention overcomes those limitations. The patent file is often a valuable source of information for gaining an understanding about the new features of a particular product that the patent is adding and where or how those features manifest themselves in the product(s) (e.g., software or hardware).

If the patent owner has obtained a patent on a significant new technology feature, this new technology may be highlighted in advertising and marketing documents. The patent owner's marketed product features, patented and nonpatented, illustrates what product features the patent owner believes are significant to the marketplace at a point in time. Product brochures and user manuals are valuable sources of information when dealing with patented feature(s) that are highly technical or memorialized in a manner that is not easily apparent to the layperson. These documents may better highlight and show the importance of the patented feature(s). Other sources of information showcasing technology features include product upgrade announcements, customer surveys or focus group reports that delineate product features, product development plans, and commissioned market research.

Factor 9 relates to Factor 8 in an important manner. All the information gathered in Factor 8, both quantitative and qualitative, should

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<sup>46</sup> Microsoft Order, paragraphs 103-104.

be used to ensure that only the features taught by the patents are being measured for commercial success and profitability. For example, suppose a patent holder had a patent on a new lightweight long-lasting battery for use in laptops. An expert might review the patent and learn the history of prior laptop battery art, including that of nickel cadmium, nickel metal hydride, and lithium ion batteries. He could learn that each of these technologies was an advancement over the other batteries in terms of performance and, in some instances, weight. Suppose the new battery technology lasted twice as long and weighed half as much as a current lithium ion battery. With that understanding, the expert could then turn to the patent owner's and infringer's marketing and product information to see if those features were considered important enough to be emphasized to potential customers. Customer surveys could also be reviewed to determine if longer battery life and lower weight were of value to customers.

In some instances documents that attempt to measure the value a customer places on various features may also be available. After the expert analyzes documents such as customer surveys or user groups studies, this information could then be used when constructing the analyses in Factor 8 to ensure that the degree of success and amount of profit attributed to longer battery life and lower weight (and conveyed sales, if appropriate) is being measured rather than the value of the entire laptop or the success of laptops in general.

The court's modification of this factor in its Microsoft Order is noteworthy in its treatment of the hypothetical negotiation in a matter involving SEP patents under the RAND commitment. As mentioned above in discussing Factors 6 and 8, an analysis of a reasonable royalty should focus on the value of the patented technology and not on the value of it being part of a standard. The question is how to incorporate an analysis of other, non-infringing technology that may have existed prior to the adoption of the standard, but are later excluded, at the time of the hypothetical negotiation, due to the adoption of the standard.

The court states that it is "[t]hrough this factor, the parties to a hypothetical negotiation under a RAND commitment would consider *alternatives that could have been written into the standard instead of the patent technology*. The focus is on *the period before the standard was adopted and implemented*."<sup>47</sup> In other words, even though the hypothetical negotiation takes place at or just before first infringement, the analysis of non-infringing alternatives occurs prior to the adoption and implementation of the subject SEP patents under the RAND commitment.

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<sup>47</sup> Microsoft Order, paragraph 106. (Emphasis added.)

**[10]—Factor 10: The Nature of the Patented Invention; the Character of the Commercial Embodiment of It as Owned and Produced by the Licensor; and the Benefits to Those Who Have Used the Invention**

Much of the same source information listed in Factors 8 and 9 is applicable to the analyses called for in Factor 10. This factor requires the expert to understand not only the patented features, but how these features are brought to market and what value the users of the features derive. One of the most distinctive aspects of this factor is its focus on benefits to those who use the invention.

This focus on benefits shifts the analysis from the producer of the patented product to the customer of the patented product. This factor requires an understanding of how the end customer will put the features introduced by the patent to use. For example, if the patented features comprise a new apparatus and method for paper manufacturing, the expert may question whether the company that is making the patented product noted these features to its customers and, in turn, if the customers employed or enabled that feature.

Factor 10 analysis should also work toward an understanding of whether a new apparatus and method used in paper manufacturing would yield cost savings benefits, revenue increases, or both for the end customer, the paper manufacturer. If so, an analysis of the extent of that benefit is also appropriate to ascertain what end consumers would likely pay to continue to have access to this feature(s). Such an analysis would, again, provide information that can be used to determine the royalty that could be imposed on the sale of the patented products and what portion, if any, of that royalty obligation could be passed on to the end customer.

A by-product of this investigation may be a determination that the patent owner and infringer market to different customers or different market segments. If this is true, these different groups could also place dissimilar importance on the various features of the patented product. Such differences should be noted and properly considered in the hypothetical negotiation.

Sources of information to perform these studies include all of the sources listed in Factors 8 and 9 as well as market and customer information that details the value of the feature to the end consumer. Industry journals and surveys, market reports, and industry user groups are some sources for information regarding end user benefits of the patented features. Examples of such information would include an industry article stating that ABC Co.'s new paper sensors allow for higher-quality paper to be manufactured with lower-quality pulp. The article could also explain that ABC is therefore able to charge a higher price per unit while maintaining historical manufacturing costs, thereby increasing its profit margin.

In the SEP and RAND context, both this factor and Factor 11, “focus the hypothetical negotiation on the contribution of the patent to the technical capabilities of the standard and also the contribution of those relevant technical capabilities to the implementer and implementer’s products.” As with the analysis of other factors, “it is important to separate the patented technology from the value associated with incorporation of the patented technology into the standard.”<sup>48</sup>

However, evidence of the value of the patent to the patent owner and implementer is relevant to showing the contribution of the patent to capabilities of the standard and in showing the contribution of the standard to the implementer.<sup>49</sup>

**[11]—Factor 11: The Extent to Which the Infringer Has  
Made Use of the Invention and Any Evidence  
Probative of the Value of That Use**

Unlike Factors 8 through 10, Factor 11 focuses solely on the infringer. Although the earlier factors concentrate on determining the effect of the patented feature(s) on the marketplace and on the manufacturer of the patented product, Factor 11 is concerned only with the infringer’s actions. Because *Georgia-Pacific*’s goal is to establish a hypothetical negotiation where the parties are a willing buyer and a willing seller, it is important to understand both parties’ mindset as they enter the hypothetical negotiation. In a Factor 11 analysis, the expert focuses only on the infringer’s mindset and motivations; hence, in understanding how the infringer has made use of the invention, the expert must research the events that led to the infringer’s decision to make such use. Following is a list of issues for the expert to consider under the guise of (1) the extent to which the infringer made use of the invention and (2) any evidence probative of the value of that use:

**Question 1:**

Extent to which the infringer has made use of the invention.

Did the infringer make other unsuccessful attempts to launch a similar product(s) without the patented feature?

Evidence of probative value of that use.

Are there economically measurable sales, cost, and profit differences between the infringer’s less successful products and the infringing product that could provide guidance to an expert as to the portion of the profit of the infringing product that should be attributed to the patented feature?

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<sup>48</sup> Microsoft Order, paragraph 107.

<sup>49</sup> *Id.*

## Question 2:

Extent to which the infringer has made use of the invention.

Did the infringer explore several technological alternatives and choose the infringing alternative? If so, why did the infringer choose to use the invention? The infringing technology?

Evidence of probative value of that use.

Perhaps other technological alternatives would have cost more to develop, or would have had higher manufacturing costs, or could have resulted in a lower product price. Each of these scenarios may lead to an economic explanation of the decision-making and therefore provide key input into the infringer's bargaining position at the hypothetical negotiation.

## Question 3:

Extent to which the infringer has made use of the invention.

Did the infringer continue to use the patented technology up to the date of the trial, or did the infringer end its use earlier?

Evidence of probative value of that use.

If the use ended due to further technological advances or because the infringer implemented a non-infringing design, this may place a cap on the amount the infringer would be willing to pay for a license to the technology.

## Question 4:

Extent to which the infringer has made use of the invention.

Did the infringer implement the infringing design or method in the same manner as the patent owner, or did the infringer add significant internal development to the final product?

Evidence of probative value of that use.

Such information may show that other technology investments were necessary in order for the infringer to succeed in the market and that, therefore, these ongoing research and development or marketing costs should be considered during the hypothetical negotiation.

## Question 5:

Extent to which the infringer has made use of the invention.

Is the infringer adhering to an industry standard which sets the exact specifications for manufacturing, and is the infringing product based on such a standard?

Evidence of probative value of that use.

This may suggest that the infringer has little recourse but to use the patented technology and little ability to change the design independent of the standard.

There are many more questions and many other possible answers. Understanding the value proposition from the infringer's perspective is one of the focal points of a *Georgia-Pacific* analysis and any real world transaction.

Sources for the information that show the infringer's use of the invention and probative value, if any, from that use include: (1) all sources listed in Factors 8 through 10, (2) internal product development information, including prior generation technologies, (3) standards body specifications, and (4) internal guidelines used by the infringer to evaluate new and existing product designs or redesigns.<sup>50</sup>

Consideration of this factor in the SEP and RAND context is discussed above in Factor 10.<sup>50.1</sup>

**[12]—Factor 12: The Portion of the Profit of the Selling Price That May Be Customary in the Particular Business or in Comparable Businesses to Allow for the Use of the Invention or Analogous Inventions**

Factor 12 focuses on industry norms in determining a reasonable royalty rate.<sup>51</sup> Specifically, this factor refocuses the expert on the information contained in Factors 1 and 2.<sup>52</sup> If the patent owner has other licensees and if the other licensees' profit margins can be ascertained, then the royalty rates in those licenses can be contrasted against the profits of the infringer to determine if the rates in the other licenses would be agreed to by the infringer. Even if the infringer's profitability is dissimilar to that of the other licensees, the infringer may still be held responsible to pay a similar royalty if the infringer's product competes directly with the licensees' products. However, if, for example, the infringer's product is sold in a separate market where

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<sup>50</sup> Examples of standards bodies include JEDEC Solid State Technology Association (formerly, the Joint Electron Device Engineering Council) and the International Telecommunication Union Standardization Section or "ITU-T."

<sup>50.1</sup> See § 6.06[10] *supra*.

<sup>51</sup> A Texas federal district court trial court held that the plaintiff's expert could not testify about industry royalty rates in the medical field in general because they were not comparable to the medical products (trocars) at issue in the litigation. *Tyco Healthcare Group LP v. Applied Medical Resources Corp.*, CA No. 9:09-CV-176, Order on Motions *in Limine*, at p. 6 (E.D. Tex. Sept. 23, 2011) (citing *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292 (Fed. Cir. 2011), and *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed. Cir. 2009)).

<sup>52</sup> See §§ 6.05[3], 6.06[1], and 6.06[2] *supra*.



prices and profits are lower, a different royalty and therefore a different apportionment may be considered.

Whether the patented feature leads to price premiums in the market should also be considered when determining the proper apportionment of profit. Some economic literature suggests a splitting of the premium.<sup>53</sup> However, certain commentators suggest subjecting the incremental profit from the price premium to a *Georgia-Pacific* analysis to determine the appropriate apportionment.<sup>54</sup>

In the RAND context, “[t]his factor must be viewed through the lens of business practices involving RAND commitments.” Specifically, “licensing fees for non-RAND committed patents customary in a business industry cannot form the basis of comparison” for RAND committed patents.<sup>55</sup>

**[13]—Factor 13: The Portion of the Realizable Profit That Should Be Credited to the Invention as Distinguished from Nonpatented Elements, the Manufacturing Process, Business Risks, or Significant Features or Improvements Added by the Infringer**

**[a]—Assessing the Importance of the Patented Technology**

Although other *Georgia-Pacific* factors discuss the need to ascertain what portion of the profit should be associated with the patented technology, this Factor 13 is the first factor to acknowledge that a thorough analysis of the non-infringing contributions of the infringer to the product’s success should be performed. Although the patented feature may have contributed to the success of the product, this may be true for other factors as well. Other potentially valuable market drivers include: (1) advertising, (2) trademarks, (3) customer lists, and (4) other patented technology necessary to make product sales. Ensuring that an appropriate portion of the infringing product’s profits are attributed to these factors prevents the erroneous conclusion that all the profits are attributable to the patent(s). In markets where products are feature-rich and brand awareness is important, it is necessary to properly isolate the economic value of the infringing features from all of the non-infringing contributors to success, even though this can be challenging.

When a reasonable royalty is the appropriate measure of patent damages, damages are often calculated by multiplying a royalty rate

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<sup>53</sup> Goldscheider, Jarosz, and Mulhern, “Use of the 25 Per Cent Rule in Valuing IP,” 37 *Les Nouvelles* 123 (Dec. 2002).

<sup>54</sup> Based upon the authors’ experience.

<sup>55</sup> Microsoft Order, paragraph 108.

(expressed as a percent) and a royalty base (expressed as product revenues). Federal Circuit decisions have impacted not only the determination of a reasonable royalty rate, but also the permissibility of a royalty base tied to the entire value of the product that incorporates the patented feature.

**[b]—Choosing the Proper Royalty Base**

The entire market value (“EMV”) rule “permits recovery of damages based on the value of a patentee’s entire apparatus containing several features when the patent-related feature is the ‘*basis for customer demand*’”<sup>56</sup> and/or the substantial value of the product sold.<sup>57</sup> The courts have increasingly focused attention on the appropriate royalty base to use in calculating reasonable royalty damages and have restricted the use of the EMV rule.<sup>58</sup>

In the real world, royalties on patented product features are often expressed as a percent of total product revenues, even when that feature is not the basis for product demand. Total product sales are usually easily determined and relatively straightforward to audit. A modest royalty rate has jury appeal as being conservative, but applied to an inflated royalty base can still yield damages of tens of millions of dollars or more. Such was the case in *Lucent Technologies, Inc. v. Gateway, Inc.*<sup>59</sup>

In this case, the Federal Circuit court vacated the damage award and ordered a new trial on damages. The court stated that

“[t]here is nothing inherently wrong with using the market value for the entire product, especially when there is no established market value for the infringing component or feature, so long as the multiplier accounts for the proportion of the base represented by the infringing component or feature.”<sup>60</sup>

<sup>56</sup> *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1549 (Fed. Cir. 1995). (Emphasis added.) See also *State Industries, Inc. v. Mor-Flo Industries, Inc.* 883 F.2d 1573, 1580 (Fed. Cir. 1989).

<sup>57</sup> *Fonar Corp. v. General Electric Co.*, 107 F.3d 1543, 1549, 1553 (Fed. Cir. 1997). In addition to the patented element or feature being the basis for customer demand, the unpatented and patented components must be part of a single assembly or analogous to a single functioning unit. See, e.g.:

*Ninth Circuit: Velo-Bind, Inc. v. Minnesota Mining & Manufacturing Co.*, 647 F.2d 965, 211 U.S.P.Q. (BNA) 926 (9th Cir.), *cert. denied* 454 U.S. 1093 (1981).

*Federal Circuit: Rite-Hite Corp. v. Kelley Co., Inc.*, N. 56 *supra*, 56 F.3d at 1550; *Kalman v. Berlyn Corp.*, 914 F.2d 1473, 1485, 16 U.S.P.Q.2d (BNA) 1093, 1102 (Fed. Cir. 1990).

<sup>58</sup> The EMV rule is applicable to both reasonable royalty and lost profit damages. See § 6.08[4] *infra*.

<sup>59</sup> *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed. Cir. 2009).

<sup>60</sup> *Id.*, 580 F.3d at 1339.

In other words, a royalty base using the entire value of the product could be appropriate as long as the royalty rate reflects an accurate apportioning of value between the patent feature and other non-patented product features. This decision seemed to recognize that product revenues are often used as the royalty base for patented features. This is allowed as long as the royalty rate is proportionate to the relative importance of the patented feature.

Shortly thereafter, the Federal Circuit court seemed to narrow use of the EMV rule in its *Uniloc USA, Inc. v. Microsoft Corp.* decision.<sup>61</sup> In the *Uniloc* case, the District Court ruled that a new damages trial was appropriate because Uniloc should not have shown a comparison of the entire value of the software with the claimed royalty for the patented product activation feature to the jury.<sup>62</sup>

On appeal, the Federal Circuit court sided with the district court on the improper use of the EMV rule. In addition, the appeals court seemed to further limit use of the EMV rule by stating that the entire market value of a product cannot be used as a royalty base if the patented feature does not drive consumer demand for the product. It indicated that both Supreme Court and Federal Circuit precedents do not allow the use of the entire market value of accused products as a royalty base for minor patent improvements simply by asserting a low enough royalty rate.<sup>63</sup> This seems to be at odds with the Federal Circuit's 2009 opinion in *Lucent v. Gateway*.<sup>64</sup> In addition, the appeals court reasoned in *Uniloc* that if the entire market value of a product is not the appropriate royalty base, it makes no sense to use it even as a reasonableness check.<sup>65</sup>

An example of how the *Uniloc* decision is being interpreted by the district courts can be seen in *Mirror Worlds LLC v. Apple, Inc.*<sup>66</sup> In *Mirror Worlds*, the judge cited the *Uniloc* decision regarding the EMV rule as the basis to exclude the plaintiff's damages opinion which was relied upon by the jury. The court found no proof that the disputed patented feature drove demand for Apple hardware or software, and the court would not allow a reduced royalty rate to be applied to the EMV royalty base to apportion value to the patented feature.<sup>67</sup>

Obtaining persuasive support in discovery regarding the importance of the patented feature to customer demand is of primary importance in determining the applicability of the EMV rule. In order to understand

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<sup>61</sup> *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1317 (Fed. Cir. 2011).

<sup>62</sup> *Id.*, 632 F.3d at 1311-1312.

<sup>63</sup> *Id.*, 632 F.3d at 1320.

<sup>64</sup> See N. 59 *supra*.

<sup>65</sup> *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1321 (Fed. Cir. 2011).

<sup>66</sup> *Mirror Worlds, LLC v. Apple, Inc.*, 784 F. Supp.2d 703 (E.D. Tex. 2011).

<sup>67</sup> *Id.*, 784 F. Supp.2d at 727.

the relative importance of the infringing feature, begin by creating an inventory listing of all the elements of a particular product that may drive sales. Sources for this list would include product brochures and marketing documents, and should encompass both important features and branding. In addition, product catalogs (including product Web sites), product packaging, price lists, and comparable competitor information help contrast the product that incorporates the infringing feature from products that do not. SEC filings, such as Form 10-K reports, often provide details of both products and competition. Other sources for determining the relative importance of both infringing and non-infringing elements of the product are: (1) internal business and marketing plans, (2) market feedback reports, (3) strategic product plans, (4) third-party market analyses and surveys, and (5) studies and white papers issued by relevant industry associations and groups.

Analyses of sales data showing market penetration rates before and after the use of the patented feature (for both patent holder and infringer) help apportion the realizable profit of the infringer. Particular statistical regression analyses can also assist in properly delineating the profit attributable to the subject patents. Analyses such as hedonic regression are sometimes used by experts in order to ascertain the effect of the infringing feature on the sales price or profit of the infringing product and thus derive a royalty rate.

However, proving the importance of the patented feature may fall short of supporting the position that the patent feature forms the *sole* basis for customer demand.<sup>68</sup> In fact, it is reasonable to expect that many products do not have one separate feature that forms the sole basis for consumer demand. Many features may combine to form the basis for customer demand. It is unclear whether the Federal Circuit would allow the EMV rule to be applied in instances where multiple features combine to create product demand.

#### [c]—SEP and RAND Considerations

The court in its Microsoft Order states, “in the RAND context, it is critical to consider the contribution of the patented technology apart from the value of the patent as the result of its incorporation into the standard, the latter of which would improperly reward the SEP owner for the value of the standard itself. Rewarding the SEP owner with any of the value of the standard itself would constitute hold-up value and

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<sup>68</sup> In *I.P. Innovation LLC v. Red Hat, Inc.*, 705 F. Supp.2d. 687, 690 (E.D. Tex. 2010), the court rejected the notion that an online user forum touting the patented feature as essential was sufficient to show that the patent feature formed the basis for customer demand. Similarly, in *Mirror Worlds, LLC v. Apple, Inc.*, N. 66 *supra*, the court rejected consumer surveys as being sufficient evidence that the patented feature drove customer demand. *Id.*, 784 F. Supp.2d at 726-727.

be contrary to the purpose behind the RAND commitment.”<sup>69</sup> This applies to SEP patents, whether or not a RAND commitment exists.

**[14]—Factor 14: The Opinion Testimony of Qualified Experts**

Many experts either leave Factor 14 blank in their analysis or simply state that the testimony of qualified experts is being put forth in the expert report. More specifically, however, Factor 14 allows for the explicit acknowledgment of other experts’ opinions on which the damages expert conducting the negotiation has relied. Specialized experts include technical experts, market experts, product experts, marketing experts, and the like. These experts may be in the employ of the parties to the litigation or may be independent experts retained to provide specific information on key aspects of the analysis.

The court in its Microsoft Order does not comment on Factor 14 in the RAND context. Whether the patent-at-issue is a SEP with RAND commitments would not impact this factor.

**[15]—Factor 15: The Amount That a Licensor and Licensee Would Have Agreed Upon (at the Time the Infringement Began) if Both Had Been Reasonably and Voluntarily Trying to Reach an Agreement<sup>70</sup>**

Factor 15 is the culminating consideration in the *Georgia-Pacific* factors analysis. This factor requires the expert to actually perform the hypothetical negotiation and set an amount to be paid by the licensee to the licensor. There is no prescribed process for holding this hypothetical negotiation, a point noted in the *Georgia-Pacific* court decision.

**[a]—Hypothetical Negotiation**

Even though there appears to be no prescribed process for holding the hypothetical negotiation, one parameter—the date of hypothetical negotiation—has been established by the courts. The hypothetical negotiation date can have a profound impact on the royalty rate an infringer would pay. If the date of hypothetical negotiation was established as preceding the launch of an infringing product and the infringer had adequate time to make modifications to avoid infringement, then one would expect that a negotiated royalty rate,

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<sup>69</sup> Microsoft Order, paragraph 109.

<sup>70</sup> That is, the amount that “a prudent licensee . . . would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.” See *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120, 166 U.S.P.Q. (BNA) 235 (S.D.N.Y. 1970).

*ceteris paribus*, would be lower. If the negotiation date occurred after a product launch, then the royalty rate should be higher—if for no other reason than the inconvenience of having to make post-launch modifications.

The date of the hypothetical negotiation is the later of the date when the patent issues or the date when the infringement first begins. This hypothetical date remains the same, even in instances where there are certain statutory bars to obtaining damages, such as a patent holder's failure to mark a product or where laches is asserted.<sup>71</sup>

There is often a multiplicity of interpenetrating factors that affect the amount of a reasonable royalty. However, there is no formula by which these factors can be rated precisely in the order of their relative importance or by which their economic significance can be automatically translated into their pecuniary equivalent.

Thus, there has been much debate over setting the proper bargaining positions of the parties at the negotiating table to determine (1) which information can or should be included and (2) the proper outcome of such a negotiation. Experts, on behalf of the litigating parties, as well as judges have participated in this debate.

Experts often point to the differences between hypothetical negotiations and real world negotiations. These differences are often raised to assist the trier of fact in understanding adjustments that the expert may make to certain economic information such as comparable licenses and standard industry profit apportionment rates. It is significant that experts note these differences to convey the change in negotiation strengths and positions between the parties in the hypothetical negotiation versus the real world. These differences are expressed in Table 6-1 which follows.<sup>72</sup>

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<sup>71</sup> See, e.g., *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1257-1258, 75 U.S.P.Q.2d (BNA) 1705 (Fed. Cir. 2005); *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1554, 35 U.S.P.Q.2d (BNA) 1065 (Fed. Cir. 1995); *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858, 869-870, 26 U.S.P.Q.2d (BNA) 1767 (Fed. Cir. 1993).

The hypothetical negotiation date established by the courts was recently challenged by Microsoft in a case involving standards patents, requiring licensing under Reasonable, and Non-Discriminatory ("RAND") terms. Microsoft's expert opined that the proper hypothetical negotiation date should be prior to when patents are adopted as standards. This is necessary to address two key risks presented by licensing standards essential patents: (1) the improper capture of "hold-up" value, allowing a patent holder's ability to leverage its monopoly because it is part of the standard; and (2) the problem of royalty stacking. Motorola filed a *Daubert* challenge against Microsoft's expert and the court allowed Microsoft's expert to testify. See *Microsoft Corp. v. Motorola, Inc.*, Case No. C10-1823JLR, Order (W.D. Wash. Oct. 22, 2012).

<sup>72</sup> The authors acknowledge their initial reliance on a table published by Troxel and Kerr in *Calculating Intellectual Property Damages*, pp. 213-214 (2006).

**Table 6-1**  
**Differences Between Hypothetical and Real Life Negotiations**

The Hypothetical Negotiation	Real Life Licensing Negotiation
The patent is acknowledged by both parties to be valid.	A prospective licensee often asserts that a patent is invalid and the prospective licensor may be uncertain about being able to prove validity in court.
The licensee is assumed to infringe the patent.	The prospective licensee will claim that its activity does not infringe the patent, and the patent owner may not be certain about being able to prove infringement.
The patent owner and licensee are presumed to be willing to license on reasonable terms.	The patent owner may be unwilling to license and the licensee may be unwilling to take a license at a price other than at a nuisance value or some fraction of litigation costs.
Both parties are assumed to know all the relevant facts.	Both parties are usually not fully informed of all the relevant facts and may be shockingly wrong on certain key facts and assumptions.
Information from subsequent events (i.e., "the Book of Wisdom") may be used to supplement historical knowledge.	Neither party can predict the future.
Litigation costs are not considered.	Litigation costs are almost always a major consideration.

Assumptions imposed by the courts on experts change the bargaining perspectives of the parties which could substantially change the bargaining position of the parties over what it would have been in actual licensing negotiations. Hypothetical world negotiations do not necessarily determine that one party's position is stronger than the other. Rather, the defining difference of hypothetical world negotiation and real world negotiation is the greater amount of verifiable information available to the decision-makers and the lack of animosity between the parties in the hypothetical world. In the hypothetical world, the expert has the opportunity to sort through the typical unsupported posturing of the parties that occurs in the

real world and consider actual information from the parties and the market in its totality.

Anyone who has ever been involved in a real world patent transaction can attest that unsupported posturing is not uncommon. The extent to which such posturing prevails is often determined by how much information can be gleaned by either party when comprehensive sharing does not occur and how much time skilled parties can spend drawing conclusions from this data.

In addition, experts often note that in the real world certain patent holders would never license a particular patent to a particular licensee. However, the exercise called for in *Georgia-Pacific* is meant to find the economic value that would allow the parties to put aside their personal differences and enter into a license that benefits both parties economically. These issues were specifically addressed by the court in *Georgia-Pacific* when it stated:

“[The analysis] . . . does contemplate a marshaling of all of the pertinent facts which, like cards dealt face up, are for all to see. And it then contemplates the supposititious meaning of buyer and seller, who are able, on the bases of the over-all round-up of information, to become ‘willing’ buyers and sellers, at a royalty which will enable the buyer to make and sell at a reasonable profit.”<sup>73</sup>

The “cards dealt face up” element of the hypothetical negotiation produces a more complete set of information than is typically available in the real world and, therefore, allows for a more accurate result. Whether this more complete set of information will benefit one party over another will depend on what was thought to be true in the real world versus what was determined to be accurate and helpful when the expert had the opportunity to consider everything in the hypothetical negotiation.

#### **[b]—SEP and RAND Considerations**

In the SEP and RAND context, the parties would consider both the SEP nature of the patent(s) and the commitment to license under reasonable and non-discriminatory terms and would avoid any royalty premium because the patent was part of a standard. The parties would avoid the problem of royalty stacking by considering other royalties paid by the implementer.<sup>74</sup>

<sup>73</sup> *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1122, 166 U.S.P.Q. (BNA) 235 (S.D.N.Y. 1970). (Footnote omitted.)

<sup>74</sup> Microsoft Order, paragraph 110.



Regarding hold-up, the court states that “the parties would examine a reasonable royalty rate under the RAND commitment based on the contribution of the patented technology to capabilities of the standard, and in turn, the contribution of those capabilities of the standard to the implementer and the implementer’s products.” “[A] patent that is extremely important and central to a standard would reasonably command a higher royalty rate than a less important patent.” However, even if a SEP contributes greatly to a portion of a standard, “if that portion is not used by the implementer, the specific SEP may have little value to the implementer.”<sup>75</sup> There is no reason why SEP patents with no RAND commitments should not also focus on the contribution of the patented capabilities to the standard.

Regarding concerns of royalty stacking, the courts states that “a RAND negotiation would not be conducted in a vacuum” and that the parties would “consider other SEP holders and the royalty rate that each of these patent holders might seek from the implementer based [on] the importance of these other patents to the standard and to the implementer’s products.”<sup>76</sup> Royalties paid to other SEPs for the same standard should also be useful benchmarks in determining the reasonableness of the royalty sought for the SEP-at-issue.

While much of the Microsoft Order focuses on preventing abuses by the patent holder, the court does recognize that “the RAND commitment must guarantee that holders of valuable intellectual property will receive reasonable royalties on that property.”<sup>77</sup>

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<sup>75</sup> Microsoft Order, paragraph 111.

<sup>76</sup> Microsoft Order, paragraph 112.

<sup>77</sup> Microsoft Order, paragraph 113.

§ 6.07 Beyond the Use of the *Georgia-Pacific* Factors

[1]—Possible Data Sources

The quantity of possible data sources can be vast. Unfortunately, beginning such an analysis can be tricky because one may not know with certainty where all the information resides and in what format. The expert must consider that information may exist in many forms and many locations and must ensure that each lead is investigated in order to obtain the most complete set of data. The following is a list of possible sources for necessary information<sup>1</sup>:

- (1) Background
  - (a) Company organization
    - (i) Organizational charts
    - (ii) Documents showing company affiliations
    - (iii) Documents showing ownership structure
  - (b) Accounting and finance manuals (to gain an understanding of profit centers, cost allocation, inventory valuation, etc.), chart of accounts
    - (i) Explanation of profits centers, cost allocation, inventory valuation etc.
    - (ii) Chart of accounts
    - (iii) Identification and explanation of inter-company allocations included in expenses (if applicable)
  - (c) Product brochures/literature related to the patented product
    - (i) User guides
    - (ii) Manuals
    - (iii) Product update announcements
    - (iv) Technical notes
    - (v) Read-only files
  - (d) Advertising or promotional materials or documents (including plans) detailing the patented attributes
  - (e) Document storage and retention policies and procedures
- (2) Licensing information
  - (a) All existing licenses granted by licensor for patented or related technology

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<sup>1</sup> Although the specific names and formats of relevant documents may vary for any particular matter, this is a good starting point. In addition, in attempting to gather this type of information, one would expect to find most other forms of documents which may be unique to the parties or which are known under another name or format than are listed here.

(b) All licensing correspondence with potential licensees involving the patented technology, including licensing negotiation documents regarding unsigned license offers

(c) License agreements where the alleged infringer is the licensee

(d) Any license agreements between the parties

(e) Patent owner documentation regarding its policy related to the protection and licensing of its intellectual property

(f) Other existing licensing agreements in the industry that might prove an industry standard or a range

(g) IRC Section 482 studies (internal technology transfers), including information related to IRC Section 6662 penalties

(h) Industry specifications from standard-setting bodies (i.e., Bellcore, ITU, etc.)

(i) Published royalty rates for the industry and/or similar products

(j) Special conditions under which prior licenses may have been granted (in litigation, under threat of litigation, etc.)

(3) Financial information

(a) Annual reports (parent company and divisional)

(b) SEC Form 10-Ks (for publicly traded companies, 10-K SEC filings, Part II, Items 7 and 7A)

(c) Other SEC filings such as initial public offering-related documents

(d) Monthly unit sales, revenue, and cost data for the patented product and any claimed conveyed sales (expense reports, monthly product profit and loss statements showing account detail)

(e) Warranty expense by product (supporting documents and explanation of calculation), customer complaint logs or information

(f) Standard cost build-ups by product, variance reports

(g) Price lists, information on discounting policies and pricing policies

(h) Sales call reports

(i) Sales data showing market penetration before and after using patented process or selling patented product (for both patent holder and infringer) through marketing plans, marketing reports, strategic plans, third-party market surveys, etc.

(j) Capital budget (appropriation) requests showing projected profitability and internal hurdle rates (required rates of return for investment in facilities) dated on or about the date of infringement

(k) Divisional and/or product profitability projections

(l) IRC Section 482 studies (internal technology transfers), including information related to IRC Section 6662 penalties

- (4) Market information
  - (a) Analysts' reports
  - (b) Marketing plans and/or strategic plans identifying competitors and products
  - (c) Customer surveys (existing or performed for litigation) showing likelihood of existing customers switching to patent holder's product if certain product features or competition is eliminated<sup>1.1</sup>
  - (d) Documents showing customer reliance on patented feature(s)
  - (e) Third-party market surveys, including those by industry groups, identifying market players, products, and market share
  - (f) Online customer/consumer reviews of the patented product or product containing the patented feature
- (5) Forecasts and projections
  - (a) Budgets or projections showing expected sales volumes and revenue
  - (b) Budgets or forecasts showing increasing levels of production and corresponding levels of capital equipment required, projections, planning documents
  - (c) Divisional and/or product profitability projections
  - (d) Capital appropriation requests relating to equipment or plant expansion, on or about the date of alleged infringement (providing details of capacity and cost of expansion)
  - (e) Special reports such as break-even analyses that relate to cost and/or profitability
- (6) Capacity information
  - (a) Backlog reports, documents showing supply shortages, quality problems, etc.
  - (b) Documents showing distribution network, type of sales force (direct, distributors, etc.), geographic territories, customers
  - (c) Production reports, capacity utilization reports
  - (d) Sales by type of distribution used

#### **[2]—Design Arounds**

The ability to “design around” the teachings of the patent(s) at issue has significant implications in several areas of the litigation.

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<sup>1.1</sup> In *Apple, Inc. and NeXT Software Inc. v. Motorola, Inc. and Motorola Mobility, Inc.*, 2012 WL 1959560 (N.D. Ill. May 22, 2012), *dismissed with prejudice* 869 F. Supp.2d 901,104 U.S.P.Q.2d (BNA) 1611 (N.D. Ill. June 22, 2012). Judge Posner attempts to reset the bar for the allowability of consumer surveys.

One such implication of the ability to design around the patents is that the infringer may cease infringing and may also continue to sell its underlying products in a non-infringing form. This obviates the threat of an injunction in the hypothetical negotiation and ends the period of damages at the date of the design around implementation.

The second potential effect of a design around in a patent infringement matter depends on when that design around could have been implemented. If the expert can show that the infringer had the ability to implement a design around the patent(s) at issue at the time of the hypothetical negotiation, this information could have a significant impact on the negotiation. The infringer would very likely pay no more for a license to the patent(s) at issue than the infringer's next best non-infringing alternative. A design around that is available as of the date of first infringement would be such an alternative. Although other court decisions have addressed the effect of implementing non-infringing designs, the Federal Circuit's decision in *Grain Processing Corp. v. American Maize-Products Co.* is perhaps the most important.<sup>2</sup> This decision states that:

"a fair and accurate reconstruction of the 'but-for' market also must take into account, where relevant, alternative actions the infringer foreseeably would have undertaken had he not infringed. Without the infringing product, a rational would-be infringer is likely to offer an acceptable noninfringing alternative, if available, to compete with the patent owner rather than leave the market altogether. The competitor in the 'but for' marketplace is hardly likely to surrender its complete market share when faced with a patent, if it can compete in some other lawful manner. Moreover, only by comparing the patented invention to its next-best available alternative(s)—regardless of whether the alternative(s) were actually produced and sold during the infringement—can the court discern the market value of the patent owner's exclusive right, and therefore his expected profit or reward, had the infringer's activities not prevented him from taking full economic advantage of this right."<sup>3</sup>

The actual facts of that case supported the claim that the infringer could have implemented a non-infringing design as of the date of first infringement. Based on this conclusion, the court limited the royalty rate to the difference in cost to manufacture the infringing product from the cost to manufacture the non-infringing product.

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<sup>2</sup> *Grain Processing Corp. v. American Maize-Products Co.*, 185 F.3d 1341, 51 U.S.P.Q.2d (BNA) 1556 (Fed. Cir. 1999).

<sup>3</sup> *Id.*, 185 F.3d at 1350-1351.

Although manufacturing cost differences are one measure of the damage cap a design around may impose on a reasonable royalty, other considerations include (1) the capital investment or research and development costs to create such an alternative, (2) the time it would take to implement the non-infringing design, and (3) the potential lost revenues and profits associated with the absence of the product from the market or the sale of an inferior product in the market until the more acceptable design around is available. Other important considerations for the expert to consider relate to the acceptability of the non-infringing design around in the marketplace. Any proposed non-infringing design around should produce an economically viable product that captures the benefits of the patented technology and/or results in market indifference between the patented technology and the design around.

Information that would support an analysis of the alleged infringer's ability and cost to design around the patent would include (1) product planning documents prior to the date of first infringement, (2) alternative product designs created in the normal course of business, and (3) financial and budget information related to these alternative designs. This financial information should include research and development costs, manufacturing costs, and other operating costs associated with the sale of the alternative products. In addition, experts may gather other non-infringing product designs used by third-party competitors, as well as commission studies by patent and other technical experts, of the types of designs that would have been known and available to a person skilled in the art at the date of first infringement. In addition, any evidence of any of the potential design arounds having been made, such as prototypes, would be helpful to such an analysis.

However, a recent Federal District court decision may expand the scope of what is required to prove the ability to create, the cost of developing, and consumers' willingness to accept, an acceptable non-infringing design around. In this recent decision, Judge Posner seemed to add an additional consideration in determining whether an expert's testimony should be allowed.<sup>3.1</sup> Judge Posner, quoting *Kumho Tire Co., Ltd. v. Carmichael*, states,

"An important test for deciding whether a problem with proposed expert testimony is disabling, or merely a weakness, is whether the expert 'employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.'"<sup>3.2</sup>

<sup>3.1</sup> Apple, Inc. and NeXT Software Inc. v. Motorola, Inc. and Motorola Mobility, Inc., 2012 WL 1959560 (N.D. Ill. May 22, 2012).

<sup>3.2</sup> *Id.*, 2012 WL 1959560, at \*2 (Posner, J.) (citing *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999)).

Further, Judge Posner adds:

“if the expert, though he could have used in the lawsuit the same approach that he would have been required by the applicable professional standards to use to deal with an identical issue outside the litigation context, failed to do so—then (again with possible exceptions inapplicable to this case) his proposed testimony should be barred.”<sup>3.3</sup>

Judge Posner states that “one must consider how the expert would proceed in a parallel non-litigation context,”<sup>3.4</sup> and posits that, in the non-litigation context, a defendant’s damages expert would not have relied on a technical expert hired by the defense who relied in part on the employees of the defendant itself to determine the feasibility and cost of a design around. In addition, Judge Posner offers the opinion that in a non-litigation context an expert would not rely on conversations with technical experts or client employees to determine market acceptance of this change. Rather, Judge Posner suggests, if such an expert were asked by the defendant to opine on this issue, the expert would necessarily rely on personnel and information that are not in the possession of the client. If, in the judge’s opinion, the expert would have used different sources, retained outside technical experts, or conducted consumer surveys (whether or not those are part of the record) as part of a real-world consulting engagement, but did not do so in the litigation, then the expert’s opinion should be excluded.<sup>3.5</sup>

Taken in isolation, this ruling would suggest that damages experts in patent infringement matters may have to commission technical analyses from outside subject matter experts and consumer survey experts who have no connection to the matter at hand. If the decision is upheld and other courts adopt a similar approach, then this could add additional areas of information-gathering to every patent infringement matter where the issue of design around was important. As a result, counsel and experts would need to work to identify such design arounds as early in the litigation process as possible so that such studies and surveys can be planned and executed before the filing of the expert damages report.<sup>3.6</sup>

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<sup>3.3</sup> *Id.* (*Apple, Inc. and NeXT Software Inc. v. Motorola, Inc. and Motorola Mobility, Inc.*).

<sup>3.4</sup> *Id.*, 2012 WL 1959560, at \*7.

<sup>3.5</sup> *Id.*, 2012 WL 1959560, at \*1, \*3, \*6, \*9-\*10, and \*12.

<sup>3.6</sup> Judge Posner also fails to discuss the timing of when the damages expert would hire these outside experts, since the technical and damages experts are dependent upon the judge’s ruling in *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 34 U.S.P.Q.2d 1321 (Fed. Cir. 1995) (*en banc*) (“*Markman I*”), *aff’d* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), in order to begin any analysis of non-infringing alternatives and design arounds.

Judge Posner does not discuss any of the challenges that a litigant or its expert might face in adopting this standard of practice to every matter, including that in many instances, the details necessary to determine design arounds require both confidential information from the defendant and the plaintiff. Typically, such confidential information may not be shared with parties that are not under a protective order in the litigation, forcing counsel to then hire outside expert as part of the litigation. This result appears to run counter to one of Judge Posner's other requirements, i.e., that the outside expert not be hired in the context of the litigation.

In addition, Judge Posner did not discuss in the opinion how a judge would determine exactly how an expert would have executed a real-world consulting engagement. For example, Judge Posner faults one of the damage experts for relying on client information,<sup>3.7</sup> opining that an outside consultant would not be retained for a non-litigation expert assignment and then rely on internal data that a company already possesses.

It is the experience of the authors that there are many real-world instances where outside consultants do rely on internal client data, which would seem to comply with Judge Posner's "real-world" requirement. In addition, in Judge Posner's decision there is no discussion of the possibility that experts may apply many different approaches in completing non-litigation context consulting engagements and, therefore, each expert would then bring that individual approach to the litigation context.<sup>3.8</sup>

Design-around alternatives might be limited when dealing with SEP patents. However, this does not mean that an analysis of non-infringing alternatives should be ignored. Even when non-infringing alternatives are not part of the standard, if these alternatives provide the same benefits as the patented technology, then an analysis of the non-infringing technology may be useful in evaluating the benefits of the SEP patent. As discussed earlier, the value of SEP patents should be determined separately from the value associated with being part of a standard.<sup>3.9</sup>

### [3]—Established Royalty Rate and *Panduit* Kicker

Another interesting issue which extends beyond the use of the *Georgia-Pacific* factors analysis arises when an established rate is

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<sup>3.7</sup> Apple, Inc. and NeXT Software Inc. v. Motorola, Inc. and Motorola Mobility, Inc., 2012 WL 1959560, at \*3 (N.D. Ill. May 22, 2012).

<sup>3.8</sup> The decision has been appealed by both parties to the Federal Circuit Court of Appeals. The outcome of the appeal will be of considerable interest, as will the actions of other courts that must decide whether to adopt Judge Posner's additional test.

<sup>3.9</sup> See § 6.06, *supra*.



created by the patent owner through arm's length licensing. The question then becomes, "Should the alleged infringer get the same deal as those companies that entered into the license without causing the patent owner to bear the risk associated with establishing validity and infringement of the patent(s)?" Both courts and experts have historically disagreed on this topic, with some arguing that allowing the infringer (after litigation) to pay the same as other licensees would create a situation for the infringer of "heads-I-win, tails-you-lose"<sup>4</sup> whereby the infringer benefits by not taking a license because it pays no more than the market rate, delays payment by not having taken a license in the normal course of business, and imposes a heavy burden on the patent owner to extract payment (through litigation). Others argue that imposing some kind of penalty on infringers for their failure to negotiate a license violates the spirit of the willing buyer/willing seller scenario of *Georgia-Pacific*, and therefore results in a royalty that is not reasonable. In addition, critics also point out that there exist other mechanisms to compensate the patent owner for its pain (i.e., the award of attorney's fees, willfulness penalties, etc.). Both camps typically refer to this penalty as the "Panduit Kicker," alluding to the often-quoted decision in *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*,<sup>5</sup> which is relevant:

"The setting of a reasonable royalty after infringement cannot be treated, as it was here, as the equivalent of ordinary royalty negotiations among truly 'willing' patent owners and licensees. That view would constitute a pretense that the infringement never happened. It would also make an election to infringe a handy means for competitors to impose a 'compulsory license' policy upon every patent owner."<sup>6</sup>

(Text continued on p. 6-57)

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<sup>4</sup> *Troxel Manufacturing Co. v. Schwinn Bicycle Co.*, 465 F.2d 1253, 1257, 175 U.S.P.Q. (BNA) 65, 68 (6th Cir. 1972).

<sup>5</sup> *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152 (6th Cir. 1978).

<sup>6</sup> *Id.*, 575 F.2d at 1158.



Except for the limited risk that the patent owner, over years of litigation, might meet the heavy burden of proving the four elements required for recovery of lost profits, the infringer would have nothing to lose—and everything to gain—if it could count on paying only the normal, routine royalty that non-infringers have paid.<sup>7</sup>

A similar theme was expressed by the court in *Fromson v. Western Litho Plate and Supply Co.*:

“Forced to erect a hypothetical, it is easy to forget a basic reality—a license is fundamentally an agreement by the patent owner not to sue the licensee. In a normal negotiation, the potential licensee has three basic choices: forego all use of the invention; pay an agreed royalty; infringe the patent and risk litigation. The methodology presumes that the licensee has made the second choice, when in fact it made the third.”<sup>8</sup>

With these decisions in hand, experts sought reasonable royalty rates that impose a *Panduit* Kicker on the infringer in the form of higher royalty rates. Although some courts have allowed this penalty, others have not. In *Micro Chemical, Inc. v. Lextron, Inc.*,<sup>9</sup> the plaintiff sought to justify a reasonable royalty rate that exceeded the defendant’s profits by arguing that the reasonable royalty rate included an unspecified penalty or enhancement component that was purportedly allowed by *Panduit*. The *Micro* court expressly rejected this methodology, citing the Federal Circuit’s denunciation of “*Panduit* Kickers” and other attempts to get enhanced damages outside the statutory scheme for enhanced damages found in 35 U.S.C. Section 284.<sup>10</sup>

In addition, in *Technology Licensing Corp. v. Gennum Corp.*,<sup>11</sup> TLC argued that its expert’s reports were based on sufficient facts and data to support its theory that Gennum’s manufacture and sale of infringing chips had enabled further infringement by manufacturers

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<sup>7</sup> *Id.*

<sup>8</sup> *Fromson v. Western Litho Plate and Supply Co.*, 853 F.2d 1568, 7 U.S.P.Q.2d (BNA) 1606 (Fed. Cir. 1988). Although the *Fromson* decision suggests the need to reconcile the fact that the infringer did not willingly negotiate a license, but must take a license in the hypothetical, the court does acknowledge that it can cure this inequity by awarding treble damages for willfulness and attorney’s fees.

<sup>9</sup> *Micro Chemical, Inc. v. Lextron, Inc.*, 161 F. Supp.2d 1187, 1209 (D. Colo. 2001), *rev’d in part on other grounds, vacated in part on other grounds* 318 F.3d 1119 (Fed. Cir. 2003) (reversed trial court’s lost profits findings).

<sup>10</sup> *Id.*, 161 F. Supp.2d at 1209 (citing *Mahurkar v. C. R. Bard, Inc.*, 79 F.3d 1572, 1580-1581 (Fed. Cir. 1996)).

<sup>11</sup> *Technology Licensing Corp. v. Gennum Corp.*, 2004 WL 1274391, 2004 U.S. Dist. LEXIS 10604 (N.D. Cal. March 26, 2004).

whose use of the infringing chips dramatically increased the value of their products. TLC contended that it was relying on a reasonable royalty damages theory. The court determined that TLC's expert could testify as to his calculations and opinions regarding a royalty rate which might have been negotiated, but that Federal Circuit law did not sanction the use of a multiplier as employed by the expert to determine adequate compensation for infringement.<sup>12</sup>

How, then, does an expert reconcile these apparently contrary views of the use of a *Panduit* Kicker? One school of thought is to measure both the risk of the patent owner and the risk differences between the licenses that were entered into willingly and those that were arrived at through litigation. To the extent that royalties charged to willing licensees are not perfectly uniform, an expert could attempt to ascertain if more restrictive terms or higher fees have been imposed on licensees that drifted closer to litigation than those licenses that were achieved with little effort. Such analysis could yield a metric by which to increase damages of the infringer in litigation. This addition to the royalty could be proffered separately from the established royalty rate, allowing the court to determine whether it is a reasonable addition to apply to the case.

Another possible analysis is to measure the efforts made by the patent owner's employees in dealing with the infringer during litigation. This would entail measuring both the out-of-pocket costs as well as the quantifiable opportunity costs that management spent pursuing litigation. To the extent that these costs are quantifiable, they may provide a basis for differentiating the reasonable royalty in the litigated matter from the established royalty rate. Again, because this analysis would add to the established rate, it could also be presented as such to the court, giving the court the freedom to apply this calculation or choose another remedy.

The key theme here is the ability to accurately disaggregate the "reasonable royalty" under *Georgia-Pacific* from the royalty which includes a *Panduit* Kicker if an expert wishes to include such a penalty. This will ensure that any court (whether or not it believes in a *Panduit* Kicker) can choose the appropriate royalty without the risk of overstating damages.

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<sup>12</sup> The court found that the plaintiff's expert had introduced analytical gaps by applying a multiplier to a royalty rate that was based on purely fictional circumstances. Significantly, the court also found that the expert used a factually improper hypothetical negotiation (a hypothetical situation which might have existed between TLC and a third party and was not based on a hypothetical negotiation between TLC and Gennum), and multiplier numbers that the expert conceded were "purely judgmental" and lacked any legal or factual foundation.

#### [4]—Rules of Thumb

In our discussion of the *Georgia-Pacific* analysis, we have listed many analyses and information sources, some complex and some more straightforward, which can be studied and applied to determine a reasonable royalty. However, in addition to these analyses, and at times in substitution for these analyses, some experts previously relied on certain “Rules of Thumb” in calculating a royalty rate. Rules of Thumb are convenient mathematical approaches to determine a reasonable royalty in a patent infringement matter. Perhaps the most famous of these Rules of Thumb for determining a royalty rate is the 25% Rule of Thumb originally suggested by Robert Goldscheider.<sup>13</sup>

Under the 25% Rule of Thumb, the economic benefit from the licensee’s (infringer’s) use of the subject intellectual property is allocated between the licensor (patent holder) and licensee. This approach involves a belief that, in general, licensors and licensees in non-litigated technology licenses tend to share in the benefits of the technology in a fixed proportion (most commonly thought to be 25%, but as discussed below, it can be within a range of values) regardless of the type of technology involved, the product markets covered, or the scope of the patents.

This has resulted in what has been called the 25% Rule of Thumb, which would apportion 25% of the operating profits from the infringing technology to the patent holder/licensor and 75% to the defendant/licensee. This 25% Rule of Thumb was sometimes used as a starting point in a hypothetical negotiation.<sup>14</sup>

Over time, several variations proposing different percentage splits have been proposed. Various rules-of-thumb percentage splits include: 25% to 33% (applied to profits or sometimes to cost savings); 5% to 50% (of profits or cost savings); and 10% (applied to capitalized costs).<sup>15</sup>

Historically, the 25% Rule of Thumb has most often been used when there is no licensing history for the patent technology, if there is no information on comparable licenses, or as a reasonableness

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<sup>13</sup> See: Finnegan and Goldscheider, *The Law and Business of Licensing* (rev. ed. 1980); Goldscheider, *Technology Management Handbook* (1984). The basis for the 25% Rule as stated by Goldscheider is restated and updated in a co-authored article: Goldscheider, Jarosz, and Mulhern, “Use of the 25 Per Cent Rule in Valuing IP,” 37 *Les Nouvelles* 123 (Dec. 2002).

<sup>14</sup> See Goldscheider, Jarosz, and Mulhern, “Use of the 25% Rule in Valuing Intellectual Property,” pp. 418-426 in Smith and Parr, eds., *Intellectual Property Valuation, Exploitation, and Infringement Damages* (2005).

<sup>15</sup> Troxel and Kerr, *Assets and Finances: Calculating Intellectual Property Damages*, p. 282 (2010).

check on a reasonable royalty derived using another approach. The 25% Rule of Thumb can yield spurious results when applied to companies with low or negative net margins, possibly greatly underestimating the value of the intellectual property by using an infringer's poor business performance to the detriment of the patent owner, or when applied to a product where the patented feature does not form the basis for consumer demand for the product.

In response to these perceived deficiencies, the Federal Circuit eliminated the use of the 25% Rule of Thumb in *Uniloc USA, Inc. v. Microsoft Corp.*<sup>16</sup> by holding as follows:

"This court now holds as a matter of Federal Circuit law that the 25 percent rule of thumb is a fundamentally flawed tool for determining a baseline royalty rate in a hypothetical negotiation. Evidence relying on the 25 percent rule of thumb is thus inadmissible under *Daubert* and the Federal Rules of Evidence, because it fails to tie a reasonable royalty base to the facts of the case at issue."<sup>17</sup>

Although the Federal Circuit has not weighed in specifically on the 5%, 50%, or 10% rules, one would have to assume that the conclusion it reached in *Uniloc* would apply equally to any "rule of thumb."

The *Uniloc* decision is significant because the patentee bears the burden of proving damages. This burden requires that the patentee sufficiently tie expert testimony to the facts of the case. If the patentee fails to do this, then the testimony must be excluded.<sup>18</sup> Using a rule of thumb now fails in this regard because the Federal Circuit considers using the 25% Rule to derive a base rate is beginning from

"a fundamentally flawed premise and adjusting it based on legitimate considerations specific to the facts of the case [such as through the application of the *Georgia-Pacific* factors] nevertheless results in a fundamentally flawed conclusion."<sup>19</sup>

Lower courts have immediately applied the *Uniloc* decision. For example, a federal magistrate in Marshall, Texas, citing *Uniloc*, vacated a \$139 million jury award for Versata Software against SAP, where the plaintiff's expert used the 25% Rule.<sup>20</sup> The *Uniloc* decision is likely to

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<sup>16</sup> *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292 (Fed. Cir. 2011).

<sup>17</sup> *Id.*, 632 F.3d at 1315.

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*, 632 F.3d at 1317.

<sup>20</sup> Li, "Uniloc Decision Helps SAP Void \$139 Million Patent Verdict," *The American Lawyer* (Jan. 13, 2011), available at <http://www.law.com/jsp/cc/PubArticle>

impact many more pending cases where experts have submitted damage estimates relying in whole or in part on the 25% Rule.

Even though the 25% Rule is used in real-world patent licensing negotiations, use of this rule was determined by the Federal Circuit never to have provided the analytical rigor required for a determination of a reasonable royalty. The 25% Rule was occasionally used in litigation to fill a void where comparable licenses did not exist and where there was insufficient fact and financial data to determine a reasonable royalty rate. Having eliminated this tool, courts, including the Federal Circuit, may have to consider allowing all licensing information into the record—including bundled licenses containing the patented technology, settlement licenses, and information related to licensing negotiations.<sup>21</sup> Existing licenses need not be perfectly comparable to be useful. In fact, as valuation experts know, perfect comparables may never exist for any asset. However, having adequate relevant licensing information will allow the expert to make necessary adjustments to arrive at a supportable reasonable royalty.

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CC.jsp?id=1202477930995&Uniloc\_Decision\_Helps\_SAP\_Void\_\_Million\_Patent\_Verdict (last visited August 29, 2012).

<sup>21</sup> See, for example: *ResQNet.com, Inc. v. Lana, Inc.*, 594 F.3d 860 (Fed. Cir. 2010) (including the dissenting opinion of Circuit Judge Newman); *Lucent Technologies, Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed. Cir. 2009).

### § 6.08 Lost Profits

By statute, damages should be

“adequate to compensate for the infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.”<sup>1</sup>

Moreover,

“To recover lost profits damages, the patentee must show a reasonable probability that, ‘but for’ the infringement, it would have made the sales that were made by the infringer.”<sup>2</sup>

Proving this “reasonable probability” is guided by the framework of several key court decisions.

In 1978, in *Panduit Corp. v. Stahl Bros. Fibre Works*, the Sixth Circuit court laid out the basic framework for evaluating whether lost profits is the appropriate measure of damages.<sup>3</sup> Although this basic framework has been refined, what have become known as the four *Panduit* factors still form the basis for an analysis of the appropriateness of lost profits damages. According to the court:

“To obtain as damages the profits on sales he would have made absent the infringement, i.e., the sales made by the infringer, a patent owner must prove: (1) demand for the patented product,<sup>4</sup> (2) absence of acceptable noninfringing substitutes,<sup>5</sup> (3) his manufacturing and marketing capability to exploit the demand,<sup>6</sup> and (4) the amount of the profit he would have made.”<sup>7</sup>

#### [1]—Demand for the Patented Product

In order to prevail on a claim for lost profits damages, the patent holder must be able to show that there was demand for the product

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<sup>1</sup> 35 U.S.C. § 284.

<sup>2</sup> *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (*en banc*) (citing *State Industries, Inc. v. Mor-Flo Industries, Inc.*, 883 F.2d 1573, 1577 (Fed. Cir. 1989), *cert. denied* 493 U.S. 1022 (1990)).

<sup>3</sup> *Panduit Corp. v. Stahl Bros. Fibre Works*, 575 F.2d 1152 (6th Cir. 1978).

<sup>4</sup> See § 6.08[1] *infra*.

<sup>5</sup> See § 6.08[2] *infra*.

<sup>6</sup> See § 6.08[3] *infra*.

<sup>7</sup> *Panduit Corp. v. Stahl Bros. Fibre Works*, N. 3 *supra*, 575 F.2d at 1156. The amount of the profit that would have been made is discussed at § 6.08[4] *infra*.



using the patented technology during the period of infringement.<sup>8</sup> It is important to note that demand for the infringing product does not necessarily translate into demand for the patent holder's product.<sup>9</sup> The infringing product may have additional nonpatented features or be of different quality than the patent-holder's product.<sup>10</sup> A clear illustration of this point can be found in the *Polaroid Corp. v. Eastman Kodak Co.* decision.<sup>11</sup> The patents at issue in that case related to instant photography and were utilized in instant photography cameras by both Polaroid, which held the patents in question, and Kodak. During periods when Polaroid was profitable, had manufacturing capacity, and had marketing capabilities, it was able to recover lost profits damages based on Kodak's historic sales. However, the court found that Polaroid would not have made some of Kodak's sales in the Middle East because Kodak was able to expand its instant camera sales in that area by adding a built-in flash (two years before Polaroid added this feature). Polaroid's lack of a built-in flash was enough of a differentiating feature in the Middle Eastern market to result in an award to Polaroid of only 10% of Kodak's infringing sales.<sup>12</sup>

If the patent relates to one of many features of a product, the alleged infringer is likely to argue that the patented feature is not the basis for consumer demand. Hence, the patent holder should be prepared to produce additional support related to demand for the patented feature such as advertising and marketing materials where the patented feature is separately promoted.

It is important to note, however, that this *Panduit* factor does not "require any allocation of consumer demand among the various limitations recited in a patent claim." It only requires "a product that is 'covered by the patent in suit' or that 'directly competes with the infringing device.'"<sup>13</sup>

The best evidence of demand for the patented product is the patent holder's or alleged infringer's commercial success selling the product that incorporates the patented technology or feature(s). Commercial success can be shown through many different analyses including, but not limited to, sales volumes and revenue, as well as through relevant market share.

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<sup>8</sup> *Id.* (*Panduit Corp. v. Stahl Bros. Fibre Works*).

<sup>9</sup> *Polaroid Corp. v. Eastman Kodak Co.*, 1990 WL 324105, 16 U.S.P.Q.2d (BNA) 1481 (D. Mass. Oct. 12, 1990).

<sup>10</sup> *Id.*

<sup>11</sup> *Polaroid Corp. v. Eastman Kodak Co.*, N. 9 *supra*.

<sup>12</sup> *Id.*, 16 U.S.P.Q.2d at 1498-1500.

<sup>13</sup> *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1331 (Fed. Cir. 2009).

The importance of patented products or patented features may be publicly disclosed in a company's annual reports, SEC filings (such as a firm's Form 10-K), or disclosures related to an initial public offering. In seeking discovery on this issue of demand for the patented product or patented features, parties should request (or collect) historical sales data for both patented and infringing products. If the patent relates to a product feature, parties should determine whether a separate market exists for the feature or part which is listed separately on sales quotations or price lists. In addition, parties will want to review strategic plans, marketing plans, budgets, and forecasts to determine the level of actual and expected demand for the patented product or feature.

Many companies have their sales personnel generate sales call reports (often on a weekly or monthly basis). These reports provide a written narrative of sales representatives' field notes based on visits to actual and potential customers. These narratives often provide information on the importance of patented products or patented features (often compared with a competitor's offerings).

Third-party data sources may also show evidence of demand for the patented product or patented feature. In some industries and companies, security market analyst reports may discuss the importance of patented technology. In addition, there are many publicly available third-party market reports that provide useful information about various product markets and the importance of patented and unpatented technologies.

#### [2]—Absence of Acceptable Non-Infringing Substitutes

The second *Panduit* factor, the absence of acceptable non-infringing substitutes, requires the patent owner to demonstrate that no acceptable, non-infringing substitutes existed in the market during the period of infringement. This generally requires showing that purchases of the product resulted from the patented advantages or specific patented features. That is, the patented advantages form the basis for consumer demand. Analysis of this second *Panduit* factor focuses on interpreting (or defining) the relevant market.

Prior to *Grain Processing Corp. v. American Maize-Products Co.*,<sup>14</sup> the standard for an acceptable, non-infringing product was quite high. Generally, the non-infringing substitute had to be commercially available

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<sup>14</sup> *Grain Processing Corp. v. American Maize-Products Co.*, 185 F.3d 1341 (Fed. Cir. 1999).

and sold in commercial quantities.<sup>15</sup> *Grain Processing* answered the question of whether a non-infringing substitute had to actually be in the marketplace or merely available. In *Grain Processing*, the court framed the “but-for” analysis—what would the alleged infringer have done when confronted with the allegations of infringement (assuming the patent was not invalid and was infringed)? The court held that although the non-infringing process was not being used commercially at the time of infringement, all the know-how was available, and the infringer could have produced a non-infringing product.<sup>16</sup> The court, by allowing infringers to reconstruct the market as it would have developed absent the infringing product,<sup>17</sup> increased the hurdle for proving lost profits damages. However, it should be noted that the accused infringer still has to overcome the presumption that a non-infringing alternative was unavailable when it did not have a non-infringing product in the market.<sup>18</sup> As indicated previously,<sup>18.1</sup> a recent decision by Judge Posner suggests that courts may be placing additional onus on the creation of consumer surveys to address market acceptance of litigation-based design arounds. As part of this decision, Judge Posner suggested that specific consumer surveys used to test market acceptance and even the price a consumer would be willing to pay to keep the infringing feature should be created and executed by non-litigant experts to inform a damages expert of the likely adoption of this non-infringing alternative.<sup>18.2</sup>

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<sup>15</sup> See, e.g., *Kaufman Company, Inc. v. Lantech, Inc.*, 926 F.2d 1136 (Fed. Cir. 1991). To further illustrate, in *Minnesota Mining and Manufacturing Co. v. Johnson & Johnson Orthopedics, Inc.*, 976 F.2d 1559, 1578 (Fed. Cir. 1992), the court rejected JJO’s argument that a non-infringing substitute existed to 3M’s synthetic casting tape even though JJO had imported and sold small quantities of an alternative, non-infringing product. The court’s position was that Bayer (JJO’s proposed supplier) did not supply JJO with commercially acceptable casting tape until several weeks before the trial and that this was done only for purposes of the litigation. There was no evidence in the record to suggest that JJO could have actually purchased a competitive casting tape from Bayer during the infringement period and, therefore, there was no viable, non-infringing substitute.

<sup>16</sup> *Grain Processing Corp. v. American Maize-Products Co.*, N. 14 *supra*, 185 F.3d at 1356:

“[A] substitute need not be openly on sale to exert this influence. Thus, with proper economic proof of availability, as American Maize provided the district court in this case, an acceptable substitute not on the market during the infringement may nonetheless become part of the lost profits calculus and therefore limit or preclude those damages.”

<sup>17</sup> *Id.*, 185 F.3d at 1350-1351.

<sup>18</sup> *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1333-1334 (Fed. Cir. 2009).

<sup>18.1</sup> See § 6.07[2] *supra*.

<sup>18.2</sup> *Apple, Inc. and NeXT Software Inc. v. Motorola, Inc. and Motorola Mobility, Inc.*, 2012 WL 1959560 (N.D. Ill. May 22, 2012).

In the absence of non-infringing substitutes in a two-supplier market, it is reasonable to assume that “but-for” infringement, the patent holder would have made all the sales made by the infringer, assuming the other *Panduit* factors support this assumption as well.

Analysis of lost sales is more complicated when more than two suppliers are in the market. In 1990, with *State Industries, Inc. v. Mor-Flo Industries, Inc.*, the court allowed an apportionment of infringing sales between the patent holder and others in the market based on historic market share of suppliers,<sup>19</sup> excluding the infringer’s share.

For example, in a three-supplier market, where one party is the infringer, and each party has a 33.3% market share, the patent holder’s “but-for” market share, assuming no intervening facts, would be 50%: 100% minus the infringer’s share (33.3%), or 66.6% percent; the patent holder’s market share would be 33.3% divided by 66.6%, or 50%.

The Federal Circuit recognized an even more sophisticated analysis of the market and competition in 1993 with its decision in *BIC Leisure Products, Inc. v. Windsurfing International, Inc.*<sup>20</sup> The BIC court found that “[the defendant] Windsurfing did not show that BIC’s customers would have purchased sailboards from Windsurfing and other manufacturers in proportion to their market shares.”<sup>21</sup> BIC, indicated the court, sold its products in a lower-end segment of the market. Further, held the court,

“[t]o be acceptable to the infringer’s customers in an elastic market, the alleged alternative ‘must not have a disparately higher price than or possess characteristics significantly different from the patented product.’”<sup>22</sup>

Relevant evidence to prove or disprove the absence of acceptable non-infringing substitutes include (1) marketing reports and similar documents showing other products competing against the patented product; (2) advertising and promotional materials; (3) third-party market surveys by industry groups; (4) documents showing customer reliance on patented feature(s); (5) customer surveys (existing or performed

(Text continued on page 6-65)

<sup>19</sup> *State Industries Inc. v. Mor-Flo Industries, Inc.*, 883 F.2d 1573, 1576-1580 (Fed. Cir. 1989), *cert. denied* 493 U.S. 1022 (1990).

<sup>20</sup> *BIC Leisure Products Inc. v. Windsurfing International, Inc.*, 1 F.3d 1214, 27 U.S.P.Q.2d (BNA) 1671 (Fed. Cir. 1993).

<sup>21</sup> *Id.*, 1 F.3d at 1216.

<sup>22</sup> *Id.*, 1 F.3d at 1219 (Fed. Cir. 1993) (citing *Kaufman Co. v. Lantech, Inc.*, 926 F.2d 1136, 1142 (Fed. Cir. 1991) (citing *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 553 (Fed. Cir. 1984))).

for litigation) showing the likelihood that existing customers will switch to the patent holder's product if certain competition is eliminated; and (6) industry specifications from standard-setting bodies (i.e., Bellcore, ITU), if applicable, showing no substitutes based on lack of compliance with relevant standards.

Parties will also want to gather market segmentation and market share information, which can be obtained from the parties themselves and/or through third-party sources, including analyst reports and trade associations.

### **[3]—The Patent Holder's Manufacturing and Marketing Capability to Exploit the Demand**

The third *Panduit* factor to analyze the appropriateness of lost profits damages is the patent holder's manufacturing and marketing capability to exploit the demand. The patent holder's manufacturing and marketing capability help assess the patent holder's ability to exploit the demand—i.e., the ability to have made the infringing sales.

Manufacturing capability is most often analyzed as manufacturing capacity. Did the patent holder have the capacity to manufacture the infringing sales product volumes? If not, could incremental capacity have been added (where the cost of adding incremental capacity would reduce the amount of incremental profits obtained from the analysis of damages)?

Information useful in proving, or disproving, sufficient manufacturing capability to exploit demand include: (1) the patent holder's backlog reports—to show whether actual production shortages existed during the infringement period; (2) documents discussing actual product, material, supplies, or inventory shortages or shortfalls from projected amounts (these would include production reports and capacity utilization reports); and (3) documents discussing quality problems.

Support for incremental costs associated with increased manufacturing capacity is needed if sufficient capacity could have been added to meet the increased "but for" levels of capacity demand. This support can be provided by contemporaneous budgets or forecasts showing increasing levels of production, corresponding required levels of capital equipment, and capital appropriation requests relating to equipment or plant expansion dated about the date of alleged infringement (which would provide details of capacity and cost of expansion). If comprehensive records do not exist regarding the cost of capacity expansion, then the expert must gather support for all component elements of capacity expansion. Project lead times, as well as equipment and labor

costs, are important determining factors in assessing the reasonableness of capacity expansion. Information supporting an analysis of incremental capacity expansion would include: (1) incremental plant space, (2) build-out costs, (3) design time and expense, (4) tooling costs and set-up time and related costs, (5) testing time, and (6) project lead times.

Marketing capability relates to the ability of the patent holder to have made the infringing sales. Marketing capability is affected by the physical location of and territories served by the patent holder's sales force. For example, if the infringing sales were made on the West Coast and the patent holder's sales force is limited to the Mid-Atlantic region, then it is unlikely that the patent holder would have made the infringer's sales if no changes were made by the infringer.

In many cases, firms sell many products not covered under the patent(s) at issue to a given customer. Even when the nonpatented products cannot be considered collateral or convoyed sales, customers may buy an entire range of products from one company. Hence, when an expert is assessing marketing capability, he must consider the range of products not covered by the patent that are purchased along with the patented product. If the patent holder discloses only the patented product and not the full suite of products, lost profits damages may be more difficult to prove—especially if there are non-infringing alternatives available from firms who sell the entire product suite. In addition, it is important to analyze consumer loyalty to certain suppliers. If there are non-infringing substitutes available and the patent holder has never made a sale to certain potential customers, it may be more difficult for the patent holder to make those infringing sales.

Documents and information needed to prove marketing capacity include (1) documents showing the parties' distribution networks; (2) type of sales force (direct, distributors, etc.); (3) geographic distribution of sales personnel; (4) customers; and (5) sales by type of distribution method used.

#### **[4]—How Much Profit the Patent Holder Would Have Made**

The fourth and final *Panduit* factor to analyze the appropriateness of lost profits damages is the amount of profit the patent holder would have made. As discussed in the introduction to this chapter, patent damages are a function of a limited number of key variables: the sales price of the patented and infringing products, the incremental sales margin of the patented and infringing products, the volume of infringing sales, and the reasonable royalty rate. Although none of these concepts

are difficult to conceive, they can be complicated to demonstrate factually.

The calculation of lost profits is relatively simple: damages are equal to the infringing quantity of sales multiplied by the selling price per unit, less the amount of total incremental costs required to make the sales. (This analysis can also be performed on the basis of incremental margin per unit—price per unit less incremental cost per unit.) “When basing the alleged lost profits on lost sales, the patent owner has an initial burden to show a reasonable probability that he would have made the asserted sales ‘but for’ the infringement.”<sup>23</sup> In addition, sufficient information must be available to estimate lost profits with a reasonable degree of certainty—absolute certainty is not required in proving lost profit damages.<sup>24</sup>

Where the patented product is a piece or component of a larger machine or product, lost sales damages may be available on the larger machine or product, which includes many nonpatented parts. Under the “entire market value rule,” the patent holder is entitled to lost profits on the patented component, as well as lost profits on convoyed sales because the patent holder has the right to “the entire market value” of the invention.<sup>25</sup> This rule was further refined by the Federal Circuit in 1995 with its decision in *Rite-Hite Corp. v. Kelley Co., Inc.*<sup>26</sup> In *Rite-Hite*, the court determined that the entire market value rule only applied where the patented product was sold with unpatented products such that together they constituted a complete machine or a functional unit.<sup>27</sup> In addition, in order to apply the entire market value rule, the patent-related feature must form the “basis for customer demand” or, from another perspective, the patent-related feature must be important enough to have “created the value of the component parts.”<sup>28</sup>

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<sup>23</sup> *Grain Processing Corp. v. American Maize-Products Co.*, 185 F.3d 1341, 1349 (Fed. Cir. 1999) (citing *King Instruments Corp. v. Perego*, 65 F.3d 941, 952 (Fed. Cir. 1995), and *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (*en banc*)).

<sup>24</sup> *Standard Havens Products, Inc. v. Gencor Industries, Inc.*, 953 F.2d 1360, 1372 (Fed. Cir. 1991).

<sup>25</sup> See, e.g., *State Industries, Inc. v. Mor-Flo Industries, Inc.*, 883 F.2d 1573, 1580 (Fed. Cir. 1989), *cert. denied* 493 U.S. 1022 (1990).

<sup>26</sup> *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538 (Fed. Cir. 1995) (*en banc*).

<sup>27</sup> *Id.*, 56 F.3d at 1549-1550.

<sup>28</sup> *Id.*, 56 F.3d at 1549, citing:

*Federal Circuit: State Industries, Inc. v. Mor-Flo Industries, Inc.*, 883 F.2d 1573, 1580 (Fed. Cir. 1989), *cert. denied* 493 U.S. 1022 (1990); *TWM Manufacturing Co., Inc. v. Dura Corp.*, 789 F.2d 895, 900-901 (Fed. Cir.), *cert. denied* 479 U.S. 852 (1986).

The court specifically rejected the argument that nonpatented product sales should be included in lost profits based only on the “financial and marketing dependence” of the patented and nonpatented products or the “reasonable probability” that the nonpatented product would be sold with the patented product.<sup>29</sup>

Despite its ruling in *Rite-Hite*, the Federal Circuit did allow for the recovery of lost profits on the sale of nonpatented replacement parts. Lost profits on these parts was to be awarded in addition to damages resulting from lost sales suffered by King Instruments on a product that did *not* incorporate the patented invention (*King Instruments Corp. v. Perego*).<sup>30</sup> In the dissenting opinion of Judge Nies in the *King Instruments* case, he recognized that this recovery was a clear departure from *Rite-Hite*.<sup>31</sup> As discussed in detail in this chapter,<sup>32</sup> the Federal Circuit has given further guidance on the use of the entire market value rule, specifically focusing on its use when the patented feature is a small portion of the overall product.

Information to support or defend against a lost profits claim, which should be requested from both parties, includes: (1) monthly unit sales; (2) monthly revenue; and (3) monthly direct and indirect cost data for the patented product and any claimed convoyed sales. Monthly expense reports and monthly product profit and loss statements showing account detail should also be requested. In addition, monthly cost and revenue information should be sought to potentially provide enough relevant data to perform a regression analysis to determine the relationship between revenue and cost.<sup>33</sup> Companies generally track only direct costs and cost of sales by product. Nevertheless, although it is uncommon for companies to allocate indirect selling, general, and administrative (“SG&A”) costs to specific products, incremental SG&A costs must be estimated and accounted for in a lost profits analysis.

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*Court of Federal Claims*: Marconi Wireless Telegraph Co. v. United States, 53 U.S.P.Q. 246, 250 (Ct. Cl. 1942), *aff'd in part, vacated in part* 320 U.S. 1, 63 S.Ct. 1393, 87 L.Ed. 1731 (1943).

<sup>29</sup> *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1550 (Fed. Cir. 1995) (*en banc*).

<sup>30</sup> *King Instruments Corp. v. Perego*, 65 F.3d 941, 947-953 (Fed. Cir. 1995).

<sup>31</sup> *Id.*, 65 F.3d at 953-961 (Nies, J., dissenting).

<sup>32</sup> See § 6.06[6] *supra*.

<sup>33</sup> “Regression analysis”—i.e., the statistical investigation of relationships between variables—may not produce meaningful results when one analyzes certain general costs that are based on allocations. For example, if corporate overhead is allocated to a division of interest based on the division’s sales, then even though the regression results may look strong, they are meaningless in determining the amount of incremental overhead that would have been incurred to generate additional sales. Limited time series data may also greatly reduce the benefits of regression analysis.



Note also that annual reports prepared in accordance with Generally Accepted Accounting Principles (“GAAP”) seldom contain a product’s specific sales and cost data needed for a lost profits analysis. GAAP statements are concerned with reporting information for the entire business—and key business segments.

Accounting and finance policy and procedures manuals can be extremely valuable in helping the expert to gain an understanding of:

- (1) the chart of accounts that is necessary to translate account codes into meaningful revenue and expense items;
- (2) profit centers;
- (3) cost allocation methodologies; and
- (4) inventory valuation, etc.

Additional information to request in discovery includes:

- (1) standard cost build-ups by product;
- (2) standard cost variance reports;
- (3) price lists;
- (4) information on discounting policies and pricing policies;
- (5) budgets;
- (6) projections;
- (7) planning documents;
- (8) warranty expense by product (supporting documents and explanation of how it is calculated);
- (9) customer complaint logs or information;
- (10) identification and explanation of inter-company allocations included in expenses (if applicable); and
- (11) special reports such as break-even analyses that relate to cost and/or profitability.

#### **[5]—Key Elements and Factors**

##### **[a]—Estimating Sales**

Unlike other lost profit damage calculations, estimating lost sales in a patent case always involves actual sales for the product. Both the infringer’s and the patent holder’s actual sales provide the basis for what sales would have been “but for” the infringement. Where the patent holder believes the infringer’s sales have impacted prices of the patented product or where the infringer’s prices had been substantially higher or lower than prices of the patented product, it is advisable to estimate lost unit sales and prices for lost sales separately.

In cases where there are no non-infringing substitutes, where the patented and infringing products had all the same features, where the patented and infringing products were sold at the same price in the same markets, and where the infringer could not “invent around” (or design around) the patent, one would expect that lost sales would be equal to the infringer’s sales. In most cases, however, certain adjustments to the infringer’s historical sales must be made. For example, it is possible that the patented product and the infringing product are not identical in every respect or that both the patent holder and infringer do not sell in all the same markets. In these instances, infringing unit sales may be reduced to account for differences in demand due to nonpatented product differences and differences in sales territories.

The patent holder’s sales information is also important in estimating lost sales. In addition to capacity considerations, the patent holder’s sales information can show whether the patent holder’s product sold in the same markets, to the same customers, through the same distribution channels, and at the same prices, as that of infringer. This information is important in establishing whether the patent holder would have made some or all the infringer’s sales “but for” the infringement.

Both the patent holder’s and infringer’s sales information will also provide information on the existence of possible collateral sales.

#### [b]—Market Expansion

An infringer may argue against a lost profits claim by alleging that it actually expanded the market for the patented product. Not only would the patent holder not have made all of the infringer’s sales, except for (“but for”) the infringer’s activities, the patent holder’s own sales would have been smaller.

Kodak advanced a market expansion argument in the *Polaroid Corp. v. Eastman Kodak Co.* case.<sup>34</sup> Although Kodak’s general argument that Kodak expanded the instant photography market was rejected by the court,<sup>35</sup> the court did credit Kodak with expanding the instant photography market in the Middle East. As discussed above, Kodak introduced an instant camera with a built-in flash. This feature

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<sup>34</sup> *Polaroid Corp. v. Eastman Kodak Co.*, 1990 WL 324105, 16 U.S.P.Q.2d (BNA) 1481, 1495-1498 (D. Mass. Oct. 12, 1990).

<sup>35</sup> *Id.*, 16 U.S.P.Q.2d at 1498, 1504.

allowed Kodak to make sales in, for example, Saudi Arabia where “religious customs prohibit photographing women outside the home.”<sup>36</sup>

The claim for market expansion is, like the other elements of lost profits, fact-specific. It is important that the infringer show unique nonpatent (or nonpatent holder patent) product attributes, unique marketing and sales methods, or unique sales or distribution channels. That is, what was the infringer doing to grow the market that the patent holder failed to do?

#### [c]—Estimating the Selling Price

Once lost unit sales are estimated, the selling price of those units must be determined. In cases where the patent holder and infringer have sold their products to the same markets at the same prices and there is no claim for price erosion, estimating the selling price can be relatively straightforward. However, where different markets and/or product features are involved or where the infringer’s price was higher or lower than the patent holder’s price, some additional analysis is necessary to determine the “but for” selling price.

In this regard, raising or lowering the price of infringing products to the same levels as those of the patent holder will impact the quantity of lost sales. One of the basic laws of demand is that as prices decrease, demand increases—or if prices increase, the demand decreases. Any changes in the price level of infringing sales made to undercut the patent holder’s prices will impact the quantity of units that can be claimed as part of lost profits.<sup>37</sup>

#### [d]—Estimating Incremental Costs

Estimating incremental costs in a patent infringement lost profits claim resembles the exercise used in other litigation damage calculations.<sup>38</sup> Only incremental costs arising from incremental sales—or, from another perspective, the costs necessary to sell the incremental volume—should be considered. These costs will include both direct and indirect costs, manufacturing and nonmanufacturing costs. Complications arise when companies sell multiple products that have many common costs.

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<sup>36</sup> *Id.*, 16 U.S.P.Q.2d at 1497-1500.

<sup>37</sup> This effect is considered in detail in § 6.08[6][a] *infra* in our discussion of price erosion.

<sup>38</sup> See, in this regard, the discussion of incremental costs associated with incremental sales in § 3.02[3] *supra*.

These common costs must be analyzed to determine which costs would vary with increased sales/manufacturing volumes of the patented product (and collateral/convoyed products, if relevant).

If sufficient data exists, regression analysis can be a highly useful analytical tool to identify those costs that vary with sales or production volumes. Regression analysis also provides estimates of the extent to which certain costs vary with volume. For example some costs may vary in direct proportion to the volume of sales—such as sales commissions—whereas other costs may have a large fixed component with only a portion of the cost varying with sales volume. Where insufficient historical cost information exists (which frequently occurs), the expert often must rely on engineering cost studies and interviews with manufacturing and sales personnel to determine the exact nature of costs and whether they would vary at the incremental volumes claimed.

#### **[e]—Lost Profits on Collateral (Convoys) Products and Apportionment**

Lost profits on collateral products are calculated in the same manner as lost profits on the patented product. Incremental sales revenue and costs must be estimated based on the infringer's actual sales and/or the patent holder's own sales history. Apportionment of profits between the patented product and collateral sales is technically not necessary when the entire market value rule applies. Should the claimed collateral sales not be part of a functional unit with the patented product, then collateral lost profits may not be awarded.<sup>39</sup> Even if the patent holder believes that the entire market value rule applies, it is often prudent to attempt to disaggregate lost profit damages between the patented product and collateral sales. When one is seeking discovery, it is advisable to obtain all available information about the individual selling prices, costs, and profitability of component parts and collateral products (including replacement parts).

#### **[6]—Lost Profits Beyond Lost Sales of the Patented Product**

Lost profits are not only recoverable for lost historical sales of the patented product but, depending on the facts and circumstances of the case, lost profits may also be the appropriate remedy when the patent holder has suffered harm related to:

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<sup>39</sup> See § 6.06[6] *supra*. See also, *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1333-1334 (Fed. Cir. 2009).

- (1) price erosion;
- (2) lost collateral or convoyed sales;
- (3) lost goodwill or business value; and
- (4) lost future sales.

**[a]—Price Erosion**

An infringer's entry into the market may persuade the patent holder to cut the price of the patented product as a competitive response to illegal competition. Price erosion damages can be calculated on both the patent holder's actual sales and the infringing sales made by the infringer. In a two-supplier market, an analysis of price erosion can be relatively straightforward. However, where non-infringing alternatives exist among several competitors, an analysis of price erosion can become quite complex.

As discussed, one of the basic laws of demand is that as prices decrease, demand increases. Price elasticity of demand measures how much demand increases or decreases as prices increase or decrease. As the Federal Circuit stated in *Crystal Semiconductor Corp. v. Trittech Microelectronics International, Inc.*, “[a]ll markets must respect the law of demand.”<sup>40</sup> Elasticity is calculated by dividing the percentage change in quantity demanded by the percentage change in price.

In the case of price erosion damages, if the patent holder could have sold the patented product at a higher price, the law of demand dictates that the patent holder would have sold less of the product at a higher price than the infringer sold at a lower price, assuming the product had “elasticity.” If a product is “inelastic,” the quantity demanded is less sensitive to price increases. Hence, the more “elastic” a product is, the more sensitive it will be to increases in price. Products that have many substitutes are more elastic than products with few or no substitutes.

Price elasticity and cross-price elasticity can be calculated from market price and sales data for the patent product, infringing product, and possible substitute products. Once the price elasticity of demand is calculated, potential lost sales are reduced relative to the increase in selling price of the product. The patent holder is still able to obtain a reasonable royalty on all infringing sales that are not claimed as lost profits.

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<sup>40</sup> See *Crystal Semiconductor Corp. v. Trittech Microelectronics International, Inc.*, 246 F.3d 1336, 1359 (Fed. Cir. 2001).

**[b]—Lost Collateral or Convoyed Sales**

A more complete discussion of collateral or convoyed sales and the entire market value rule is provided earlier in this chapter.<sup>41</sup> As with determining lost profits of the patented product, the patent holder must also estimate the amount of money the patent holder would have made if it had made the collateral sales. Determination of this amount requires estimation of unit sales, prices, and incremental costs for collateral sales—as well as proving that the collateral sales and patented product were sold together as a functional unit.

**[c]—Damage to Goodwill**

Damage to goodwill or a company's reputation can become evident from lost sales or reduced prices. Therefore, damage to goodwill could often be expressed in the form of additional lost sales and price erosion damages. Damage to goodwill is a lost profits theory that has not received much attention from the courts,<sup>42</sup> but was addressed in *Lam, Inc. v. Johns-Manville Corp.*<sup>43</sup> In the *Lam* case, the Federal Circuit agreed with the district court's decision that infringement had damaged Lam, Inc.'s goodwill:

"The litigation not only interfered with Lam's financial resources, but also with its human resources. Lam's cash resources were drained and its employees devoted valuable time to the lawsuit. Moreover, J-M's hastily-developed CLASSPAKs seriously damaged Lam's goodwill. Since these fixtures didn't work very well, the customers developed doubts concerning the entire concept."<sup>44</sup>

In this case the patent owner's damages were based on impaired post-infringement growth of the business.<sup>45</sup>

**[d]—Lost Future Sales**

Even after the Supreme Court decision in *eBay Inc. v. MercExchange, L.L.C.*, discussed above,<sup>46</sup> successful patent holders who also sell a

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<sup>41</sup> See § 6.08[5][e] *supra*.

<sup>42</sup> Skenyon, Marchese, and Land, *Patent Damages Law & Practice*, § 2:7 (2006).

<sup>43</sup> *Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 1068 (Fed. Cir. 1983).

<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 126 S.Ct. 1837, 164 L.Ed.2d 641 (2006). See § 6.02 *supra*.

patented product almost always are awarded injunctions against the infringer's continued sale of the infringing product. Damages on past infringement and injunctive relief against future sales may still not adequately compensate the patent holder for the harm suffered from infringement. For example, many products are sold with long-term maintenance contracts and spare parts sales. Damages based solely on past sales would not fully compensate the patent holder for the infringement if lost future maintenance and parts profits are ignored.

The difficulty with estimating future lost profits is that there can be uncertainty regarding the market for the patented product, consumer demand, product pricing, costs of production, technological change, regulatory issues, and general economic conditions. In *Brooktree Corp. v. Advanced Micro Devices, Inc.*, the Federal Circuit stressed the importance of proving future market conditions.<sup>47</sup> The *Brooktree* Court highlighted the uncertainties of future pricing, future competition, and future electronics markets.<sup>48</sup> Despite the difficulty in proving future projections, the Federal Circuit subsequently, in *Shockley v. Arcan, Inc.*, "acknowledge[d] that a patentee may be able to produce sufficient evidence to recover projected future losses."<sup>49</sup>

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<sup>47</sup> *Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555, 1581 (Fed. Cir. 1992).

<sup>48</sup> *Id.*

<sup>49</sup> *Shockley v. Arcan, Inc.*, 248 F.3d 1349 (Fed. Cir. 2001).

## § 6.09 Enhancement of Damages

## [1]—Prejudgment Interest

The need for prejudgment interest in a reasonable royalty setting stems from the fact that although all reasonable royalty damages are accrued prior to the trial date, the ultimate damages figure must be expressed in current dollars as of the date of trial. Moreover, all accrued damages must be brought forward to the current period at some interest rate. There are two general theories surrounding what measure of interest should be applied to this calculation.

## [a]—Prejudgment Interest as Borrowing Rate of Infringer

Sponsors of the theory that prejudgment interest should be calculated at the borrowing rate of the infringer believe that, like the mortgagee of a car loan, a patent owner essentially extends credit (in the form of unpaid damages) to the infringer for the period leading up to the trial and, like any creditor, it is therefore appropriate that the patent owner receive a return on the amount of the credit extended. We must therefore ask what measure of interest the patent owner should receive as compensation for not having received the reasonable royalty throughout the damages period. In *Gornstein Enterprises, Inc. v. Quality Care-USA, Inc.*,<sup>1</sup> the court stated that “the defendant who has violated the plaintiff’s rights is in effect a debtor of the plaintiff until the judgment is entered and paid or otherwise collected.” Courts have agreed to various forms of these “borrowing” rates, including simple interest,<sup>2</sup> risk-free<sup>3</sup> or prime rate interest,<sup>4</sup> and statutory rates.

Some practitioners who support the borrowing method believe that the proper interest rate should be one that considers the loan:

“Because the amount of the judgment is typically not secured by collateral and the damages could be payable at any time (depending on how quickly the legal proceedings move forward), the model implicitly contemplates the defendant’s rate for short-term, unsecured debt. Put differently, it involves a hypothetical short-term loan that

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<sup>1</sup> *Gornstein Enterprises, Inc. v. Quality Care-USA, Inc.*, 874 F.2d 431, 436 (7th Cir. 1989).

<sup>2</sup> *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 557 (Fed. Cir. 1984).

<sup>3</sup> *Polaroid Corp. v. Eastman Kodak Co.*, 16 U.S.P.Q.2d (BNA) 1481, 1540 (D. Mass. 1990).

<sup>4</sup> *Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 1060 (Fed. Cir. 1983).



is continually rolled over (with accumulated interest) until the judgment is paid.”<sup>5</sup>

**[b]—Prejudgment Interest as the Plaintiff’s Lost Return**

Sponsors of this method of prejudgment interest measure focus on the fact that because the plaintiff did not receive money that was due, it had to forgo the gains it would have made on that investment. One typical measure of this lost return posited by damages experts is the patent owner’s weighted average cost of capital (“WACC”). WACC is a measurement of a company’s total financing costs, as can be seen in the formula for WACC:

WACC =

(Cost of Equity ( Percent of Equity in Capital Structure) +  
(Cost of debt × [1 – company tax rate] ×  
Percent of Debt in Capital Structure)

WACC measures both the interest paid on debt as well as the cost of financing through equity. This information is readily available for public companies and is typically viewed as the true financing cost of an organization.

Experts and courts that reject the use of WACC as a measure of prejudgment interest typically claim that there is no guarantee that a particular venture would have achieved a return equivalent to its WACC.

Continuing with the plaintiff’s lost return theory, other practitioners propose that, rather than awarding the plaintiff’s WACC, one should measure the rate paid by the plaintiff on its outstanding debt. This method assumes that the plaintiff would have reduced its outstanding debt had it received the damages amounts in a timely fashion. Unfortunately, prejudgment interest figures could, in some instances, exceed the amount of debt a plaintiff owes. In addition, this approach inherently assumes that outstanding debt is viewed negatively by the patent owner, ignoring the fact that many companies specifically strive to maintain a particular debt-to-equity ratio.

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<sup>5</sup> Epstein, “Prejudgment Interest Rates in Patent Cases,” 24:2 IPL Newsletter, at p. 9 (Winter 2006).

**[c]—To Compound or Not to Compound?**

Courts have been divided regarding whether prejudgment interest should be compounded or left as simple interest. The Federal Circuit has upheld the use of both simple and compound interest,<sup>6</sup> recognizing that the use of either “is a matter largely within the discretion of the district court.”<sup>7</sup> The Federal Circuit has also indicated that compound interest is fairer in that it makes sure that the patent owner is fully compensated.<sup>8</sup> Historically, courts have awarded prejudgment interest based on the concept that the defendant has received a loan from the patent owner. Therefore, it is appropriate that the courts also permit compounding because any commercial loan would certainly include this term as well. In addition, to the extent one supports the lost return approach, proceeds from such investments would also likely be compounded as well.

The expert who calculates prejudgment interest should therefore be familiar with not only the case facts, but also the parties’ relevant creditworthiness, borrowing history, and interest rates paid. If the plaintiff is an individual with no ongoing business, then the lost return methodology may consist only of passbook interest. However, if one supports the defendant’s borrowing rate approach, a study of the creditworthiness of the defendant is a useful step in choosing the proper commercial interest rate for prejudgment interest. Last, if one supports the lost return approach, a historical review of the patent owner’s actual behavior may guide the ultimate choice of an interest rate. Has the company used other proceeds to pay down outstanding debt? Has the company had to sell equity to the public to raise capital during the period of damages? These approaches can help guide and support the proper measure to use in deciding whether and how to compound interest.

**[2]—Postjudgment Interest**

Unlike prejudgment interest, postjudgment interest rates are defined by statute. Interest is generally allowed on judgments entered in the federal courts from the date of judgment until the judgment is

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<sup>6</sup> See, for example: *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1555 (Fed. Cir. 1995) (*en banc*); *Datascope Corp. v. SMEC, Inc.*, 879 F.2d 820, 829 (Fed. Cir. 1989); and *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 556-557 (Fed. Cir. 1984).

<sup>7</sup> *Rite-Hite Corp. v. Kelley Co.*, *id.*, 56 F.3d at 1555.

<sup>8</sup> *Id.*

paid. Title 28 U.S.C. Section 1961 governs civil and bankruptcy adversary judgment interest. This includes postjudgment interest on patent infringement judgments.

Title 28, Sections 1961(a) and 1961(b), state that

“[s]uch interest shall be calculated from the date of the entry of the judgment, at a rate equal to the weekly average 1-year constant maturity Treasury yield, as published by the Board of Governors of the Federal Reserve System, for the calendar week preceding the date of the judgment. The Director of the Administrative Office of the United States Courts shall distribute notice of that rate and any changes in it to all Federal judges. Interest shall be computed daily to the date of payment except as provided in section 2516(b) of this title and section 1304(b) of title 31, and shall be compounded annually.”

The Web site for the Federal Judiciary<sup>9</sup> provides a link to the Federal Reserve System Web site<sup>10</sup> that posts current applicable rates equal to the one-year constant maturity Treasury yield.<sup>11</sup>

### [3]—Willful Infringement

In cases of willful infringement, the court may “increase the damages up to three times the amount found or assessed.”<sup>12</sup> Thus, trebling of the award is the maximum enhancement for willful infringement, but the award could be increased in smaller multiples such as doubling or a 50% increase in the court’s discretion.<sup>13</sup> The decision to grant enhancement, and the amount of the enhancement, is based on “the egregiousness of the defendant’s conduct based on all the facts and circumstances.”<sup>14</sup> Some of the factors often considered in this analysis are:

- (1) whether the infringer deliberately copied the ideas or design of the patent holder;

<sup>9</sup> See <http://www.uscourts.gov> (last visited January 13, 2011).

<sup>10</sup> See <http://www.uscourts.gov/postjud/postjud.html> (last visited January 13, 2011).

<sup>11</sup> See <http://www.federalreserve.gov/releases/h15/current/> (last visited January 13, 2011).

<sup>12</sup> 35 U.S.C. § 284.

<sup>13</sup> *Transclean Corp. v. Bridgewood Services, Inc.*, 290 F.3d 1364, 1378 (Fed. Cir. 2002).

<sup>14</sup> *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 826 (Fed. Cir. 1992).

- (2) whether a good faith belief existed that the patent was not infringed or was invalid, following an initial investigation of the scope of the patent by the infringer;
- (3) the infringer's litigation conduct;
- (4) the infringer's size and financial condition;
- (5) the closeness of the case evidence;
- (6) the duration of the infringer's misconduct;
- (7) remedial action by the infringer;
- (8) the infringer's motivation for harm; and
- (9) whether the infringer attempted to conceal its misconduct.<sup>15</sup>

The threshold for determining willful infringement was reset by the Federal Circuit in *In re Seagate Technology, LLC*.<sup>16</sup> In *Seagate*, the court overruled its prior standard for proving willful patent infringement by moving away from the prior standard of a mere failure to exercise "due care" to avoid patent infringement to a standard of requiring clear and convincing evidence of "objective recklessness" on the part of the accused infringer.<sup>17</sup>

In order to establish willful infringement, the patentee must demonstrate that the infringer acted with "reckless disregard" ("acted despite an objectively high likelihood") that its actions would constitute infringement of a valid patent. Further, this objectively high likelihood must have been "either known or so obvious" to the infringer.<sup>18</sup>

Although the ultimate calculation is mere arithmetic (e.g., doubling or trebling), the determination of willfulness and the amount of enhancement entail an extensive analysis of the infringer's conduct.

Also, in "exceptional cases" the court may award reasonable attorney's fees to the prevailing party.<sup>19</sup> A case can be found to be "exceptional" for its willful infringement as well as for other types of conduct.<sup>20</sup> The "prevailing party" can be either the patent owner or the alleged infringer.<sup>21</sup> The award of fees can include expenses such as expert witness fees.<sup>22</sup>

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<sup>15</sup> *Id.*, 970 F.2d at 827-828.

<sup>16</sup> *In re Seagate Technology, LLC*, 497 F.3d 1360 (Fed. Cir. 2007) (*en banc*).

<sup>17</sup> *Id.*, 497 F.3d at 1371.

<sup>18</sup> *Id.*

<sup>19</sup> 35 U.S.C. § 285.

<sup>20</sup> *Beckman Instruments, Inc. v. LKB Producter AB*, 892 F.2d 1547, 1551 (Fed. Cir. 1989).

<sup>21</sup> *Mathis v. Bill Spears d/b/a Waterway Plastics*, 857 F.2d 749, 754 (Fed. Cir. 1988).

<sup>22</sup> *Id.*, 857 F.2d at 758.

## § 6.10 Special Damages Cases

## [1]—Design Patents

Design patents are issued for any new, original, and ornamental design used for an article of manufacture.<sup>1</sup> Remedies for infringement of design patents include an important addition to the remedies previously discussed, i.e., recovery of damages can include the total profit of the infringer. Title 35 U.S.C. Section 289 provides that an infringer of a design patent, “shall be liable to the owner to the extent of his total profit, but not less than \$250. . . .”<sup>2</sup> The addition of this remedy does not affect the availability of other remedies for infringement, but the patentee “shall not twice recover the profit made from the infringement.”<sup>3</sup> Therefore, if infringer profits are recovered under Section 289 for infringement of a design patent, there cannot be an additional recovery on the same sale for infringement of a utility patent.<sup>4</sup>

These damages are calculated in the same fashion as infringer profits under Section 504(b) of the Copyright Act.<sup>5</sup> There are, however, some important limitations that affect calculation of these types of damages.

The Sixth Circuit has held in *Schnadig Corp. v. Gaines Manufacturing Co., Inc.*, that the calculation should be made on a pre-tax basis, i.e., the infringer cannot deduct its income tax as an expense.<sup>6</sup> However, there are cases under Section 504(b) of the Copyright Act that hold that the damages calculation should be made on a post-tax basis.<sup>7</sup> Also, recovery based on the total profit of the infringer is not subject to enhancement for willful infringement as previously discussed.<sup>8</sup>

<sup>1</sup> 35 U.S.C. § 171.

<sup>2</sup> 35 U.S.C. § 289.

<sup>3</sup> *Id.*

<sup>4</sup> *Catalina Lighting, Inc. v. Lamps Plus, Inc.*, 295 F.3d 1277, 1291-1292 (Fed. Cir. 2002).

<sup>5</sup> 17 U.S.C. § 504(b). See also, Chapter 8 *infra*.

<sup>6</sup> *Schnadig Corp. v. Gaines Manufacturing Co., Inc.*, 620 F.2d 1166, 1171 (6th Cir. 1980) (“By recovering an infringer’s pre-tax profits, the patentee will in fact be treated as though he had gained the profits from the exploitation of his patent.”).

<sup>7</sup> *Three Boys Music Corp. v. Bolton*, 212 F.3d 477, 487-488 (9th Cir. 2000).

<sup>8</sup> See, in this regard, the discussion at § 6.09[3] *supra*. See also, *Braun, Inc. v. Dynamics Corporation of America*, 975 F.2d 815, 823-824 (Fed. Cir. 1992).

**[2]—Infringement Claims Against the United States**

Claims against the United States for use of a patent without a license are allowed pursuant to Title 28 U.S.C. Section 1498. The action must be brought in the United States Court of Federal Claims.<sup>9</sup> Pursuant to the statute, the United States is not considered to be an ordinary infringer, but rather a compulsory, nonexclusive licensee.<sup>10</sup> Damages, therefore, are limited to “recovery of [the patentee’s] reasonable and entire compensation for such use and manufacture.”<sup>11</sup> Injunctive relief is not available against the United States, nor is enhancement of damages for willfulness.<sup>12</sup>

Given these restrictions, damages in these cases are usually calculated as (1) a reasonable royalty for a compulsory, nonexclusive license and (2) interest for the delay in seeking the license.<sup>13</sup>

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<sup>9</sup> 28 U.S.C. § 1498(a).

<sup>10</sup> *Standard Manufacturing Co. v. United States*, 42 Fed. Cl. 748, 757 (Fed. Cl. 1999).

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*, 42 Fed. Cl. at 757-758.

<sup>13</sup> *Id.*, 42 Fed. Cl. at 758.

### § 6.11 The U.S. International Trade Commission (ITC) as a Forum for Patent Cases

As mentioned previously,<sup>1</sup> prior to the Supreme Court's 2006 ruling in *eBay, Inc. v. MercExchange, L.L.C.* the general rule was that "courts will issue permanent injunctions against patent infringement absent exceptional circumstances."<sup>2</sup> With District Court injunctions less certain, it is expected that more parties will try to obtain exclusion orders against foreign infringers/importers by bringing a Section 337 investigation<sup>3</sup> before the ITC.<sup>4</sup>

The International Trade Commission ("ITC") is an "independent," quasi-judicial federal agency that provides trade policy advice to both the legislative and executive branches of government.<sup>5</sup> The ITC is not only a forum to challenge foreign infringers/importers, but can also make policy affecting U.S. companies with foreign manufacturing facilities that import products back into the U.S.<sup>6</sup> For a firm to bring an infringement action before the ITC, the party must satisfy certain statutory requirements.<sup>7</sup>

First, actions before the ITC are intended to stop unfair methods of competition (i.e., infringing on a U.S. patent) where there is a threat to or the effect is to (1) destroy or substantially injure an industry in the U.S.; (2) prevent the establishment of such an industry; or (3) restrain or monopolize trade and commerce in the U.S.<sup>8</sup>

Second, the ITC considers a domestic industry to exist in the U.S. if there has been a significant investment in plant and equipment; a significant employment of labor or capital; or a substantial investment in its exploitation, including engineering, research and development, or licensing.<sup>9</sup>

Third, although Section 337 was amended in 1988 to allow holders of intellectual property rights that do not manufacture products

<sup>1</sup> See § 6.02 *supra*.

<sup>2</sup> *eBay, Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 126 S.Ct. 1837, 1838, 164 L.Ed.2d 641 (2006).

<sup>3</sup> The ITC adjudicates allegations of "unfair acts in connection with imports under Section 337 of the Tariff Act of 1930 as amended, 19 U.S.C. Section 1337." See [http://www.usitc.gov/press\\_room/documents/featured\\_news/337facts.pdf](http://www.usitc.gov/press_room/documents/featured_news/337facts.pdf) (last visited January 14, 2013).

<sup>4</sup> "ITC Increasingly Popular For Patent Litigation," IP Law 360 (June 13, 2006), available at <http://www.law360.com/technology/articles/6983/itc-increasingly-popular-for-patent-litigation> (last visited February 11, 2013).

<sup>5</sup> See <http://www.usitc.gov/> (last visited February 11, 2013).

<sup>6</sup> 19 U.S.C. § 1337. And see <http://www.law.cornell.edu/uscode/text/19/1337> (last visited January 17, 2013).

<sup>7</sup> *Id.*

<sup>8</sup> 19 U.S.C. § 1337(a)(1)(A).

<sup>9</sup> 19 U.S.C. § 1337(a)(3).

(i.e., non-practicing entities or “NPEs”) to obtain remedies at the ITC,<sup>10</sup> respondents (alleged infringers) challenged defining licensing as an industry. This question of whether licensing alone could be classified as a domestic industry was recently settled on behalf of NPEs.<sup>11</sup>

The primary benefits of launching an ITC action are that, if successful, a claimant is almost certain to obtain an exclusion order (i.e., an injunction against further importation), and ITC actions are processed very quickly, usually within fifteen months.<sup>12</sup> Although the ITC can issue an exclusion order against the future importation of infringing products, it cannot assess damages for past infringement.<sup>13</sup> As a result, because the ITC cannot award damages, ITC claimants often file parallel actions in District Court where damages for past infringement can be obtained.

The ITC reports that the number of new Section 337 investigations increased by over 530% from FY 2000 through FY 2012.<sup>14</sup> Since 2006, when the Supreme Court issued its decision in *eBay, Inc. v. MercExchange, L.L.C.*, ITC investigations have also increased substantially.<sup>15</sup> Because of the speed at which investigations are conducted and the certainty of an exclusion order if the respondent is found to infringe, it is not surprising that the settlement rate for ITC actions is very high. From May 2006 (when the Court issued its decision in the *eBay* case) through the first quarter of 2012, over 49% of 337 ITC matters settled.<sup>16</sup> The settlement rate of 47.06% for NPEs was slightly lower than the average for the total.<sup>17</sup>

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<sup>10</sup> See [http://www.usitc.gov/press\\_room/documents/featured\\_news/337facts.pdf](http://www.usitc.gov/press_room/documents/featured_news/337facts.pdf) (last visited January 14, 2013).

<sup>11</sup> *InterDigital Communications, L.L.C. v. USITC and Nokia*, No. 337-TA-613 (Fed. Cir. Jan. 10, 2013) (*en banc*), <http://www.cafc.uscourts.gov/images/stories/opinions-orders/10-1093o.pdf> (last visited January 17, 2013).

<sup>12</sup> See 19 U.S.C. Sections 210.42(c) and 210.51(a), [http://www.usitc.gov/intellectual\\_property/documents/section\\_337\\_rules.pdf](http://www.usitc.gov/intellectual_property/documents/section_337_rules.pdf) (last visited January 17, 2013). See also [http://www.usitc.gov/intellectual\\_property/documents/337\\_faqs.pdf](http://www.usitc.gov/intellectual_property/documents/337_faqs.pdf), p. 23 (last visited January 17, 2013).

<sup>13</sup> *Id.*, [http://www.usitc.gov/intellectual\\_property/documents/337\\_faqs.pdf](http://www.usitc.gov/intellectual_property/documents/337_faqs.pdf), at p. 24 (last visited January 17, 2013).

<sup>14</sup> See N. 10 *supra*, [http://www.usitc.gov/press\\_room/documents/featured\\_news/337facts.pdf](http://www.usitc.gov/press_room/documents/featured_news/337facts.pdf) (last visited January 14, 2013).

<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> *Id.*