INTERNATIONAL ASSOCIATION FOR THE PROTECTION OF INDUSTRIAL PROPERTY (AIPPI)

Japanese Group

Symposium on

Intellectual Property Laws and Systems

at Gotenba City, Japan

September 6, 1997

Patent Infringement Remedies in the United States: Are They Out of Control?

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I. Introduction

The "black ships" have arrived again! United States circles have begun to pressure Japan to tighten or toughen the remedies for patent infringement because Japanese "actual" damages have been very low in comparison to that of the United States. James A. Forstner of the DuPont Company recently wrote:

> [T]he threat of infringement litigation has often not been much of a deterrent to the infringer, who has known that patent litigation is usually protracted for the foreign patentee, and that even if the patentee prevails, damages will be low (they will usually be an alleged "reasonable royalty," which usually will not compensate the patentee for its losses due to the infringing activities). The infringer thus can continue infringing, knowing that the penalty for infringement will be low if it loses the lawsuit—perhaps less than the royalty rate being offered before the lawsuit is initiated—and that there will be no punitive damages.[1]

This new and recently-initiated pressure by circles in the United States, based on differences between the two patent systems including, in particular, the incidence and size of patent infringement awards, is understandably of serious concern in Japan. The Japanese believe that the problem is not that their damage awards are too low, but that the award by the American courts are too high. There is no denying that damage awards in the United States have been extremely high in recent times. Reasons for these high awards are rooted in the culture, the law and the times.

Before providing explanations, it is important to understand the statutory law and case law precedents in place pertaining to patent infringement remedies of American jurisprudence. After a glimpse into historical antecedents this survey, this primer, will cover such monetary relief or compensatory damages as lost profits, reasonable royalties, interest assessments, punitive damages, attorney fees and related topics. This primer will then cover equitable relief, that is, preliminary and permanent injunctions, inasmuch as US law and practice appears to be out control not only in the area of damages, but also injunctions. In other words, in both areas the pendulum has swung too far, as will be illustrated below.

II. United States Law on Patent Infringement Remedies

The United States Patent Code, Title 35 U.S.C. sets forth the elements of recovery available to patentees whose patents are held to be valid, enforceable and infringed as follows:

- Section 281 provides for civil action by the patentee;
- Section 283 provides for an injunction to prevent further infringement;
- Section 284 provides for recovery by the patentee of damages not less than a reasonable royalty, together with interest and costs, and for damages that may be increased by the court up to three times the amount found; and
- Section 285 provides for an award by the court, in exceptional cases, of reasonable attorney fees to the prevailing party.

See Appendix A for the literal text of these provisions.

A. Historical Perspective

1. Before 1870

Before 1870, the Patent Acts generally said the patentee could recover actual damages and the method of measuring damages was reserved for the courts. A patentee could recover "such damages as shall be addressed by a jury."[2] The patent owner could recover "a sum that shall be at least equal to three times the price for which the patentee has usually sold or licensed, to other persons, the use of the invention."[3] A patentee could recover "a sum equal to three times the actual damage sustained by such patentee."[4] The 1836 Act gave the court power to render judgment "for any sum above the amount found by such verdict as the actual damages sustained by the plaintiff, not exceeding three times the amount thereof, according to the circumstances of the case."[5]

2. 1870 to 1946

The Act of 1870 broadened the courts powers in equity actions so that a patent owner was entitled to recover "in addition to the profits to be accounted for by the defendant, the damages the complainant has sustained thereby."[6] In addition, the 1870 Act provided that in an action on the case, "damages for the infringement of any patent may be recovered."[7] In other words, a patentee could recover the amount of his damages from the infringement.

Therefore, from about 1870 to 1946, a patentee could recover by an action in equity the infringer's gains or profits, and any damages the patentee sustained in excess of those gains or profits. In *Tilghman*, the Supreme Court held that the patentee could recover the infringer's profits due to the infringement and the patentee's lost profits.[8]

3. 1946 to 1964

From 1946 to 1964, it was unclear whether a patentee could measure damages by the infringer's profits. In 1952, Congress combined §§ 67 and 70 of the 1946 Act into 35 U.S.C. Section 284 (1954). The legislative history of the 1952 Act illustrated the changes were meant to clarify the statute. In 1962, the Supreme Court held that damages could no longer be measured by the infringer's profits and that Congress eliminated a recovery of an infringer's profits by the 1946 amendments to the 1946 Act.[9]

The Supreme Court's 1964 declaration that an infringer's profits could never be the measure of damages was quickly accepted by the lower courts. In 1965, the district court in *Georgia-Pacific*, rejected the special master's measured damages based on the infringer's profits in light of the 1946 amendments.[10]

The court believed that Congress eliminated the right to recover an infringer's profits as a measure of damages by the 1946 amendments in order to eliminate the necessity of accounting procedures in equity actions before special masters and to eliminate apportionment problems in determining which part of the profits were attributable to the patented invention from those attributable to other factors.[11]

4. 1964 to Present

After the 1946 amendments and the *Aro* decision, the lower courts were in a difficult position since the Supreme Court and Congress did not provide guidance. Thus, the lower courts looked to the law prior to 1946 and awarded damages based on the market value lost which was the amount of a "reasonable royalty" for a licensee to use the invention where the patentee's lost profits or the infringer's profits gained were not proved.

Although the Supreme Court held that damages may not be measured by the infringer's profits, courts often calculate damages in this manner where evidence shows that the patentee's rate of profit on the sale of its products would be substantially similar to the defendant's. Here, the courts would permit an award based on the defendant's profit rate as a "reasonable approximation" of the patentee's lost profits.[12]

The Court of Appeals for the Federal Circuit determined that the 1946 amendments and the *Aro* decision were consistent with the rule that under proper circumstances an infringer's profits may be considered in determining a patentee's general damages adequate to compensate for the infringement.[13] In other words, the lower courts have said that sometimes an infringer's profits are recoverable despite the Supreme Court's decision to the contrary.

From 1964 to the present, courts measure damages based on the patentee's lost profits. If a patentee's lost profits are not calculable, then the courts allow a patentee to recover damages based on an "established royalty" or a "reasonable royalty."

B. Monetary Relief

Section 284 is interpreted to provide alternate measures of damages in patent infringement cases. These measures are based on lost profits to the infringing sales, a reasonable royalty on the infringing sales, or a combination of lost profits and a reasonable royalty. A reasonable royalty "sets the floor below which damage awards may not fall."[14] A patentee will normally attempt to recover lost profits since it is likely to be greater than a reasonable royalty.[15]

1. Lost Profits

Lost profits are the profits the patentee would have made "but for" the infringement. In order to claim lost profits, a patentee must prove with a reasonable probability that, but for the infringement the patentee would have made the infringer's sales and that evidence supports the calculation of the amount.[16] The patentee, however, need not "negate all possibilities that a purchaser might have bought a different product or might have foregone the purchase altogether."[17] The burden of proof is a preponderance of the evidence.[18] Any doubts are to be resolved against the infringer.[19]

In determining lost profits, an acceptable method was first announced in *Panduit Corp. v. Stahlin Bros. Fibre Works.*[20] The Court in *Panduit* set forth a test where the patentee must prove:

1. demand for the patented device;
2. the absence of acceptable non-infringing alternatives;
3. the patentee's capacity to exploit the demand; and
4. the amount of profit the patentee would have made.

The first three Panduit factors are the elements of causation asking whether the patentee would have made the sales "but for" the infringement. The fourth factor addresses how much the patentee is entitled to.

a. Demand for Patented Device

The patent owner must proffer evidence from which demand for the patented device can be inferred. Normally demand for the patented product sold by the infringer is inferred from the fact that those sales were made.[21] Evidence of a long-felt need and commercial success of the patented product also satisfy this first *Panduit* factor. For example, in *State Industries*, the court inferred demand from evidence that a great need had existed in the industry to develop foam-insulated water heaters, and that the patented method was the first to fulfill the need and the high sales figures for both parties were considered further evidence of demand.[22]

b. Absence of Acceptable Non-Infringing Substitutes

The patentee has the initial burden to show an absence of acceptable non-infringing substitutes.[23] Absence of acceptable non-infringing substitutes is necessary to show that, but for the infringement, the infringer's sales would have gone to the patentee rather than to third parties. Continued infringement after an infringement suit is filed is evidence of the absence of an acceptable non-infringing substitute.[24]

To qualify as an acceptable substitute, a competing product should possess the beneficial characteristics of the patented product.[25] In considering what is acceptable, the plaintiff must show either that specific purchasers bought the patented product for its claimed advantages, or that potential purchasers in the marketplace generally sought to buy the patented product for its beneficial characteristics.[26] The mere existence of competing products, however, does not necessarily make them acceptable non-infringing substitutes.[27]

When there is an acceptable non-infringing substitute in the marketplace, a patentee may still be able to establish entitlement to lost profits based on its market share.[28] The patentee must still prove that his product and the infringer's product are similar and competing for the same customers.[29] Then the patentee is entitled to a reasonable royalty on the remaining infringing sales for which lost profits were not proved.[30]

c. Capacity to Meet Demand

Not only does a patentee have to show a demand for the patented device, but the patent owner must also show that he had the capacity to meet the total sales of both the patentee and the infringer.[31] This manufacturing capacity requirement is met by showing that the work could have been subcontracted, that the patentee had sufficient facilities to manufacture the product, or that the patentee could have expanded his facilities to meet the demand for the infringing product.[32]

The marketing capacity requirement is also met by showing that the patentee protected the market it developed, had substantial sales and an advertising budget, employed direct salespeople and had sales techniques necessary to obtain and fill orders from large corporate buyers.[33] Additionally, the capacity requirement is satisfied when lack of manufacturing or marketing capacity is due to the infringement.[34]

d. Alternate Approaches to Causation

Subsequent Federal Circuit opinions are careful to note that *Panduit* is not the exclusive test for proving 'but for' causation.[35] "If there are other ways to show that the infringement in fact caused the patentee's lost profits, there is no reason why another test should not be acceptable."[36] The following alternative ways have been recognized to prove the element of causation:

1) Two-Supplier Market

A court may infer "but for" causation where the patentee can show that he and the infringer are the only two suppliers in the market.[37] Insignificant competitors and other infringers may be ignored.[38] Therefore, demand for the patented product is equal to the sum of the patentee's sales plus the infringer's sales in a two-supplier market.[39]

2) Permissible Market Share

In a market where there may exist multiple suppliers all selling inferior and/or infringing products the Federal Circuit has held that the patentee may receive lost profits for infringing sales based on its market share.[40]

In *Bic Leisure*, however, the court held that the patent owner must now show with reasonable probability that "but for" the infringing product, the customers would have been part of its market share.[41] Thus, a "similarity of products is necessary in order for market share proof to show correctly satisfaction of Panduit's second factor."[42]

Courts may infer "but for" causation even in the absence of strict proof of the Panduit elements.[43] When "the infringing product is an identical copy, or a virtually identical copy, of the commercial version of the patented invention, and particularly where the infringing product and the commercial version of the patented invention have common advantages over different, noninfringing – albeit perhaps 'competing' – products, it is reasonable to infer that the patentee probably would have made the sale but for the infringing sale."[44]

e. Measure of Lost Profits

"Generally, in determining whether infringing sales caused the patentee to lose profits, the district court must conclude (1) that the patentee would have made the sale but for the infringement, i.e., that causation existed, and (2) that proper evidence supporting the computation of lost profits has been presented." [45]

The amount of damages cannot be speculative, but the amount need not be proven with unerring precision.[46] Doubts are resolved against the infringer. Fixed costs such as management salaries, property tax and insurance are not included in the damage calculation.[47]

The amount of damages to be awarded for patent infringement is a question of fact in which the patent owner bears the burden of proof.[48] Lower courts have discretion in setting the amount of the award of lost profits and the standard of review is clearly erroneous.[49]

2. The Royalty Rate

When damages are not measured by lost profits the patentee is entitled to a reasonable royalty under 35 U.S.C. Section 284 which sets the floor below which damage awards may not fall.[50] The royalty the patentee is entitled to is calculated as of the date of infringement.[51] Sometimes when a patentee seeks damages on unpatented components sold with a patented apparatus, courts have applied a formulation known as the entire market value rule to determine whether such components should be included in the damage computation in reasonable royalty cases.[52]

There are three accepted methods for determining a the royalty rate: (1) constructing a hypothetical negotiation; (2) using the established royalty rate; and (3) the analytical method.

a. Hypothetical License

Using a hypothetical licensing negotiation between the patentee and a willing licensee at the time infringement began to determine the reasonable royalty is based upon the premise that a reasonable royalty is the amount the infringer would have been willing to pay, prior to the infringement, in an arm's length negotiation.[53]

1. Georgia-Pacific Factors

In *Georgia Pacific*, the court set forth 15 factors to help determine a reasonable royalty.[54] The *Georgia Pacific* factors are now often cited in determining the result of the hypothetical licensing negotiation. The factors include:

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 promotor.

6) The effect of selling the patented specialty in promoting sales of other products of the licenses; the existing value of the invention to the licensor as a generator of sales of his non-patented 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 has made use of the invention; and any evidence probative of the value of that use.

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 invention.

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; that is, the amount which a prudent licensee - who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention - 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.

2. Honeywell Factors - A Modern Approach

A more modern approach in determining a reasonable royalty is found in the court's jury instructions in *Honeywell v. Minolta.*[55]

The court modified the Georgia-Pacific factors in the following ways:

1) *Honeywell* omits the first two *Georgia-Pacific* factors concerning established and comparable royalties.

2) *Honeywell* adds "the relative bargaining positions" of the patentee and the infringer.

3) *Honeywell* substitutes what the parties "reasonably anticipated would be their profits or losses as a result of entering into a license agreement" for the *Georgia-Pacific* factor #12 concerning customary industry practice.

4) *Honeywell* adds "the extent to which the infringement prevented licensor form using or selling the invention."

5) *Honeywell* adds "the market to be tapped."

6) *Honeywell* expands *Georgia-Pacific* factor #15 by adding "...you may take into account the events and facts that occurred thereafter, and that could not have been known to or predicted by the hypothesized negotiators."

7) *Honeywell* adds "any other economic factor that normally prudent businessmen would, under certain similar circumstances, take into consideration in negotiating the hypothetical."

See Appendix B for side by side comparison of *Honeywell* and *Georgia-Pacific* factors; and

See Appendix C for an expert witness report applying the *Honeywell* factors.

b. Established Royalty Rate

A royalty rate is established when (1) it was widely applied in numerous licensing agreements with similar terms and (2) those terms are what the infringer would have basically needed to avoid infringement. Therefore, a single licensing agreement is not sufficient to prove an established royalty without additional evidence.[56] Rates agreed to in order to avoid or settle litigation are not conclusive evidence of an established royalty.[57] In addition, rates in a licensing agreement to make a product that is different from the infringing product are insufficient to prove an established royalty rate.[58] An established royalty usually sets the minimum recovery, but it does not necessarily set the maximum recovery for patent infringement.[59]

c. Analytical Method

A typical analytical approach begins with subtracting the infringer's overhead expenses from the anticipated gross profit of the infringer. An acceptable net profit is given to the infringer and the remaining profit is awarded to the patentee.[60]

3. Mixed Awards - Lost Profits Plus Reasonable Royalty

If the patentee is able to prove he would have made some of the infringer's sales, the patentee may be entitled to a combination of the lost profits on the sales he is able to prove he would have made and a reasonable royalty on the remaining infringing sales.[61]

4. Additional Damage Measures

A patentee may be entitled to additional compensation if evidence shows that "but for" the infringer he would have made more sales, would have sold at higher prices, or would have sold other non-patented products along with the sales of the patented product sold by the infringer.[62]

a. Price Erosion

A patentee is entitled to recover his losses if he was prevented from raising prices, or forced to lower prices or give discounts as a result of the defendant's infringement.[63] A court can take into consideration what alternatives would have competed at the higher price which includes: the relative prices charged by the patentee and infringer; a decrease in price or increase in discounting by the patentee following the infringer's market entry, and; retarded sales growth due to substantial litigation.[64]

b. Diminution of Value of Product/Market Spoilage

When an infringer offers a product which is of lesser quality than that of the patentee, the reputation and sales of the product may be affected.[65] In *Reebok Int'l*, the Federal Circuit recognized that "harm to reputation" is a factor to be considered in awarding damages.[66] The court said that "[h]arm to reputation resulting from confusion between an inferior accused product and a patentee's superior product is a type of harm that is often not fully compensable by money because the damages caused are speculative and difficult to measure."[67]

c. Convoying/ "Entire Market" Rule

A patentee is entitled to lost profits on unpatented components which accompany the sale of patented components where, in reasonable probability, the patentee would have made the convoyed sales which the infringer made.[68] One key factor in applying the "entire market value" rule is determining whether the patentee could reasonably have anticipated the convoyed sales.[69] Other factors include the way products are marketed, the price lists, the industry custom of selling the unpatented product with the patented one, the marketability of the unpatented product by itself, and the physical dependence of the unpatented product on the patented product.[70]

The Federal Circuit limits compensation under the entire market rule so that "the unpatented components must function together with the patented component in some manner so as to produce a desired end product or result. All the components together must be analogous to components of a single assembly or be parts of a complete machine, or they must constitute a functional unit. Our precedent has not extended liability to include items that have essentially no functional relationship to the patented invention and that may have been sold with an infringing device only as a matter of convenience or business advantage."[71]

d. Unpatented Goods

The court in *Rite-Hite,* also expanded the recovery of lost sales to include sales of items not expressly covered by the patent. In order to fully compensate the patentee, profits related to sales of an unpatented item that the infringer "anticipated taking away" should be included in the damage award.

The deciding factor is whether "[n]ormally the patentee (or its licensee) can anticipate sale of such unpatented components as well as of the patented" ones.[72] "If in all reasonable probability the patent owner would have made the sales which the infringer has made, what the patent owner in reasonable probability would have netted from the sales denied to him is the measure of his loss, and the infringer is liable for that."[73]

e. Accelerated Market Re-Entry

The accelerated market re-entry theory entitles a patentee an award of the profits or the profits expected to be lost to the infringer after the patent expired as a result of the infringer's pre-expiration market penetration. Normally, damages end with expiration of the patent. Once the patent has expired, a competitor is free to enter the market and compete. Usually though, new entrants begin with a zero market share. Infringement, however, may have allowed the infringer to get a "head start" in the market for the formerly patented product. Therefore, the patentee is damaged even after patent expires. A patentee must prove traditional lost profits damages and the trial and/or injunction must be near or subsequent to the patent expiration.

5. Standard of Review on Appeal

Courts do not have the discretion to choose between the lost profits or the reasonable royalty method.[74] Courts, however, do have the discretion to determine reasonable accounting methods for calculating the lost profits or the reasonable royalty.[75] Subsidiary decisions, such as choosing an accounting method, are reviewed under the abuse of discretion standard.[76] When the amount of damages are fixed by the court, the damages are a question of fact and are reviewed under the clearly erroneous standard.[77] If, however, the Federal Circuit reviews a motion for judgment notwithstanding the verdict, the substantial evidence standard applies.[78]

6. Prejudgment and Post Judgment Interest

Both prejudgment and post judgment interest are elements of damages under 35 U.S.C. Section 284. Interest is not to be included in the punitive portion of the damage award.[79]

a. Prejudgment Interest

Normally, prejudgment interest is awarded from the date of infringement to the date of judgment.[80] The court has the discretion to limit or deny prejudgment interest if there exists justification such as the patentee is responsible for an undue delay in prosecuting the action.[81] Prejudgment interest may be awarded for all damages, including attorneys' fees, under 35 U.S.C. Section 285.[82] Whether to award simple or compound interest is within the discretion of the District Court.[83]

Additionally, the interest rate to apply is within the discretion of the court.[84] The courts have used the prime rate when the patentee used the rate for borrowing funds.[85] The courts have also used the U.S. Treasury Bill rate.[86] When special circumstances warrant, an interest rate above prime is used.[87]

b. Post Judgment Interest

28 U.S.C. Section 1961, sets post judgment interest which is to be compounded annually and calculated from the date of judgment at a rate based on the 52-week United States Treasury bills.

7. Enhanced Damages

a. Willful Infringement

The statute, 28 U.S.C. Section 284, which authorizes enhancement has been held to be a matter of discretion and to be based upon the nine factors in *Read Corp. v. Portec, Inc.*[88] The nine factors enumerated in *Read Corp. v. Portec Inc.* to determine whether to award enhanced damages are:[89]

(1) Whether the infringer deliberately copied the ideas or design of another.

(2) Whether the infringer, when he knew of the other's patent protection, investigated the scope of the patent and formed a good-faith belief that it was invalid or that it was not infringed.

(3) The infringer's behavior as a party to the litigation.

(4) Defendant's size and financial condition.

(5) Closeness of the case.

(6) Duration of defendant's misconduct.

(7) Defendant's motivation for harm.

(8) Whether defendant attempted to conceal its misconduct.

A patentee whose patents have been willfully infringed may be awarded damages "up to three times the amount found or assessed."[90] Recently, however, a court held that a "close case" of willful patent infringement requires only partially enhanced damages rather than treble damages.[91] The purpose of the statute is to punish the willful infringer, to deter like conduct in the future, and to protect the integrity of the patent system.[92] The enhanced damages must be a penalty and not merely to adequately compensate the patentee.[93] "Although the statute does not state the basis upon which a district court may increase damages, it is well-settled that enhancement of damages must be premised on willful infringement or bad faith. Furthermore, if a district Court enhances damages, it must explain and articulate thorough findings the basis upon which it concludes that there has been willful infringement or bad faith."[94]

Willful infringement is a factual finding which must be found by clear and convincing evidence and the standard of review is clearly erroneous.[95] Most of the time, the Federal Circuit affirms findings of willful infringement and awards of increased damages and/or attorney fees but on occasion it overturns such awards[96] or the court remands such awards.[97]

To willfully infringe, infringer must have acted in disregard of the patent without a good faith belief that the patent was not infringed, invalid, or unenforceable.[98] Willfulness cannot be determined by hard and fast *per se* rules, instead the "totality of the circumstances" is considered in deciding whether the infringement was willful.[99] Some factors showing willfulness include deliberate copying, failure to exercise due care after notice of a patent, concealment or misrepresentation as to infringing activities, and the continuation of litigation in bad faith.[100]

The advice of counsel is apparently the most important factor to be considered whether the infringement was willful.[101] For the advice of counsel to be effective it should be as soon as possible after notice or knowledge of the patent and before the infringement starts, competent and well-founded, authored by a patent attorney rather than a general attorney or technical/management personnel, and adhered to by the infringer. However, "there is no *per se* rule that an opinion letter from patent counsel will necessarily preclude a finding of willful infringement... nor is there a *per se* rule that the lack of such a letter necessarily requires a finding of willfulness."[102]

b. Attorneys' Fees and Costs

Under 35 U.S.C. Section 285, if the court finds that the case is "exceptional" by clear and convincing evidence, attorney fees may also be awarded.[103] The purpose of Section 285 is to compensate the prevailing party for the prosecution or defense of the suit, to discourage infringement by penalizing the infringer and to prevent gross injustice when the accused litigated in bad faith.[104] The decision to award fees is discretionary.[105] Unjustified litigation is a sufficient basis for finding a case to be "exceptional."[106] Misconduct or bad faith conduct during litigation also establishes a case as "exceptional."[107]

8. Limitations on Damages

a. Patent Marking

Generally, damages cannot be awarded unless constructive notice was given by marking the patented product or unless the infringer had actual notice of the alleged infringement.[108] The filing of an action for infringement constitutes actual notice under Section 287 of Title 35. Marking provisions do not apply where the patent is directed to a process or method.[109] Where a patented product and method are infringed, the patentee must mark the product.[110] Once marking has begun, it must be consistent and continuous to satisfy the constructive notice provisions of the statute.[111]

b. Laches

A laches defense bars relief only for damages accrued prior to suit where the patentee delayed filing suit and the delay was unreasonable, inexcusable and prejudicial to the alleged infringer.[112]

c. Equitable Estoppel

Equitable estoppel, which may bar all damages, requires proof of (1) affirmative conduct by the patentee which led the alleged infringer to believe that he would not sue on his patent; (2) alleged infringer's detrimental reliance on the patentee's conduct; and (3) material prejudice to the infringer due to the reliance, if the patentee is allowed to proceed with its suit.[113]

C. Equitable Relief

1. Preliminary Injunctions

Preliminary injunctions involve substantive matters unique to patent law and are therefore governed by the Federal Circuit court.[114] The determination of whether a preliminary injunction is appropriate involves an analysis and balancing of four factors: (1) the plaintiff's likelihood of success on the merits; (2) the likelihood of irreparable harm to the plaintiff without injunctive relief; (3) the balance of hardships between the plaintiff and defendant; and (4) the public interest.[115]

a. Likelihood of Success

The first factor to be considered for a preliminary injunction is the likelihood of success on the merits.[116] A likelihood of success on the merits is established by demonstrating that the patent at issue is valid and has been infringed by the defendant.[117] Irreparable harm is presumed where a patentee makes a strong showing of validity and infringement.[118]

A patent is presumed valid an the infringer has the burden to prove invalidity by clear and convincing evidence.[119] A patent is presumed valid because the U.S. Patent and Trademark Office is presumed to have examined the patent properly.[120] Whether a patent claim has been literally infringed involves properly interpreting the claims to determine their scope.[121] Determining the claim scope is a question of law.[122] Second, the properly interpreted claims must cover the accused device or process. The claims determine the scope of the invention and the properly interpreted claims must cover the accused infringing product or process.[123] Literal infringement is established when every limitation set forth in a patent claim is present in the accused device or process.[124]

b. Irreparable Harm

Where there is a strong showing of patent validity and infringement, irreparable harm may be presumed.[125] "The nature of the patent grant thus weighs against holding that monetary damages will always suffice to make the patentee whole, for the principal value of the patent is the statutory right to exclude."[126] Every patentee, however, who shows a likelihood of success is not entitled to a preliminary injunction.[127] The presumption of irreparable harm may be rebutted with evidence such as evidence of licensing, undue delay, or no present capability to infringe the patent.[128]

c. Balance of the Hardships

Although balance of the hardships is a factor to be considered in granting a preliminary injunction, there is no requirement that a District Court expressly find that the balance tips in the favor of the patentee.[129] "One who elects to build a business on a product found to infringe can not be heard to complain if an injunction against a continuing infringement destroys the business so elected."[130]

d. The Public Interest

Protecting rights secured by valid patents is an important public interest because Congress has determined that the public interest is not served by cheaper goods when the cheaper price is due to patent infringement.[131]

2. Permanent Injunctions

"Absent a sound reason for denying [an] injunction," courts will grant a patentee injunctive relief once infringement of the valid patent is established.[132] A permanent injunction should only be denied in light of "very persuasive evidence that further infringement will not take place."[133] Therefore, courts will rarely deny a permanent injunction against an infringer.

A court may deny a permanent injunction where the injunction would cause "irreparable hardship" on the infringer without any concomitant benefit to the patentee.[134] A court may also deny a permanent injunction when a patent holder has been awarded damages that compensate the holder for the patent term.[135]

An injunction should be narrowly tailored and an injunction that imposes unnecessary restraints on a party's legal activities will be vacated.[136] Conversely, an injunction should be broad enough to prohibit future infringement by the products found to infringe and products that are slightly different which clearly would still infringe.[137]

D. A Case Example end.

Cecil D. Quillen, Jr., in an unpublished manuscript, *Innovation and the United States Patent System Today*, sets forth the following case example.[138] In *Polaroid Corp. v. Eastman Kodak Co.,* Polaroid's claim was for $12B, and the judgment was for $873M.[139] The judgment was determined by awarding Polaroid lost profits on the sales it lost to Kodak which would have been more profitable than the 10% "reasonable royalty" on the remainder of Kodak's sales. The $873M judgment included $233M lost profits, $204M "reasonable royalty," and $436M interest.

1. Actual Lost Profits Calculation

Polaroid's actual lost profits pretax income on all of its lost sales would have been $171M. The pretax royalty on all of Kodak's sales at the 10% reasonable royalty would have been $317M.

2. If No Mixed Award

If the court followed the literal interpretation of the statute and regarded damages based on "pecuniary loss" and "reasonable royalty" mutually exclusive, and awarded damages and interest on the greater of Polaroid's lost profits on all of its lost sales, or a 10% reasonable royalty on all of Kodak's sales, but not a combination of the two, the award would have been based on the 10% royalty, since it was the larger of the two. The judgment, including interest but not considering taxes, would have been for $663M ($317M royalty and $346M interest) at the 10% "reasonable royalty." ($110M less than what was awarded.)

3. If Current Tax Assessment

If the court considered the additional Federal income taxes Polaroid would have paid on its additional royalty income and interest income, then the award based on the 10% royalty plus an increase to allow for current taxes would have been $394M. ($479M less than what was awarded.)

III. Patent Infringement Remedies in the United States are Out of Control

A. A Now and Then Comparison

Before the advent, in the early 1980's, of the pro-patent jurisprudence of the Court of Appeals for the Federal Circuit (CAFC), increased rate of passage of pro-competitive intellectual property legislation and the very noticeable slow-down, if not stoppage, of governmental antitrust activities aimed at intellectual property licensing and exploitation, courts invalidated patents more often than not, normally assessed only low "reasonable royalty" damages, rarely awarded enhanced damages or punitive damages and attorney fees and hardly ever granted preliminary injunctions.

Then the climate changed drastically. The value of patents increased dramatically as more patents were being upheld. Courts began "to read the riot act" to infringers and infringement penalties became severe. Additionally, preliminary injunctions were issued more liberally and stays of injunctions pending appeals were being denied. This change that has continued apace to this day, has been heralded with fanfare by such business periodicals as FORTUNE ("The Surprising New Power of Patents," June 1986), CHEMICAL WEEK ("Washington's Propatent Court," December 1986), and BUSINESS WEEK ("The Battle Raging Over 'Intellectual Property' - Patents, Copyrights, and Trademarks are Potent Competitive Weapons," May 1989). The FORTUNE article carried the following interesting by-line:

> Thanks mostly to a new appeals court, patent holders are winning many more suits against infringers. Damage awards have driven some defendants close to bankruptcy. Companies with patents are going on the offensive; infringers had better rethink.[140]

The FORTUNE article also stated that "what is really giving management the willies is the trend in damages."[141] Consequently, there is "a growing respect for the power of patents and ... the need to manage differently as a result."[142]

The BUSINESS WEEK article asserted that the "newly created appeals court, which is upholding patents 80% of the time, got the revolution going" and that the "defense of intellectual property rights has gotten so aggressive, in fact, that some experts fear the pendulum may swing too far."[143] Normally, increased damages and/or attorney fees used to be assessed only in cases of truly flagrant copying often coupled with other egregious conduct and absence of a competent legal opinion.

According to the BUSINESS WEEK article, Representative Kastenmeier, Congress' leading intellectual property booster, also saw signs that intellectual property protection was going too far and criticized the new CAFC by saying "it's regrettable that the court leans as far as it does. We didn't intend it to be that way."[144] In this connection it is of interest to note that, in an address at the annual dinner in honor of the Federal Judiciary of the New York Patent and Trademark Law Association in March 1990, Chief Judge James Oakes of the Second Judicial Circuit referred, on one hand, to the present time as "truly a golden age for intellectual property," but on the other hand, as a period of "patent blackmail" being available to "patent chasers" (in analogy to "ambulance chasers"). He warned that this was a downside of protection going too far.[145] Finally, in a 1993 article, FORBES magazine railed against "The Great Patent Plague" in which courts are playing the villain's role.[146]

B. Billion Dollar Damage Awards

Damage infringement awards, in particular, have gone through the roof. They can be astronomical and can reach or even exceed a billion dollars, as illustrated in Appendix D. These outrageous damages are due to numerous factors. The primary causative factor is the possible additive effect of the several components comprising damage awards, namely, lost profits, reasonable royalties, punitive enhancement (up to trebling), interest assessments, attorney fees, and etc. This additive effect is also shown tellingly in Appendix D.

Ronald Coolley of Arnold, White and Durkee, however, lists 164 decisions reported during 1982 to 1993 and points out that "although the decisions with huge damage awards attract the attention of those concerned about the direction the patent system is moving, the large majority of decisions result in damage awards of $10 million or less"[147]

But 59 decisions in this decision involved damages totaling one to ten million dollars. Thus, while in 84 decisions, damages ran less than one million dollars, in 80 decisions, damages exceeded one million dollars - still very high damage amounts.

C. Prevalence of Jury Trials

Another factor escalating damage awards, on top of the enormous appeal and glamour of patents today, is the increased use of juries in patent infringement and validity trials to the extent that juries are found in the majority of such trials nowadays. This sharp increase coincides with the unprecedented phenomenon that more and more patent trials are conducted by litigation specialists of large general law firms. These are skilled in trying cases before juries, but do not have technical backgrounds and are not admitted to practice before the PTO. Previously, patent cases were tried by and large before district court judges by patent lawyers of "boutique" patent law firms. What's more, the present day patent litigators engage jury consultants and economists/expert witnesses so regularly that cottage industries have grown up around these jury consultants and damage experts.

With the increased use of juries and complexity of cases, concerns about jury competence have arisen. The debate about jury performance in complex cases started in the 1960's in connection with the IBM antitrust litigation. Recently, the focus of the debate has shifted to toxic tort and high-tech patent infringement trials. It almost goes without saying that "the technical, legal and economic concepts involved in many modern cases are beyond the experience or understanding of the average juror."[148] Even though the argument that even civil jury trials are rooted in and mandated by the Seventh Amendment of the United States Constitution has been pervasively scrapped, such jury trials are not going to go away very soon.

Possibly yet another factor driving patent infringement litigation is the birth and growth of a veritable cottage industry of new firms which finance patent litigation and even sell shares, although "making profits from suits perverts the judicial process, which is intended to compensate injured parties, not make investors rich." [149]

Furthermore, it is well known that juries tend to be pro-patent and hence are more easily swayed to hold in favor of the patentee. Moreover, jury awards are not easily overturned or modified on appeal.[150]

D. Cultural Constraints

Anent the question of whether infringement remedies are excessive or too severe or too lax or lenient in Japan, cultural, societal and legal traditions are important factors not to be overlooked. As was pointed out by Jeffrey Hawley in his article on "Patent Procurement and Enforcement in Japan," published in the Newsletter of the American Group of the Pacific Intellectual Property Association, in February 1996, the Japanese patent statute emphasizes utilization of inventions by industry, inasmuch as its stated purpose is to "encourage invention by promoting their protection and utilization so as to contribute to the development of industry." A patent system designed to fulfill this purpose would have as features early filing, low filing fees, early publication, deferred examination, narrow claim scope, pre-grant opposition, high maintenance fees, prior user rights, compulsory licensing, etc. and, very importantly, as regards enforcement:

> [One] would devise an enforcement system whereby even if you obtained patent rights, they would be difficult to enforce and remedies would be marginal. There would be little discovery to help prove infringement and damages. You would probably not provide for treble damages and attorney's fees... In litigation, you would make it easy for the manufacturer to rely on the published scope of the claim.

Broadening the scope of the claim beyond its literal meaning would be difficult if not impossible.[151]

By contrast, the American Constitution emphasizes exclusive rights to inventors. Accordingly, a patent system designed to favor such exclusive rights would be a first-to-invent scheme with a grace period, fast examination, broad- claim scope, and reexamination and again, as regards enforcement, such a system would provide effective remedies, including preliminary injunctions and punitive damages and permit reliance on the doctrine of equivalents on top of broad claims, elaborate discovery and decision making by a jury.

E. The Swinging Pendulum?!

As is the case with the "first-to-invent" system, the United States is the "odd-man out" also when it comes to patent infringement remedies. In no other country are patent infringement awards as high, if not excessive, and injunctions granted as liberally, as in the United States. Based on CAFC jurisprudence of recent years, patent infringement remedies are vastly more stringent and harsher than they ever were before or now need to be. The law on remedies, damages and injunctions has not changed significantly, only its administration and implementation by the courts. In other words, from a historical perspective, the law and practice regarding patent infringement remedies have been, until fairly recently, quite similar to the law and practice in other countries, to wit, rare preliminary injunctions, stay of permanent injunctions pending appeals, modest reasonable royalty or lost profits damages related to patented subject matter and not unpatented products and entire market value, etc. Then, it is easy to conclude that the pendulum has swung too far in the United States and should and will swing back.

V. Conclusion

Today we live in a global village – a world of blurring sovereignty and trans-national regulation, where national economics are increasingly interdependent and intertwined and transnational corporations have become "stateless corporations," which recognize no borders. Governments, however, are still reluctant to embrace this new global reality.

For example, the United States House of Representatives, by a vote of 416 to 2, recently warned Europe against "an unwarranted and unprecedented interference" in a United States business transaction, namely, the Boeing-McDonnell merger. Ironically, the United States does more interfering than any other nation. Witness the American legislation seeking to punish foreign companies doing business in Cuba, Iran and Libya.

Additionally, United States antitrust authorities have been attacking mergers in Europe and Japan, e.g. recent Nippon Paper Industries case. The United States is now also challenging that Japan's Big Store Law before the World Trade Organization, apparently on behalf of Kodak, which could be considered as a mere zoning matter. On the other hand, according to the Washington Post, these interference initiatives "represent early stages toward international rules for a new globalized economy" which "will protect every country, but also require every country to give up some sovereign control."[152]

Harmonization is in the air. Times are a-changing!

[1] James A. Forstner, *Punitive Damages Would be Latest in Series of 'Positive Steps' in Japan*, WORLD INTELLECTUAL PROPERTY REPORT, April 1997, at 124.

[2] Act of 1970, §4.

[3] Act of 1793, §5.

[4] Act of 1800, §3.

[5] Act of 1836, §14.

[6] Act of 1870, §55.

[7] Act of 1870, §59.

[8] *See* Tilghman v. Proctor, 125 U.S. 136, 148-49 (1888).

[9] *See* Aro Mfg. Co. v. Convertible Top Replacement Co., 377 U.S. 476, 505-507 (1964).

[10] *See* Georgia-Pacific Corp. v. U. S. Plywood Corp., 243 F. Supp. 500, 514-46 (S.D.N.Y. 1965).

[11] *See Id.*

[12] *See* Kori Corp. v. Wilco Marsh Buggies & Draglines, Inc., 761 F.2d 649, 653-56 (Fed. Cir. 1985), *cert. denied*, 474 U.S. 902 (1985).

[13] *See Id.*

[14] *See* Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538, 1544 (Fed. Cir. 1995) (*en banc*), *cert. denied*, 116 S. Ct. 184 (1995).

[15] *See* Micro Motion, Inc. v. Kane Steel Co., Inc., 894 F.2d 1318 (Fed. Cir. 1990).

[16] *See, e.g.*, Standard Haven Prods. v. Gencor Indus., 953 F.2d 1360, 1372, 21 U.S.P.Q.2d (BNA) 1321, 1331 (Fed. Cir. 1991), *cert. denied*, 113 S.Ct. 60 (1992); Kaufman Co. v. Lantech, Inc., 926 F.2d 1136, 1140, 17 U.S.P.Q.2d (BNA) 1828, 1831 (Fed. Cir. 1991); State Indus., Inc. v. Mor-Flo Indus, Inc., 883 F.2d 1573, 1577, 12 U.S.P.Q.2d (BNA) 1026, 1028 (Fed. Cir. 1989); *cert. denied*, 493 U.S. 1022 (1990); King Instrument Corp. v. Otari Corp., 767 F.2d 853, 863, 226 U.S.P.Q. (BNA) 402, 409 (Fed. Cir. 1985), *cert. denied*, 475 U.S. 1016 (1986); Paper Converting Machine Co. v. Magna-Graphics Corp., 745 F.2d 11, 21-22, 223 U.S.P.Q. (BNA) 591, 598 (Fed. Cir. 1984).

[17] Paper Converting Mach., 745 F.2d at 21, 223 U.S.P.Q. (BNA) at 598.

[18] *See, e.g.*, SmithKline Diagnostics, Inc. v. Helena Labs., Corp., 926 F.2d 1161, 1164, 17 U.S.P.Q.2d (BNA) 1922, 1924-25 (Fed. Cir. 1991); Yarway Corp. v. Eur- Control USA, Inc., 775 F.2d 268, 275, 227 U.S.P.Q. (BNA) 352, 357 (Fed. Cir. 1985).

[19] *See, e.g.*, Kaufman Co., 926 F.2d at 1141, 17 U.S.P.Q.2d (BNA) at 1832; Del Mar Avionics, Inc. v. Quinton Instrument Co., 836 F.2d 1320, 1327, 5 U.S.P.Q.2d (BNA) 1255, 1260 (Fed. Cir. 1987); Gyromat Corp. v. Champion Spark Plug Co., 735 F.2d 549, 554-55, 222 U.S.P.Q. (BNA) 4, 8 (Fed. Cir. 1984); Ristvedt-Johnson, Inc. v. Brandt, Inc., 805 F. Supp. 557, 561 (N.D. Ill. 1992) (Rader, J. sitting by designation)

[20] *See* Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152, 1166 (6th Cir. 1978) (Markey, J.).

[21] *See, e.g.,* SmithKline Diagnostics, 926 F.2d at 1165 n.3, 17 U.S.P.Q.2d (BNA) at 1926 n.3; Gyromat Corp., 735 F.2d at 552, 222 U.S.P.Q. (BNA) at 6; Andrew Corp. v. Gabriel Elecs., Inc., 785 F. Supp. 1041, 1046, 23 U.S.P.Q.2d (BNA) 1019, 1023 (D. Me. 1992).

[22] *See* State Indus., 883 F.2d at 1578; *See also* Bic Leisure Prods., Inc. v. Windsurfing Int'l, Inc., 1 F.3d 1214, 1218-19 (Fed. Cir. 1993).

[23] *See* Uniroyal, Inc. v. Rudkin-Wiley Corp., 939 F.2d 1540, 1544 (Fed. Cir. 1991).

[24] *See* Panduit Corp., 575 F.2d at 1162, 197 U.S.P.Q. (BNA) at 733.

[25] *See, e.g.,* Radio Steel and Mfg. Co. v. MTD Products, Inc., 788 F.2d 1554 (Fed Cir. 1986); SmithKline Diagnostics, 926 F.2d at 1166, 17 U.S.P.Q.2d (BNA) at 1926; Uniroyal, 939 F.2d at 1545, 19 U.S.P.Q.2d (BNA) at 1437; Kaufman, 926 F.2d at 1142-43, 17 U.S.P.Q.2d (BNA) at 1833; TWM Mfg. Co. v. Dura Corp., 789 F.2d 895, 901- 02, 229 U.S.P.Q. (BNA) 525, 529 (Fed. Cir.), *cert. denied,* 479 U.S. 852 (1986) citing, Central Sova Co. v. Geo. A. Hormel & Co., 723 F.2d 1573, 1579, 220 U.S.P.Q. (BNA) 490, 494 (Fed. Cir. 1983).

[26] *See* Ristvedt-Johnson, 805 F. Supp. at 562.

[27] *See, e.g.,* Standard Haven Prods., 953 F.2d at 1373, 21 U.S.P.Q.2d (BNA) at 1331; Uniroyal, 939 F.2d at 1545, 19 U.S.P.Q.2d (BNA) at 1437; Kaufman, 926 F.2d at 1142, 17 U.S.P.Q.2d (BNA) at 1832-33; TWM, 789 F.2d at 901, 229 U.S.P.Q. (BNA) at 529.

[28] *See* State Indus., 883 F.2d at 1578-80, 12 U.S.P.Q.2d (BNA) at 1029.

[29] *See* Bic Leisure Prods., 1 F.3d at 1219- 20, 27 U.S.P.Q.2d (BNA) at 1674-75.

[30] *See* State Indus., 883 F.2d at 1577-81, 12 U.S.P.Q.2d (BNA) at 1029-32.

[31] *See* Datascope Corp. v. SMEC, Inc., 879 F.2d 820, 825-26 (Fed. Cir. 1989), *cert. denied,* 493 U.S. 1024 (1990).

[32] *See, e.g.,* Gyromat Corp., 735 F.2d at 554-55, 222 U.S.P.Q. (BNA) at 7-8; Andrew Corp., 785 F. Supp. at 1048, 23 U.S.P.Q.2d (BNA) at 1024-25; Polaroid Corp. v. Eastman Kodak Co., 16 U.S.P.Q.2d (BNA) 1481, 1510-11 (D. Mass. 1990).

[33] *See* Yarway Corp., 775 F.2d at 276, 227 U.S.P.Q. (BNA) at 357-58; Gyromat Corp., 735 F.2d at 554, 222 U.S.P.Q. (BNA) at 8; Andrew Corp., 785 F. Supp. at 1048, 23 U.S.P.Q.2d (BNA) at 1024-25.

[34] *See* Lam, Inc. v. Johns-Manville Corp., 718 F.2d 1056, 1067-68, 219 U.S.P.Q. (BNA) 670, 677-78 (Fed. Cir. 1983).

[35] *See* Rite-Hite, 56 F.3d at 1548.

[36] *Id.*

[37] *See, e.g.,* Pall Corp. v. Micron Separations, Inc., 66 F.3d 1211, 1222 (1995); Lam, Inc., 718 F.2d at 1065, 219 U.S.P.Q. (BNA) 675; Kaufman, 926 F.2d at 1143-44, 17 U.S.P.Q.2d (BNA) at 1831-34; Kalman v. Berlyn Corp., 9 U.S.P.Q.2d (BNA) 1191, 1195, *aff'd in relevant part,* 914 F.2d 1473, 16 U.S.P.Q.2d (BNA) 1093 (Fed. Cir. 1990); Del Mar Avionics, 836 F.2d at 1327, 5 U.S.P.Q.2d (BNA) at 1260; Ristvedt-Johnson, 805 F. Supp. at 563.

[38] *See, e.g.,* Micro Motion, 894 F.2d at 1322, 13 U.S.P.Q.2d (BNA) at 1699; State Indus., 883 F.2d at 1578, 12 U.S.P.Q.2d (BNA) at 1029; Lam, Inc., 718 F.2d at 1067, 219 U.S.P.Q. (BNA) at 677; Andrew Corp., 785 F. Supp. at 1043-44, 23 U.S.P.Q.2d (BNA) at 1021.

[39] *See, e.g.,* Datascope Corp., 879 F.2d at 825, 11 U.S.P.Q.2d (BNA) at 1324; Livesay Window Co. v. Livesay Indus., Inc., 251 F.2d 469, 473, 116 U.S.P.Q. (BNA) 167, 170 (5th Cir. 1958); Andrew Corp., 785 F. Supp. at 1046, 23 U.S.P.Q.2d (BNA) at 1023; Polaroid Corp., 16 U.S.P.Q.2d (BNA) at 1492.

[40] *See* State Indus., 883 F.2d at 1579.

[41] *See* Bic Leisure, 1 F.3d 1214.

[42] *Id.* at 1219.

[43] *See, e.g.,* AMP, Inc. v. Lantrans, Inc., 22 U.S.P.Q.2d (BNA) 1448 (C.D. Cal. 1991); Paper Converting Mach., 745 F.2d at 21, 223 U.S.P.Q. (BNA) at 598.

[44] AMP, Inc., 22 U.S.P.Q.2d (BNA) at 1452.

[45] *Id.* at 1451.

[46] *See, e.g.,* Minnesota Min. & Mfg. v. Johnson & Johnson, 976 F.2d 1559, 1579, 24 U.S.P.Q.2d (BNA) 1321, 1338 (Fed. Cir. 1992); Standard Haven Prods., 953 F.2d at 1374, 21 U.S.P.Q.2d (BNA) at 1332; Bio-Rad Lab., Inc. v. Nicolet Instrument Corp., 739 F.2d 604, 616, 222 U.S.P.Q. (BNA) 654, 664 (Fed. Cir. 1984); Lam, Inc., 718 F.2d at 1065, 219 U.S.P.Q. (BNA) at 675.

[47] *See* Paper Converting, 745 F.2d at 22, 223 U.S.P.Q. (BNA) at 599; Ristvedt-Johnson, 805 F. Supp. at 565; Andrew Corp., 785 F. Supp. at 1048, 23 U.S.P.Q.2d (BNA) at 1025; Polaroid Corp., 16 U.S.P.Q.2d (BNA) at 1526.

[48] *See* SmithKline Diagnostics, 926 F.2d at 1164, 17 U.S.P.Q.2d (BNA) at 1925.

[49] *See Id.*

[50] *See* Panduit Corp., 575 F.2d at 1166; Rite-Hite, 56 F.3d at 1537.

[51] *See* Wang Lab., Inc. v. Toshiba Corp., 993 F.2d 858, 869-870 (Fed. Cir. 1993); Fromson v. Litho Plate and Supply Co., 853 F.2d 1568, 1575 (Fed. Cir. 1988).

[52] *See* Rite-Hite, 56 F.3d at 1549.

[53] *See* Panduit Corp., 575 F.2d at 1157-58, 197 U.S.P.Q. (BNA) at 731; *accord* Trell v. Marlee Elecs. Corp., 912 F.2d 1443, 1445, 16 U.S.P.Q.2d (BNA) 1059, 1061 (Fed. Cir. 1990).

[54] *See* Georgia-Pacific Corp., 318 F.Supp. at 1120, 166 U.S.P.Q. (BNA) at 238.

[55] *See Honeywell v. Minolta,* Civil Nos. 87-4847, 88-1624 (D.N.J. Jan. 28, 1992), jury instructions at 69.

[56] *See* Hanson v. Alpine Ski Area, Inc., 718 F.2d 1075, 1078, 219 U.S.P.Q. (BNA) 679, 681-82 (Fed. Cir. 1983).

[57] *See* Deere & Co. v. International Harvester Co., 710 F.2d 1551, 1557, 218 U.S.P.Q. (BNA) 481, 486 (Fed. Cir. 1983).

[58] *See* Trell, 912 F.2d at 1446, 16 U.S.P.Q.2d (BNA) at 1059.

[59] *See* D. CHISUM ON PATENTS Section 20.03[2].

[60] *See, e.g.,* TWM Mfg. Co. v. Dura Corp., 789 F.2d 895, 899, 229 U.S.P.Q. (BNA) 525, 527 (Fed. Cir. 1986); Hanson, 718 F.2d at 1078-82, 219 U.S.P.Q. (BNA) at 681-85; Polaroid Corp., 16 U.S.P.Q.2d (BNA) at 1534.

[61] *See, e.g.,* State Indus., 883 F.2d at 1580, 12 U.S.P.Q.2d (BNA) at 1031; TWM Mfg., 789 F.2d at 901-02, 229 U.S.P.Q. (BNA) at 528-29.

[62] *See, e.g.,* Minnesota Min. & Mfg., 976 F.2d at 1578- 79, 24 U.S.P.Q.2d (BNA) at 1337-38; Water Technologies Corp. v. Calco, Ltd., 850 F.2d 660, 673 (Fed. Cir. 1988); Amstar Corp. v. Envirotech Corp., 823 F.2d 1538, 1543, 3 U.S.P.Q.2d (BNA) 1412, 1415 (Fed. Cir. 1987); Kalman, 914 F.2d at 1485, 16 U.S.P.Q.2d (BNA) at 1102; TWM Mfg., 789 F.2d at 902, 229 U.S.P.Q. (BNA) at 529.

[63] *See, e.g.,* TWM Mfg., 789 F.2d at 903, 229 U.S.P.Q. (BNA) at 529; Saf-Gard Products, Inc. v. Service Parts, Inc., 491 F. Supp. 996, 1009 (D. Ariz. 1980).

[64] *See, e.g.,* Minnesota Min. & Mfg., 976 F.2d at 1579, 24 U.S.P.Q.2d (BNA) at 1337-38; TWM Mfg., 789 F.2d at 901-902, 229 U.S.P.Q. (BNA) at 528-29; Polaroid Corp., 16 U.S.P.Q.2d (BNA) at 1490-92; Lam, Inc., 718 F.2d at 1067, 219 U.S.P.Q. (BNA) at 677-78.

[65] *See, e.g.,* Wahpeton Canvas Co. v. Frontier, Inc., 870 F.2d 1546, 1548 n.2, 10 U.S.P.Q.2d (BNA) 1201, 1204 n.2 (Fed. Cir. 1989); Laitram Corp. v. Cambridge Wine Cloth Co., 863 F.2d 855, 859, 9 U.S.P.Q.2d (BNA) 1289, 1294 (Fed. Cir. 1988), *cert. denied,* 490 U.S. 1068 (1989).

[66] *See* Reebok Int'l Ltd., v. J. Baker, Inc., 32 F.3d 1552 (Fed. Cir. 1994).

[67] *Id.* at 1558.

[68] *See, e.g.,* Beatrice Foods Co. v. New England Printing and Lithographing Co., 899 F.2d 1171, 1175, 14 U.S.P.Q.2d (BNA) 1020, 1023 (Fed. Cir. 1990); State Indus., 883 F.2d at 1580, 12 U.S.P.Q.2d (BNA) at 1031; Rexnord, Inc. v. Laitram Corp., 6 U.S.P.Q.2d (BNA) 1817 (E.D. Wisc. 1988); *accord* Rite-Hite, 56 F.3d at 1550; TWM Mfg., 789 F.2d at 901, 229 U.S.P.Q. (BNA) at 528; King Instrument, 767 F.2d at 865-66, 226 U.S.P.Q. (BNA) at 410-11; Paper Converting Mach., 745 F.2d at 22-23, 223 U.S.P.Q. (BNA) at 599-600.

[69] *See* Del Mar Avionics, Inc., 836 F.2d at 1327, 5 U.S.P.Q.2d (BNA) at 1260.

[70] *See, e.g.,* Kalman, 9 U.S.P.Q.2d (BNA) at 1196-97; State Indus., 883 F.2d at 1580, 12 U.S.P.Q.2d (BNA) at 1031; TWM Mfg., 789 F.2d at 901, 229 U.S.P.Q. (BNA) at 528; Paper Converting Mach., 745 F.2d at 22-23, 223 U.S.P.Q. (BNA) at 599.

[71] *See* Rite-Hite, 56 F.3d at 1550.

[72] Tektronix, Inc. v. United States, 552 F.2d 343, 351, 193 U.S.P.Q. (BNA) 385, 393 (Ct.Cl.1977).

[73] Paper Converting Mach., 745 F.2d at 23, 223 U.S.P.Q. (BNA) at 591.

[74] *See* SmithKline Diagnostics, 926 F.2d at 1164-5, 17 U.S.P.Q.2d (BNA) at 1925.

[75] *See Id.*

[76] *See Id.*

[77] *See Id.*

[78] *See Id.*

[79] *See, e.g.,* Beatrice Foods Co. v. New England Printing and Lithographing Co., 923 F.2d , 1576, 1580, 17 U.S.P.Q.2d (BNA) 1553, 1556 (Fed. Cir. 1991); Underwater Devices Inc. v. Morrison-Knudsen Co., 717 F.2d 1380, 1389, 219 U.S.P.Q. (BNA) 569, 575-76 (Fed. Cir. 1983).

[80] *See* Nickson Indus., 847 F.2d at 800.

[81] *See, e.g.,* General Motors, 461 U.S. at 655; Allen Archery, Inc. v. Browing Mfg. Co., 898 F.2d 787, 791, 14 U.S.P.Q.2d (BNA) 1156, 1159 (Fed. Cir. 1990); Nickson Indus., Inc. v. Rol Mfg. Co., 847 F.2d 795, 800, 6 U.S.P.Q.2d (BNA) 1878, 1881 (Fed. Cir. 1988); Bio-Rad Lab., 739 F.2d at 618, 222 U.S.P.Q. (BNA) at 665; Gyromat Corp., 735 F.2d at 555-56, 222 U.S.P.Q. (BNA) at 8-9.

[82] *See* Mathis v. Spears, 857 F.2d 749, 757-58.

[83] *See* Rite-Hite, 56 F.3d at 1555.

[84] *See* Studiengesellschaft Kohle, m.b.H. v. Dart Industries, Inc., 862 F.2d 1564, 1579 (Fed. Cir. 1988).

[85] *See* General Motors, 461 U.S. at 655; Studiengesellschaft, 862 F.2d at 1579.

[86] *See* T.J. Smith & Nephew Ltd. v. Parke, Davis & Co., 9 F.3d 979 (Fed. Cir. 1993); Polaroid Corp., 17 U.S.P.Q.2d (BNA) at 1714.

[87] *See* Lam, Inc., 718 F.2d at 1066, 219 U.S.P.Q. (BNA) at 676.

[88] *See* Exxon Chemical Patents, Inc. v. Lubrizol Corp., 30 U.S.P.Q.2d (BNA) 1813, 1814.

[89] *See* Read Corp. v. Portec, Inc., 970 F.2d 816, 23 U.S.P.Q.2d (BNA) 1426, 1435-36 (Fed. Cir. 1992).

[90] 35 U.S.C. §284.

[91] *See* Applied Medical Resources Corp. v. United States Surgical Corp., DC Eva, No. 1:96cv1217, 6/17/97.

[92] *See* Avia Group Int'l, Inc. v. L.A. Gear California, Inc., 853 F.2d 1557, 1566 (Fed. Cir. 1988).

[93] *See* Beatrice Foods Co., 923 F.2d 1576, 17 U.S.P.Q.2d (BNA) 1553 (Fed. Cir. 1991)

[94] *Id.*

[95] *See, e.g.,* Minnesota Min. & Mfg., 976 F.2d at 1580, 24 U.S.P.Q.2d (BNA) at 1338; Slimfold Mfg. Co. v. Kinkead, 932 F.2d 1453, 1459, 18 U.S.P.Q.2d (BNA) 1842, 1847 (Fed. Cir. 1991); Ryco, Inc. v. Ag-Bag Corp., 857 F.2d 1418, 1428, 8 U.S.P.Q.2d (BNA) 1323, 1334 (Fed. Cir. 1988); Shiley, Inc. v. Bentley Lab. Inc., 794 F.2d 1561, 1568 (Fed. Cir. 1986), *cert. denied,* 479 U.S. 1087 (1987); King Instrument, 767 F.2d at 867, 226 U.S.P.Q. (BNA) at 412.

[96] *See, e.g.,* Stickle et al v. Heublein, 219 U.S.P.Q. (BNA) 377 (Fed. Cir. 1983); State Industries v. A.O. Smith, 224 U.S.P.Q. (BNA) 418 (Fed. Cir. 1983); Machinery Corp. of America v.

Gullfiber AB, 774 F.2d 467, 227 U.S.P.Q. (BNA) 368 (Fed. Cir. 1985).

[97] *See, e.g.,* CPG Products v. Pegasus Luggage, 227 U.S.P.Q. (BNA) 497 (Fed. Cir. 1985) (Markey, C.J.); Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 230 U.S.P.Q. (BNA) 81 (Fed. Cir. 1986) (Markey, C.J.), *cert. denied,* 479 U.S. 1034 (1987).

[98] *See, e.g.,* Amsted Indus., Inc. v. Buckeye Steel Castings Co., 24 F.3d 178, 181 (Fed. Cir. 1994); Minnesota Min. & Mfg., 976 F.2d at 1580, 24 U.S.P.Q.2d (BNA) at 1339-40; Rite-Hite Corp., 819 F.2d at 1125, 2 U.S.P.Q.2d (BNA) at 1919; Central Sova, 723 F.2d at 1576-77, 220 U.S.P.Q. (BNA) at 492- 93.

[99] *See, e.g.,* Ortho Pharmeceutical Corp. v. Smith, 959 F.2d 936, 944, 22 U.S.P.Q.2d (BNA) 1119, 1125 (Fed. Cir. 1992); Braun Inc. v. Dynamics Corp. of Am., 975 F.2d 815, 822, 24 U.S.P.Q.2d (BNA) 1121, 1127 (Fed. Cir. 1992); Datascope Corp., 879 F.2d at 828, 11 U.S.P.Q.2d (BNA) at 1326-27; Machinery Corp., 774 F.2d at 473, 227 U.S.P.Q. (BNA) at 372; King Instrument, 767 F.2d at 867, 226 U.S.P.Q. (BNA) at 412.

[100] *See, e.g.,* Afros S.p.A., 671 F. Supp. at 1436; *See also* Crucible, Inc. v. Stora Kopparbergs Bergslags AB, 701 F. Supp. 1157, 1165 (W.D. Pa. 1988); Berger & Gorin, Inc. v. Gary Plastic Packaging Corp., 691 F. Supp. 740, 752 (S.D.N.Y. 1988).

[101] *See, e.g.,* Amsted Indus., 24 F.3d at 181; Minnesota Min. & Mfg., 976 F.2d at 1580, 24 U.S.P.Q.2d (BNA) at 1339; Read Corp. v. Portec, Inc., 970 F.2d at 828-29, 23 U.S.P.Q.2d (BNA) at 1436-37; Ortho Pharmeceutical Corp., 959 F.2d at 944, 22 U.S.P.Q.2d (BNA) at 1125-26; Kloster Speedsteel AB, 793 F.2d at 1580, 230 U.S.P.Q. (BNA) at 91; Radio Steel & Mfg. Co. v. MTD Prods., 788 F.2d 1554, 1558-59, 229 U.S.P.Q. (BNA) 431, 434-35 (1986); Great Northern Corp. v. Davis Core & Pad Co., 782 F.2d 159, 166-67, 228 U.S.P.Q. (BNA) 356, 360 (Fed. Cir. 1986); Rolls-Royce Ltd. v. GTE Valeron Corp., 800 F.2d 1101, 1109-10, 231 U.S.P.Q. (BNA) 185, 191-92 (Fed. Cir. 1986).

[102] Machinery Corporation of America v. Gullfiber AB, 774 F.2d at 473, 227 U.S.P.Q. (BNA) at 372.

[103] *See* Imagineering, Inc., v, Van Klassens, Inc., 53 F.3d 1260, 1267 (Fed. Cir. 1995).

[104] *See* Central Soya Co., Inc., 723 F.2d at 1578; Beckman Instruments, Inc. v. LKB Produkter AB, 892 F.2d 1547, 1552 (Fed. Cir. 1989).

[105] Graco, Inc., 60 F.3d at 795.

[106] *See* Comora v. Thermo Cardiosystems, Inc., 23 U.S.P.Q.2d (BNA) 1147 (C.D. Cal. 1992); Standard Oil Co. v. American Cyanamid Co., 774 F.2d 448, 455 (Fed. Cir. 1985).

[107] *See* Ivac Corp. v. Terumo Corp., 15 U.S.P.Q.2d (BNA) 1453 (S.D. Cal. 1990); Kloster Speedsteel AB, 793 F.2d at 1580, 230 U.S.P.Q. (BNA) at 91.

[108] 35 U.S.C. §287.

[109] *See* American Medical Sys., Inc. v. Medical Eng'g Corp., 794 F. Supp. 1370, 1391 (E.D. Wis. 1992); Bandag, Inc. v. Gerrad Tire Co., 704 F.2d 1578, 1581, 217 U.S.P.Q. (BNA) 977, 979 (Fed. Cir. 1983); Hanson, 718 F.2d at 1083.

[110] *See* Devices for Medicine, Inc. v. Boehl, 822 F.2d 1062, 1066, 3 U.S.P.Q.2d (BNA) 1288, 1291-92 (Fed. Cir. 1987); American Medical Sys., Inc. v. Medical Eng'g Corp., 794 F. Supp. 1370, 1391 (E.D. Wis. 1992).

[111] *See* American Medical Sys., Inc. v. Medical Eng'g Corp., 6 F.3d 1523, 1538 (Fed. Cir. 1993), *cert. denied*, 114 S.Ct. 1647 (1994); *See also* Conopco, Inc. v. May Dept. Stores Co., 46 F.3d 1556, 1563 (Fed. Cir. 1994), *cert. denied*, 115 S.Ct. 1724 (1995).

[112] *See* A.C. Auckerman Co. v. Chaides Constr. Co., 960 F.2d 1020, 1032, 22 U.S.P.Q.2d (BNA) 1321, 1328 (Fed. Cir. 1992) (*en banc*).

[113] *See* A.C. Auckerman, 960 F.2d at 1028, 22 U.S.P.Q.2d (BNA) at 1325; Young Eng'rs., Inc. v. U.S. Int'l Trade Comm'n., 721 f.2d 1305, 1317, 219 U.S.P.Q. (BNA) 1142, 1153 (Fed. Cir. 1983).

[114] *See* Hybritech Inc. v. Abbott Labs., 849 F.2d 1446, 1451 n.12 (Fed. Cir. 1988).

[115] *See* Hybritech Inc., 849 F.2d at 1451.

[116] *See Id.*

[117] *See* Hybritech Inc., 849 F.2d at 1456; CVI/Beta Ventures, Inc. v. Custom Optical Frames, Inc., 859 F. Supp. 945, 950 (D. Md. 1994); American Parking Meter Advertising Inc. v. Visual Media, Inc., 693 F. Supp. 1253, 1255 (D. Mass. 1987).

[118] *See* Hybritech Inc., 849 F.2d at 1456.

[119] 35 U.S.C. ' 282; *See also* Smithkline Diagnostics, 859 F.2d at 889; Orthokinetics, Inc. v. Safety Travel Chair, Inc., 806 F.2d 1565, 1570 (Fed. Cir. 1986).

[120] *See* Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, 796 F.2d 443, 447 (Fed. Cir. 1986).

[121] *See* Markman v. Westview Instr., Inc., 52 F.3d 967, 976 (Fed. Cir.) (*en banc*), *aff'd*, 116 S. Ct. 1384 (1996).

[122] *See Id.* at 979.

[123] *See* SRI Int'l v. Matsushita Elec. Corp., 775 F.2d 1107, 1121 (Fed. Cir. 1985) (*en banc*); Markman, 52 F.3d at 979.

[124] *See* Lemelson v. United States, 752 F.2d 1538, 1551 (Fed. Cir. 1985).

[125] *See* Hybritech Inc., 849 F.2d 1446; Smith Int'l, Inc. v. Hughes Tool Co., 718 F.2d 1573, 1581 (Fed. Cir.), *cert. denied*, 464 U.S. 996 (1983).

[126] H.H. Robertson, 820 F.2d at 390.

[127] *See* Illinois Tool Works, Inc. v. Grip-Pak, Inc., 906 F.2d 679 (Fed. Cir. 1990).

[128] *See Id.* at 681-82.

[129] *See* Hybritech Inc., 849 F.2d at 1457.

[130] Windsurfing Int'l, Inc. v. AMF, Inc., 782 F.2d 995, 1003 n.12 (Fed. Cir. 1986).

[131] *See* Smith Int'l, Inc., 718 F.2d at 1581; Augut, Inc. v. John Mezzalingua Assoc. Inc., 642 F. Supp. 506, 506 (N.D.N.Y. 1986).

[132] *See* Schneider (Europe) AG v. Scimed Life Systems Inc., 852 F. Supp. 813, 861 (D. Minn. 1994); *See also* Hoechst Celanese Corp. v. BP Chemicals, Ltd., 846 F. Supp. 542, 550 (S.D. Tex. 1994).

[133] *See* Hoechst Celanese, 846 F. Supp. at 550.

[134] *See, e.g.,* Lear Siegler, Inc. v. Sealy Mattress Company of Michigan, Inc., 846 F.2d 78 (table), 1988 WL 24933 (Fed. Cir. 1988); Foster v. American Machine and Foundry Co., 492 F.2d 1317 (2d Cir. 1974); Nemey v. New York, N.H. and H.R. Co., 83 F.2d 409, 411 (2d Cir. 1936).

[135] *See* Lear Siegler, Inc., 1988 WL 24933 at 2; Trans-World Mfg. Corp. v. Al Nyman & Sons, Inc., 750 F.2d 1552, 1565 (Fed. Cir. 1984); American Safety Device Co. v. Kurland Chemical Co., 68 F.2d 734 (2d Cir. 1934).

[136] *See* Genveto Jewelry Co. v. Jeff Cooper, Inc., 800 F.2d 256, 259 (Fed. Cir. 1986).

[137] *See* KSM Fastening Sys., 776 F.2d at 1527; Spindelfabrik Suessen-Schurr v. Schubert & Salzer Maschinenfabrik Aktiengesellschaft, 829 F.2d 1075, 1082 and n.12 (Fed. Cir. 1987).

[138] Cecil D. Quillen, Jr., Innovation and the United States Patent System Today, 14-15, (Oct. 19, 1992) (unpublished).

[139] Polaroid Corp., 16 U.S.P.Q.2d (BNA) 1481.

[140] Nancy J. Perry, *The Surprising New Power of Patents*, FORTUNE, June 23, 1986, at 57.

[141] *Id.* at 59.

[142] *Id.* at 59.

[143] P. Dwyer, *The Battle Raging Over 'Intellectual Property' - Patents, Copyrights, and Trademarks are Potent Competitive Weapons*, BUSINESS WEEK, May 22, 1989, at 78.

[144] *Id.* at 89.

[145] NYPTCLA Newsletter, May/June 1990, 3.

[146] Nancy Rutter, *The Great Patent Plague*, FORBES, ASAP, March 29, 1993, at 59.

[147] Ronald Coolley, Overview and Statistical Study of the Law on Patent Damages, 3 (1993) (unpublished manuscript).

[148] *The Jury's Capacity to Decide Complex Civil Cases*, 110 HARV. L. REV., 1489 (1997).

[149] Linda Himelstein, *Investors Wanted – For Lawsuits*, BUSINESS WEEK, November 15, 1993 at 78.

[150] John Juross, *The Federal Circuit and Its Patent Damage Decisions*, 1 BALTIMORE IP LAW 17, 29 (1992).

[151] J. Jeffrey Hawley, *Patent Procurement and Enforcement in Japan*, PACIFIC INTELLECTUAL PROPERTY ASSOCIATION, (American Group), Feb. 1996, at 3.

[152] *Who asked Europe anyway?* THE WASHINGTON POST, July 24, 1997, at A20.

Appendix A

Patent Act 35 U.S.C. – Remedies for Infringement of Patent

281. Remedy for infringement of patent

A patentee shall have remedy by civil action for infringement of his patent.

283. Injunction

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.

284. Damages

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.

The court may receive expert testimony as an aid to the determination of damages or of what royalty would be reasonable under the circumstances.

285. Attorney fees

The court in exceptional cases may award reasonable attorney fees to the prevailing party.

Appendix B

	Georgia-Pacific Factors		Honeywell Factors
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.	11.	(3) The nature and scope of for the hypothesized license, which the parties have stipulated is a non-exclusive license
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.	6.	(4) Any established policy of licensor to maintain its patent's exclusivity by not licensing others to use the invention
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 promotor	8.	(5) The commercial relationship between licensor and licensee, such as whether they are competitors or in an inventor/promoter relationship
6.	The effect of selling the patented specialty in promoting sales of other products of the licenses; the existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales	5.	(6) The effect of selling the infringing products and promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of its non-patented products; and the extent of such derivative or convoyed sales
7.	The duration of the patent and the term of the license	10.	(7) The duration for the patent
8.	The established profitability of the product made under the patent; its commercial success; and its current popularity	1.	(8) The established profitability of products made under the patents, including their commercial success and 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	2.	(9) The utility and advantages of products utilizing the infringing components over other products on the market before and during that time
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	3.	(10) The nature of the patented invention; the commercial embodiment of it, and the benefits to those who have used the invention

11.	The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use	4.	(11) The extent to which the infringer has made use of the invention; and any evidence probative of the value of that use
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 invention*	15.	**(12 MODIFIED)** *What the parties reasonably anticipated would be their profits or losses as a result of entering into a licensing agreement*
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	12.	(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	7.	(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; that is, the amount which a prudent licensee - who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention - 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	13.	**(15 MODIFIED)** The amount that a licensor and a licensee would have agreed upon, if both had been reasonable and had voluntarily tried to reach an agreement, starting at the time the infringement began. *In making this determination, you may take into account the events and facts that occurred thereafter, and that could not have been known to or predicted by the hypothesized negotiators*
		9.	**(NEW)** The extent to which the infringement prevented licensor from using or selling the invention
		14.	**(NEW)** The relative bargaining positions of licensor and licensee
		16.	**(NEW)** The market to be tapped
		17.	**(NEW)** Any other economic factor that normally prudent businessmen would, under certain similar circumstances, take into consideration in negotiating the hypothetical

* Number in ( ) designates corresponding *Georgia-Pacific* factor.

Appendix C

Expert Witness Report of Karl F. Jorda on the Issue of Reasonable Royalty Rate

To determine a reasonable royalty rate one begins with a hypothetical negotiation between a "truly willing licensor and willing licensee." This method leads to a determination of a "willingly bargained royalty rate." After a willingly bargained royalty rate is determined, one then provides an opinion as to what would be a "reasonable royalty," that is, what rate seems appropriate in the totality of the circumstances. Then the willingly bargained royalty rate is adjusted so as to arrive at a reasonable royalty rate adequate to compensate for the infringement.

In order to determine a willingly bargained royalty rate, a date is first established for the hypothetical negotiation between the two parties. Two "willing" negotiators, one for each party, are then briefed by their companies' executives as to the facts that existed prior to the negotiation date. The facts set the atmosphere for the negotiation. The negotiators also are told they must assume that the patent at bar is valid and infringed.

When necessary, the "willing licensor-willing licensee" approach permits, and often requires, consideration of events and facts that occurred after the negotiation date and that could not have been known to or predicted by the negotiators. This is "a book of wisdom" that cannot be neglected.

Next, the evidence, if any, of estimated profits is reviewed. A rough rule of thumb used by licensing executives as a starting point is that 1/4 to 1/3 of the net pretax profits made from the sale of the allegedly infringing product is allocated to the patentee. The remainder of the profit is allocated to the infringer/licensee. This first rough estimate then is adjusted by examining the seventeen factors identified in the jury instructions of *Honeywell v. Minolta.* These seventeen factors constitute a "modern" version of the *Georgia-Pacific* factors.

The idea is to identify which *Honeywell v. Minolta* factors tend to increase or decrease the royalty rate under the circumstances of the particular negotiation. In any negotiation a given *Honeywell v. Minolta* factor may provide little or no guidance as to the willingly bargained royalty rate. Any additional corrections or factors that may affect the reasonable royalty rate also should be examined at this point. Then the first rough estimate is adjusted.

In the case at bar, the date of the hypothetical negotiation is the date when the defendants A and B began selling the accused product. In this pretend case, assume both defendants began selling in the fall. Therefore, September 1, 1993 will be used as the logical date of the hypothetical negotiation. Upon reviewing the defendants' estimated profits as of September 1, 1993 for the accused product and by applying the rough rule of thumb, the arrived at royalty rate is in the range of 4% to 7%. Next each *Honeywell v. Minolta* factor was considered to determine whether the factor tended to increase or decrease the royalty rate.

A brief summary of each *Honeywell v. Minolta* factor follows:

1. **The established profitability of products made under the patents, including their commercial success and current popularity.** – This is a negative factor. The profitability results for the accused product after market introduction were not good.

Several million dollars were lost. In addition, as shown by recent sales results, the product is not faring well in the marketplace.

2. **The utility and advantages of products utilizing the infringing components over other products on the market before and during that time.** – This is also a negative factor. The evidence reveals that there is no efficacy or advantage of the accused product over the other products existing in the marketplace. Moreover, there are advantaged with respect to such other products in terms of cost.

3. **The nature of the patented invention; the character of the commercial embodiment of it, and the benefits to those who have used the invention.** – This is a negative factor. The commercial embodiment of the patented invention is an over-the-counter (OTC) medication, as opposed to a new chemical entity. As such, it competes in a highly competitive marketplace with large requirements in terms of advertising expenditures and severe restrictions on pricing the product. Moreover, it is a me-too product with respect to other pre-existing products in the marketplace.

4. **The extent to which the infringer has made use of the invention; and any evidence probative of the value to that use.** – Defendants anticipated incremental sales growth of the accused product. While results to date have not justified their predicted expectations, this is still a slight positive factor.

5. **The effect of selling the infringing products and promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of its non-patented products; and the extent of such derivative or convoyed sales.** – There is no evidence that the selling of the accused product helps promote the sales of other products of either defendant. Moreover, the plaintiff has no evidence that sale of its competing product assisted sales of any other product in its product line. Therefore, this is a neutral factor.

6. **Any established policy of licensor to maintain its patent's exclusivity by not licensing others to use the invention.** – This factor is slightly negative. While the plaintiff refused to license the defendants, it did consider licensing defendant B and it in fact eventually licensed a third party. Moreover, it provided this third party with limited sub-licensing rights as well.

7. **The opinion testimony of qualified experts.** – This factor may change in light of such opinion testimony.

8. **The commercial relationship between the licensor and licensee, such as whether they are competitors or in an inventor/promoter relationship.** – This is a positive factor. Defendants are direct competitors with the plaintiff within the United States for OTC medications.

9. **The extent to which the infringement prevented licensor from using or selling the invention.** – This is a negative factor. There is evidence that the presence of additional producers of similar products increased the marketplace for those types of products. Therefore, it is likely that the entry into the marketplace by the defendants would have a positive effect on the plaintiff's sales of similar products.

10. **The duration for the patent.** – This is a neutral factor. Close to half of the life of the patent has already expired.

11. **The nature and scope for the hypothesized license, which the parties have stipulated is a non-exclusive license.** – This is a significantly negative factor. In light of the third party licensee and the fact that the plaintiff manufactures under license to the patent, this will reduce the value of the patent.

12. **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.** – This is a slightly negative factor. As stated before, there is no positive profit that has been realized by products made according to the invention. Moreover, to the extent products achieved sales, it is attributable to other factors, such as advertising and market support. Furthermore, to the extent that defendants have made any sales, it can be attributed to non-patented features, such as their selling product in a tablet form in addition to a caplet form unlike the plaintiff/licensor.

13. **The amount that a licensor and a licensee would have agreed upon, if both had been reasonable and had voluntarily tried to reach an agreement, starting at the time the infringement began. In making this determination, the events and facts that occurred thereafter, and that could not have been know to or predicted by the hypothesized negotiators may be taken into account.** – This is a significantly negative factor. Had the negotiators at the start of the alleged infringement known of the lack of commercial success of the accused product, it would have sharply reduced the amount of royalty they would have been willing to pay. Moreover, all the parties would have known that the product was going to be entering a highly competitive marketplace, with tremendous requirements of advertising expenditure. Combined with additional burdens on the product, it is likely that the defendants would only have been willing to pay a minimum royalty. Furthermore, from the plaintiff's perspective, it knew that it would have been better off obtaining a royalty from the defendants rather than keeping them out of the marketplace.

14. **The relative bargaining positions of licensor and licensee.** – This is a negative factor. While the plaintiff, as subsidiary of big company X, has renowned strengths in terms of marketing, defendants have renowned strengths in terms of research and development of pharmaceutical compositions.

15. **What the parties reasonably anticipated would be their profits or losses as a result of entering into a licensing agreement.** – This a negative factor. The plaintiff determined that it would be in its best interest financially to enter into a license agreement with both defendants at a 3% rate. Moreover, defendant A determined that, in light of what it anticipated to be its profits or losses from marketing the product, it could only tolerate a reasonable royalty of 1% to 3%. Similarly, defendant B negotiated for a royalty rate of only 5% based on its prior sales forecast.

16. **The market to be tapped.** – This is a significantly negative factor. There was no emerging market to be tapped, in light of the fact that the third-party licensee had been in the market for more than four years with the patented product. Moreover, since that time,

the third-party licensee had introduced two additional products whose poor performance is evidence of a saturation of the marketplace.

17. **Any other economic factor that normally prudent businessmen would, under certain similar circumstances, take into consideration in negotiating the hypothetical.** – This is a negative factor. In determining the royalty rate, it is likely that the defendants would consider the amount of defendant A's payments to defendant B for marketing its product based on its reliance on defendant B's NDAfor the accused product. Under that agreement, the defendants made payments that averaged considerably less than 5%. Moreover, the plaintiff would likely consider the net present value of its patented product, which was only a million dollars.

In light of the above analysis of the *Honeywell v. Minolta* factors, it is apparent that there are more factors that tend to decrease the royalty rate than factors that tend to increase the royalty rate. However, not all the factors affect the royalty rate to the same degree. In my opinion, the factors that outweigh all the other factors and thus would have the greatest impact on the royalty rate negotiation would be (1) that the defendants have sales that are far lower than what was projected and that the defendants are losing money, (2) that there are already two competitors in the marketplace, the plaintiff and its third-party licensee, which have either no, or minimal, royalty burden on their sales of the patented product, and (3) the fact the patented product provides no marketable point of difference relative to other products in the relevant market, which is a highly competitive, advertising-dependent marketplace. Therefore, a high royalty rate would increase the defendants' losses, and probably would cause them to get out of the medication business. The plaintiff on the other hand, would be inclined to accept a low royalty rate, because it has evidence that increased awareness of these medications, may have the beneficial effect of increasing the market for those medications, and increase the sales of its patented product.

Another factor relevant to this matter is the knowledge by all parties of the industry norms for licensing of OTC products. Historically, royalty rates have been in the single digits. This reflects the realities of the economics of OTC products as being less profitable than prescription pharmaceutical products because of greater price pressures, packaging requirements and advertising and marketing needs.

Therefore, in my opinion, the negotiators would agree to a royalty rate that is at the low end of the typical range of 1/4th to 1/3rd of the pre-tax profits, 4% to 7%, or about 5%. Adjusting this rate based on the *Honeywell v. Minolta* factors results in a reasonable royalty rate of 3%.

Appendix D

Size of Some Recent Patent Infringement Awards

1. $1.2B: Litton Industries v. Honeywell (1993). Reversed and remanded and ongoing.
2. $873M: Polaroid v. Eastman Kodak (1991). Reasonable royalty: 204M, lost profits: 233M, interest: 436M.
3. $205M: Smith Int'l v. Hughes Tool (1986). Reasonable royalty: 125M, interest: 70M.
4. $107M: 3M v. Johnson & Johnson Orthopedics (1991). Reasonable royalty: 1M, lost profits: 23M, punitive damages: 44M, erosion damages: 29M, interest: 10M.
5. $96M: Honeywell v. Minolta (1992).
6. $56M: Pfizer v. Internat'l Rectifier (1983). Lost profits: 38M; erosion damages: 18M.
7. $45M: Shiley v. Bentley Labs. (1985). Reasonably royalty: 1M, lost profits: 18M, punitive damages: 18M, interest: 8M, attorney fees: 1M.
8. $36M: Syntex (U.S.A.) v. Paragon Optical (1987). Reasonable royalty: 18M, punitive damages: 18M.
9. $31M: Trans World Mfg. v. Dura (1986). Lost profits: 6M, erosion damages: 2M, punitive damages: 17M, interest: 6M.