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Damages, Interest, and Costs

A patentee has succeeded in persuading a judge or jury that its patent is valid and infringed and that it can enforce it against the infringer. What may it expect in the way of relief?

Only a few years prior to the creation of the Federal Circuit, the answer would have been "Not much!" An injunction against further infringement could be expected, almost certainly, unless the patent had expired. But the damages assessed against the infringer were all too often insufficient to cover the patentee's attorney fees and other litigation expenses. Awards of treble damages and attorney fees, at least those that would survive appellate review, were rare.

Shortly after the Federal Circuit began to function, the Supreme Court decided *General Motors Corp. v. Devex Corp.*,[1] holding that prejudgment interest on patent infringement damages should be awarded absent some justification for denying such relief. The *Devex* holding was said to be consistent with the overriding purpose of Congress, reflected in 35 U.S.C. §284, of affording patent owners complete compensation. The statutory scheme was to ensure that the patent owner is placed in as good a position as it would have been in had the infringer entered into a reasonable royalty agreement.[2]

The Federal Circuit has fully embraced this positive approach toward complete compensation, and the pendulum is swinging at high speed in favor of the patent owner. Indeed, there may be cause for concern that patentees, insofar as reflected in the decisions of the Federal Circuit, are being overcompensated, at least in the area of increased damages and attorney fees. It is now conventional wisdom in the patent bar that a defendant in a patent infringement case, even one who is clearly not guilty of copying, had better have a thoughtful opinion of patent invalidity or noninfringement in its hip pocket. Patent infringement these days is a very risky business indeed, as will be seen in Chapter 16.

§15.1 Compensatory Damages

(a) General

The general rule regarding damages is that when a wrong has been done, and the law gives a remedy, the compensation shall be equal to the injury. The latter is the standard by which the former is to be measured. The injured party is to be placed, as near as may be, in the situation it would have occupied had the wrong not been committed. The rule applies to patent cases. Congress has sought to ensure that the patent owner would in fact receive full compensation for any damages it suffered as a result of the infringement.[3]

The statute provides that:

> Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement but in no event

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[1]461 U.S. 648 (1983).

[2]461 U.S. at 655. For illuminating discussion of the legislative and judicial history of patent infringement damages, see *Nike Inc. v. Walmart Stores Inc.*, 138 F.3d 1437, 46 USPQ2d 1001, 1003–06 (Fed. Cir. 1998); *King Instr. Corp. v. Perego*, 65 F.3d 941, 36 USPQ2d 1129, 1133–37 (Fed. Cir. 1995).

[3]*Fromson v. Western Litho Plate & Supp. Co.*, 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988). In patent cases, as in other commercial torts, damages are measured by inquiring, had the tortfeasor not committed the wrong, what would have been the financial position of the person wronged? *Brooktree Corp. v. Advanced Micro-Devices, Inc.*, 977 F.2d 1555, 24 USPQ2d 1401 (Fed. Cir. 1992).

> less than a reasonable royalty for the use made of the invention by the infringer ***.[4]

This statutory measure of damages is the difference between the patent owner's pecuniary condition after the infringement, and what its condition would have been if the infringement had not occurred. This formulation requires the patentee to reconstruct the market, by definition a hypothetical enterprise, to project economic results that did not occur. To prevent the hypothetical from lapsing into pure speculation, this court requires sound economic proof of the nature of the market and likely outcomes with infringement factored out of the economic picture. The statute also guarantees patentees a reasonable royalty even when they are unable to prove entitlement to lost profits or an established royalty rate. A reasonable royalty contemplates a hypothetical negotiation between the patentee and the infringer at a time before the infringement began. Again, this analysis necessarily involves some approximation of the market as it would have hypothetically developed absent infringement. This analysis, in turn, requires sound economic and factual predicates.[5] Section 284 imposes no limitation on the types of harm resulting from infringement that the statute will redress. Its broad language awards damages for an injury as long as it resulted from the infringement. Recoverable damages are those that are the direct and foreseeable result of the infringement.[6]

The government's unlicensed use of a patented invention is properly viewed as a taking of property under the Fifth Amendment through the government's exercise of its power of eminent domain, and the patent holder's remedy for such use is reasonable and entire compensation under 28 U.S.C. §1498(a). Because recovery is based on eminent domain, the proper measure is what the owner has lost, not what the taker has gained. Generally, the preferred manner of reasonably and entirely compensating the patent owner is to require the government to pay a reasonable royalty for its license as well as damages for its delay in paying the royalty.[7] Thus, evidence of benefit

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[4]35 U.S.C. §284. A motion to enforce an agreement settling a patent infringement action arises under the patent laws if the district court retains jurisdiction to enforce the agreement. However, where breach of the agreement does not itself establish infringement of the patent, it is error to determine damages based upon §284. Rather, the trial court should determine damages under state contract law regarding damages for breach of contract. So, too, with an award of attorney fees under 35 U.S.C. §285. *Gjerlov v. Schuyler Labs., Inc.,* 131 F.3d 1016, 44 USPQ2d 1881 (Fed. Cir. 1997).

[5]*Riles v. Shell Exploration & Prod. Co.,* 298 F.3d 1302, 63 USPQ2d 1819 (Fed. Cir. 2002).

[6]*King Instr. Corp. v. Perego,* 65 F.3d 941, 36 USPQ2d 1129 (Fed. Cir. 1995). Of course, notwithstanding the broad language of §284, judicial relief cannot redress every conceivable harm that can be traced to an alleged wrongdoing. For example, remote consequences, such as a heart attack of the inventor or loss in value of stock of a patentee corporation, caused indirectly by infringement, are not compensable. *Rite-Hite Corp. v. Kelley Co.,* 56 F.3d 1538, 35 USPQ2d 1065 (Fed. Cir. 1995).

[7]*Hughes Aircraft Co. v. United States,* 86 F.3d 1566, 39 USPQ2d 1065 (Fed. Cir. 1996). Valuation determinations for purposes of eminent domain are reviewed for clear error as are determinations of what constitutes a reasonable royalty. *Id.* The court has passed the question

conferred is infrequently used, and then only when the calculation of a reasonable royalty is difficult.[8]

The fact of infringement establishes the fact of damage because the patentee's right to exclude has been violated.[9] Thus, a patentee can bring an action for infringement without any evidence of damage or lost sales.[10] Indeed, a patentee qualifies for damages adequate to compensate for infringement even though it does not exploit its patent.[11] Not only is the patent owner afforded a statutory opportunity for injunctive relief,[12] but if there have been acts of infringement, it is entitled, without a showing of actual damage, to a statutory minimum of a reasonable royalty for that infringement.[13] Where a patentee fails to show causation and can point to no evidence that warrants a lost profits award, the court will require a determination of a reasonable royalty.[14] On the other hand, where a district court correctly finds that lost profits is the proper measure of damages, it need not receive evidence pertinent to a reasonable royalty.[15]

An infringer's failure to profit from the infringement is immaterial. Damages are compensation for pecuniary loss suffered from infringement without regard to whether the defendant has gained or lost by its unlawful acts. The measure, when calculation is possible, is an amount needed to return the patent owner to the position it would have occupied had there been no infringement.[16] But damages cannot always be measured by looking at the pecuniary condition of the patentee before and after the infringement. This would prevent an award of damages where, for example, the patentee is not in the business. Thus, a reasonable royalty is the floor below which damages shall not fall.[17] The patent owner bears the burden of proof on damages. When the evidence is inadequate to establish actual or nearly

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of whether lost profits against the government must be proved by clear and convincing evidence. It has held, however, that consequential damages are not recoverable under §1498. *Gargoyles, Inc. v. United States,* 113 F.3d 1572, 42 USPQ2d 1760 (Fed. Cir. 1997).

[8]*Dow Chem. Co. v. United States,* 226 F.3d 1334, 56 USPQ2d 1014 (Fed. Cir. 2000). Here, the Court of Federal Claims employed a percentage of the estimated decline of private property values that might occur had the patented method not been used. This was viewed as too speculative and having little relationship to what a willing buyer and a willing seller would used in the real world to negotiate a royalty rate.

[9]*Lindemann Maschinenfabrik v. American Hoist & Derrick Co.,* 895 F.2d 1403, 13 USPQ2d 1871 (Fed. Cir. 1990).

[10]*Roche Prods., Inc. v. Bolar Pharm. Co.,* 733 F.2d 858, 221 USPQ 937 (Fed. Cir. 1984).

[11]*King Instr. Corp. v. Perego,* 65 F.3d 941, 36 USPQ2d 1129 (Fed. Cir. 1995).

[12]35 U.S.C. §283.

[13]E.g., *Stickle v. Heublein, Inc.,* 716 F.2d 1550, 219 USPQ 377 (Fed. Cir. 1983). Injunctions and damages must be tailored to the circumstances and be correlatively determined. *Id.*

[14]*Water Techs. Corp. v. Calco, Ltd.,* 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988). See also *Smithkline Diagnostics, Inc. v. Helena Labs. Corp.,* 926 F.2d 1161, 17 USPQ2d 1922 (Fed. Cir. 1991).

[15]*Beatrice Foods Co. v. New England Printing & Lith. Co.,* 899 F.2d 1171, 14 USPQ2d 1020 (Fed. Cir. 1990).

[16]*Weinar v. Rollform Inc.,* 744 F.2d 797, 223 USPQ 369 (Fed. Cir. 1984). Damages is the amount of loss to a patentee. *Smithkline Diagnostics, Inc. v. Helena Labs. Corp.,* 926 F.2d 1161, 17 USPQ2d 1922 (Fed. Cir. 1991).

[17]*State Indus., Inc. v. Mor-Flo Indus., Inc.,* 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989); *Stickle v. Heublein, Inc.,* 716 F.2d 1550, 219 USPQ 377 (Fed. Cir. 1983). Although the

actual damages, a court may employ a reasonable royalty as the floor below which a damage award may not fall. As used in 35 U.S.C. §284, "reasonable royalty" is handy shorthand for "damages." As the statute provides, the royalty is "for the use made of the invention by the infringer." Thus the calculation is not a mere academic exercise in setting some percentage figure as a "royalty." The determination remains one of damages to the injured party.[18]

The statute does not instruct a court on how to compute damages; the only congressional intent expressed ensures that a claimant receive adequate damages, not less than a reasonable royalty.[19] Damages adequate to compensate for the infringement are usually measured, depending upon the circumstances and the proof, as the patent owner's lost profits or as a reasonable royalty.[20] The measurement of actual damages is a question of fact.[21]

Thus, the amount of a prevailing party's damages is a finding of fact on which the plaintiff bears the burden of proof by a preponderance of the evidence. Where the amount is fixed by the court, review is in accordance with the clearly erroneous standard of Rule 52(a), FRCP. Where the review is of a denial of a motion for JNOV, the more restrictive substantial evidence standard is employed. On the other hand, certain subsidiary decisions underlying a damage theory are discretionary with the court, such as the choice of an accounting method for determining profit margin or the methodology for arriving at a reasonable royalty. Such decisions are reviewed under the abuse of discretion standard. Finally, the principle that a judge has discretion to select methodology does not mean that he or she may choose between basing an award on lost profits or a reasonable royalty. If a winning patentee seeks and proves lost profits, it is entitled to an award reflecting that amount. A judge may, however, choose between reasonable alternative accounting methods for determining the amount of lost profits, or may, in his or her discretion, adopt a reasonable way to determine the number of infringing units.[22]

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statute states that the damage award shall not be less than a reasonable royalty, the purpose of this alternative is not to provide a simple accounting method, but to set a floor below which the courts are not authorized to go. *Del Mar Avionics, Inc. v. Quinton Instr. Co.*, 836 F.2d 1320, 5 USPQ2d 1255 (Fed. Cir. 1987).

[18]*Fromson v. Western Litho Plate & Supp. Co.*, 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988).

[19]*Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 223 USPQ 591 (Fed. Cir. 1984).

[20]*Beatrice Foods Co. v. New England Printing & Lith. Co.*, 899 F.2d 1171, 14 USPQ2d 1020 (Fed. Cir. 1990). Because the sale of devices that may be used to practice a patented method cannot infringe without proof of direct infringement, offers to sell such devices cannot supply adequate evidentiary support for a compensatory damage award. Thus, the patent owner is relegated to a reasonable royalty. *Embrex Inc. v. Service Eng'g Corp.*, 216 F.3d 1343, 55 USPQ2d 1161 (Fed. Cir. 2000).

[21]*Brooktree Corp. v. Advanced Micro-Devices, Inc.*, 977 F.2d 1555, 24 USPQ2d 1401 (Fed. Cir. 1992).

[22]*Smithkline Diagnostics, Inc. v. Helena Labs. Corp.*, 926 F.2d 1161, 17 USPQ2d 1922 (Fed. Cir. 1991). See also *Stryker Corp. v. Intermedics Orthopedics, Inc.*, 96 F.3d 1409, 40 USPQ2d 1065 (Fed. Cir. 1996); *Unisplay S.A. v. American Elec. Sign Co.*, 69 F.3d 512, 36

The district court has discretion in choosing the methodology for assessing and computing damages, and the only limitation on that discretion is that the award be adequate compensation and not less than a reasonable royalty.[23] Indeed, a patentee has no absolute right to pursue any and every alternative theory of damages, no matter how complicated or tenuous. A court has discretion to deny a proposed method of proof of damages that imposes too great a burden on court proceedings.[24] Simply because different accounting methods lead to different results does not make an award at the higher end of the spectrum more than adequate.[25]

Jury damage awards, unless the product of passion and prejudice, are not easily overturned or modified on appeal.[26] A jury's finding must be upheld unless the amount is grossly excessive or monstrous, or based only on speculation or guesswork.[27] On the matter of remittitur, the court has adopted the maximum recovery rule, which requires it to remit the damage award to the highest amount the jury could properly have awarded based on the relevant evidence.[28] Applying Fourth Circuit law, the court held that the power and duty of the trial judge to set aside an excessive verdict is well established, the exercise of the power being regarded as not in derogation of the right of trial by jury but one of the historic safeguards of that right. The Fourth Circuit, relying on Supreme Court precedent, has extended this obligation to the appellate level. Because the excessiveness of jury damages verdicts is a question of law in the Fourth Circuit,

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USPQ2d 1540 (Fed. Cir. 1995); *Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992).

[23]*King Instr. Corp. v. Otari Corp.*, 767 F.2d 853, 226 USPQ 402 (Fed. Cir. 1985); *Seattle Box Co. v. Industrial Crat. & Pack., Inc.*, 756 F.2d 1574, 225 USPQ 357 (Fed. Cir. 1985).

[24]*Micro Motion, Inc. v. Kane Steel Co.*, 894 F.2d 1318, 13 USPQ2d 1696 (Fed. Cir. 1990). This was a discovery situation. With all respect, it would seem that a party should have the right to make its proofs, no matter how complicated they are. It should be noted that one aspect that may have tipped the scales is the fact that the plaintiff had, at one point in the case, been willing to go to trial on damages without the evidence in question. Thus the court may have felt that the discovery was not absolutely necessary.

[25]*Seattle Box Co. v. Industrial Crat. & Pack., Inc.*, 756 F.2d 1574, 225 USPQ 357 (Fed. Cir. 1985); *Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 223 USPQ 591 (Fed. Cir. 1984).

[26]*Weinar v. Rollform Inc.*, 744 F.2d 797, 223 USPQ 369 (Fed. Cir. 1984). However, it is error to fail to instruct a jury properly on reasonable or established royalty or lost profits. Instructions phrased in terms of "monetary loss" are inadequate. *Id.* A jury award of damages is reviewed on the reasonable jury/substantial evidence standard. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989).

[27]*Brooktree Corp. v. Advanced Micro-Devices, Inc.*, 977 F.2d 1555, 24 USPQ2d 1401 (Fed. Cir. 1992).

[28]*Oiness v. Walgreen Co.*,88 F.3d 1025, 39 USPQ2d 1304 (Fed. Cir. 1996). The plaintiff then has a choice between accepting the reduction or facing a new trial on damages. See also *Shockley v. Arcan Inc.*, 248 F.3d 1349, 58 USPQ2d 1692 (Fed. Cir. 2001); *Unisplay S.A. v. American Elec. Sign Co.*, 69 F.3d 512, 36 USPQ2d 1540 (Fed. Cir. 1995). In *Tronzo v. Biomet Inc.*, 236 F.3d 1342, 57 USPQ2d 1385 (Fed. Cir. 2001), the court recognized that under the rule announced in *Hetzel v. Prince William County*, 523 U.S. 208 (1998), when a court determines that the evidence does not support a damages award, and the damages must be recalculated, the court is imposing a remittitur. If the court then imposes a lesser amount of damages than the jury awarded, and the plaintiff does not accept this reduction, the Seventh Amendment

Fourth Circuit law permits orders of a new trial nisi remittitur by an appellate court.[29] Grants of remittitur or new trial because of excessive damages awards are reviewed for abuse of discretion.[30]

The statute provides that "when the damages are not found by a jury, the court shall assess them."[31] The measure of damages provides an opportunity for the trial court to balance equitable concerns as it determines whether and how to recompense the successful litigant.[32] Inasmuch as the trial court's assessment is discretionary, it will not be disturbed absent an abuse of that discretion.[33] An abuse of discretion may be established by showing that the district court made an error of law, or a clear error of judgment, or made findings that were clearly erroneous.[34] On appeal the reviewing court may not exercise de novo review over a finding on damages. This is so whether the basis for the finding is testimony, or physical or documentary evidence.[35]

It is the infringer's burden to show that the amount or method of assessing damages constituted an abuse of discretion.[36] On appeal an infringer cannot successfully argue that the district court abused its discretion and awarded too high a figure simply by substituting its own recomputation to arrive at a lower figure. Such an argument does not show error, but merely indicates the damages an infringer-appellant would prefer to pay. That the district court might have viewed the infringer's evidence more favorably is not a basis for reversal. Pointing to facts that might have supported a lower royalty rate does not sustain the burden of showing an abuse of discretion.[37]

Of course, no multiple recoveries can be had.[38] After a patentee has collected from a direct infringer damages sufficient to put it in the position it would have occupied had there been no infringement,

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requires that the plaintiff be granted the option of a new trial. However, it concluded that *Hetzel* does not apply where the reduction in a damages award is on purely legal grounds.

[29]*Shockley v. Arcan Inc.,* 248 F.3d 1349, 58 USPQ2d 1692 (Fed. Cir. 2001).

[30]*Oiness v. Walgreen Co.*,88 F.3d 1025, 39 USPQ2d 1304 (Fed. Cir. 1996).

[31]25 U.S.C. §284.

[32]*S.C. Johnson & Son v. Carter-Wallace Inc.,* 781 F.2d 198, 228 USPQ 367, 369 (Fed. Cir. 1986).

[33]*Manville Sales Corp. v. Paramount Sys., Inc.,* 917 F.2d 544, 16 USPQ2d 1587 (Fed. Cir. 1990); *State Indus., Inc. v. Mor-Flo Indus., Inc.,* 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989); *CPG Prods. Corp. v. Pegasus Luggage, Inc.,* 776 F.2d 1007, 227 USPQ 497 (Fed. Cir. 1985); *Yarway Corp. v. Eur-Control USA Inc.,* 775 F.2d 268, 227 USPQ 352 (Fed. Cir. 1985).

[34]*Trell v. Marlee Elec. Corp.,* 912 F.2d 1443, 16 USPQ2d 1059 (Fed. Cir. 1990); *State Indus., Inc. v. Mor-Flo Indus., Inc.,* 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989); *Fromson v. Western Litho Plate & Supp. Co.,* 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988); *TWM Mfg. Co. v. Dura Corp.,* 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986).

[35]*TWM Mfg. Co. v. Dura Corp.,* 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986).

[36]*King Instr. Corp. v. Otari Corp.,* 767 F.2d 853, 226 USPQ 402 (Fed. Cir. 1985).

[37]*TWM Mfg. Co. v. Dura Corp.,* 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986).

[38]*Weinar v. Rollform Inc.,* 744 F.2d 797, 223 USPQ 369 (Fed. Cir. 1984). Where the patentee recovers a reasonable royalty, an award of some portion of the difference between the infringer's actual sales price of its business to a third party and an expert's evaluation of the value of that business without the infringing equipment might well constitute double recovery. *Minco, Inc. v. Combustion Eng'g, Inc.,* 95 F.3d 1109, 40 USPQ2d 1001 (Fed. Cir. 1996).

it cannot thereafter collect actual damages from a person liable only for contributing to that same infringement.[39] Similarly, it has been held that only one recovery may be had where the same act (selling an accused device) constitutes both patent infringement and unfair competition.[40] It would seem that the quantum of damage is not affected by the number of claims infringed.[41] The court has hinted that it will always attempt to award more than mere nominal damages.[42]

The purpose of 28 U.S.C. §1292(c)(2), which allows interlocutory appeals in patent cases, was to permit a stay of a damages trial, not compel one. There is thus no conflict between that statute and Rule 62(a), FRCP, which grants discretion to stay or proceed with the damages trial during the appeal. Indeed, the Federal Circuit typically denies motions to stay damages trials during appeals in patent cases.[43]

(b) Actual Damages: Lost Profits

The general rule for determining the actual damages to a patentee that is itself producing the patented item is to determine the sales and profits lost to the patentee because of the infringement.[44] The purpose of compensatory damages is not to punish the infringer, but to make the patentee whole. Thus, patent damages are not paid for a total amount of lost sales, but rather for lost profits on lost sales.[45]

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[39]*King Instr. Corp. v. Otari Corp.*, 767 F.2d 853, 226 USPQ 402 (Fed. Cir. 1985). Here, the alleged contributory infringement was the sale of spare parts; it would seem that the patentee could recover an additional amount for the spare parts only if he could reasonably have anticipated the sale of spare parts himself in the absence of the direct infringement. *Id.* Even though an inducer's own direct infringement is de minimus, it is nonetheless liable for all damages attributable to the direct infringement that it actively induced. *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988).

[40]*CPG Prods. Corp. v. Pegasus Luggage, Inc.*, 776 F.2d 1007, 227 USPQ 497 (Fed. Cir. 1985). Here, the Federal Circuit was applying Eleventh Circuit law.

[41]Cf. *Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 2 USPQ2d 1826 (Fed. Cir. 1987). Despite holding the independent claim nonobvious, the district court went on to hold a dependent claim anticipated. Naturally, the Federal Circuit reversed on a fortiori grounds. However, the court found it unnecessary to remand for a finding as to infringement of the dependent claim, because it was felt that damages would be unaffected by such a finding. In another case, the court criticized the patentee for submitting the infringement issue on appeal on a "plethora of dependent claims," observing that infringement of an independent claim would result in the same damage award as would infringement of all claims dependent thereon. *Wahpeton Canvas Co. v. Frontier, Inc.*, 870 F.2d 1546, 10 USPQ2d 1201 (Fed. Cir. 1989). Care might be suggested here. One could certainly conceive of situations where it would be logical to argue that the more claims of a patent that are infringed, the higher the "reasonable" royalty.

[42]*Roche Prods., Inc. v. Bolar Pharm. Co.*, 733 F.2d 858, 221 USPQ 937, 943 (Fed. Cir. 1984). "If the patent law precludes substantial damages, there exists a strange gap in the panoply (in its proper meaning, a suit of armor) of protection the patent statutes place around an aggrieved and injured patentee." The infringer had begun testing for FDA approval during the last six months before the patent expired. The court suggested that it might be appropriate to award damages sufficient to compensate for actual injury caused to the patentee by the infringer's unlawful head start.

[43]*In re Calmar, Inc.*, 854 F.2d 461, 7 USPQ2d 1730 (Fed. Cir. 1988).

[44]*Del Mar Avionics, Inc. v. Quinton Instr. Co.*, 836 F.2d 1320, 5 USPQ2d 1255 (Fed. Cir. 1987).

[45]*Glaxo Group Ltd. v. Ranbaxy Pharm. Inc.*, 262 F.3d 1333, 59 USPQ2d 1950, 1954 (Fed. Cir. 2001).

It is important at the outset to keep in mind the cardinal limitation of §284: a reasonable royalty is the absolute minimum to which a wronged patentee is entitled. Thus it is proper to award lost profits only to the extent that they exceed a reasonable royalty.[46] An award may be split between lost profits as actual damages to the extent they are proven and a reasonable royalty for the remainder.[47] It is also important to observe carefully the distinction between the profits lost to the patentee, and those that the infringer made. The patentee is clearly not entitled to the infringer's profits, although they can be used as a yardstick to measure the lost profits of the patentee in a proper case.[48] To the extent a patentee complains that infringement has damaged its ability to service foreign markets, it must rely on foreign patent protection.[49]

The "but for" test. Although it would be incorrect to bar a patentee who is not yet manufacturing the product from proving that its actual damages were larger than a reasonable royalty, the burden on a patentee who has not begun to manufacture the patented product is commensurately heavy.[50] To recover lost profits as opposed to royalties, a patent owner must prove a causal relation between the infringement and its loss of profits. The patent owner must show that "but for" the infringement, it would have made the infringer's sales.[51] The

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[46]Cf. *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525, 529 (Fed. Cir. 1986). Perhaps this is not strictly so. In *Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 2 USPQ2d 1826 (Fed. Cir. 1987), the patentee proved lost profits of $158,000 but had previously taken the position that it should have a 70% royalty, which resulted in damages of only $81,000. The district court awarded the lower figure on the ground that the patentee was bound by its earlier position. The patentee did not appeal, but the infringer claimed that a 70% royalty was too high. In affirming on lack of abuse of discretion, the Federal Circuit observed that this was not really a reasonable royalty determination but simply a downward adjustment of actual lost profits.

[47]*State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989).

[48]*Kori Corp. v. Wilco Marsh Buggies, Inc.*, 761 F.2d 649, 225 USPQ 985 (Fed. Cir. 1985). See also *Stickle v. Heublein, Inc.*, 716 F.2d 1550, 219 USPQ 377 (Fed. Cir. 1983). Infringer's profits are often considered in determining a reasonable royalty. *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986); *Trans-World Mfg. Corp. v. Al Nyman & Sons*, 750 F.2d 1552, 224 USPQ 259 (Fed. Cir. 1984). But see *Radio Steel & Mfg. Co. v. MTD Prods., Inc.*, 788 F.2d 1554, 229 USPQ 431 (Fed. Cir. 1986). The patent law long provided that a patentee could recover both its own damages and the infringer's profits. The law changed in 1946 to preclude recovery of the infringer's profits and allow recovery of damages only. *King Instr. Corp. v. Perego*, 65 F.3d 941, 36 USPQ2d 1129 (Fed. Cir. 1995). Thus, patent infringement carries no remedy of an accounting for an infringer's profits. Such profits can, however, be used to determine the reasonableness of the patentee's profit margins. *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988). Under the Semiconductor Chip Protection Act, damages are to be measured as the actual damages suffered by the owner of the mask work plus the infringer's profits that are attributable to the infringement and that are not taken into account in computing the award of actual damages. *Brooktree Corp. v. Advanced Micro-Devices, Inc.*, 977 F.2d 1555, 24 USPQ2d 1401 (Fed. Cir. 1992).

[49]*Johns Hopkins Univ. v. Cellpro Inc.*, 152 F.3d 1342, 47 USPQ2d 1705 (Fed. Cir. 1998).

[50]*Hebert v. Lisle Corp.*, 99 F.3d 1109, 40 USPQ2d 1611 (Fed. Cir. 1996).

[51]*Bic Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 27 USPQ2d 1671 (Fed. Cir. 1993).

Federal Circuit seems to have embraced the Sixth Circuit's *Panduit*[52] "but for" test for lost profits.[53]

Thus the patentee must show causation, and a factual basis for causation is "but for."[54] In order to be entitled to lost profits, the patent owner must show: (1) a demand for the product during the period in question; (2) an absence, during that period, of acceptable noninfringing substitutes; (3) its own manufacturing and marketing capability to meet or exploit that demand; and (4) a detailed computation of the amount of the profit it would have made.[55] In short, it is the patentee's burden to prove, by a preponderance of the evidence,[56] that but for the infringement it would have made the sales.[57]

The *Panduit* and two-supplier market tests are recognized methods of showing "but for" causation. The court recognizes that its precedent has not reconciled completely the two-supplier test with the *Panduit* test. Nevertheless, that precedent does provide the necessary framework for application of the two-supplier market test. Under the two-supplier test, a patentee must show: (1) the relevant market contains only two suppliers, (2) its own manufacturing and marketing capability to make the sales that were diverted to the infringer, and (3) the amount of profit it would have made from these diverted sales. In essence, the two-supplier market test collapses the first two *Panduit* factors into one "two suppliers in the relevant market" factor. The first step in a two-supplier test is to define the relevant market. The proper starting point to identify the relevant market is the patented invention. The relevant market also includes other devices or substitutes similar in physical and functional characteristics to the patented invention. It excludes, however, alternatives with disparately different prices or significantly different characteristics. Once

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[52]*Panduit Corp. v. Stahlin Bros. Fibre Works,* 575 F.2d 1152, 197 USPQ 726 (6th Cir. 1978).

[53]E.g., *Gyromat Corp. v. Champion Spark Plug Co.,* 735 F.2d 549, 222 USPQ 4 (Fed. Cir. 1984). Nonetheless, the court has made it clear that the four-part *Panduit* test is not the exclusive standard for determining entitlement to lost profits. *Carella v. Starlight Archery & Pro Line Co.,* 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986). *Panduit* is the court's "nonexclusive" standard. *State Indus., Inc. v. Mor-Flo Indus., Inc.,* 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989). Where a patent owner maintains that it lost sales equal in quantity to the infringing sales, the four-part *Panduit* test applies. *Water Techs. Corp. v. Calco, Ltd.,* 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988).

[54]*Lam, Inc. v. Johns-Manville Corp.,* 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983).

[55]*Ryco, Inc. v. Ag-Bag Corp.,* 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988); *Radio Steel & Mfg. Co. v. MTD Prods., Inc.,* 788 F.2d 1554, 229 USPQ 431 (Fed. Cir. 1986); *Yarway Corp. v. Eur-Control USA Inc.,* 775 F.2d 268, 227 USPQ 352 (Fed. Cir. 1985); *Seattle Box Co. v. Industrial Crat. & Pack., Inc.,* 756 F.2d 1574, 225 USPQ 357 (Fed. Cir. 1985); *Paper Converting Mach. Co. v. Magna-Graphics Corp.,* 745 F.2d 11, 223 USPQ 591 (Fed. Cir. 1984); *Gyromat Corp. v. Champion Spark Plug Co.,* 735 F.2d 549, 222 USPQ 4 (Fed. Cir. 1984).

[56]*Yarway Corp. v. Eur-Control USA Inc.,* 775 F.2d 268, 227 USPQ 352 (Fed. Cir. 1985).

[57]*King Instr. Corp. v. Otari Corp.,* 767 F.2d 853, 226 USPQ 402 (Fed. Cir. 1985); *Kori Corp. v. Wilco Marsh Buggies, Inc.,* 761 F.2d 649, 225 USPQ 985 (Fed. Cir. 1985); *Paper Converting Mach. Co. v. Magna-Graphics Corp.,* 745 F.2d 11, 223 USPQ 591 (Fed. Cir. 1984); *Bio-Rad Labs., Inc. v. Nicolet Inst. Corp.,* 739 F.2d 604, 222 USPQ 654 (Fed. Cir. 1984). An award of damages may be remanded in the absence of a finding that the patentee would have made the sales but for the infringement. *Bott v. Four Star Corp.,* 807 F.2d 1567, 1 USPQ2d 1210 (Fed. Cir. 1986).

the market is defined, it generally becomes an easier task to determine how many suppliers operate in the defined relevant market. That inquiry focuses on the number of companies involved, not the number of alternatives in the relevant market. If the patentee shows two suppliers in the relevant market, capability to make the diverted sales, and its profit margin, that showing erects a presumption of "but for" causation. Although the burden of persuasion remains with the patentee, the burden of going forward then shifts to the infringer. The infringer may rebut the presumption by showing that the patentee reasonably would not have made some or all of the diverted sales "but for" the infringement. For example, the infringer may rebut the presumption by showing that it sold another available, noninfringing substitute in the relevant market. This situation would arise only where there are two suppliers in the market, but the infringing supplier had two available alternatives: one infringing and the other noninfringing. In that situation, even absent the infringement, customers may have selected the infringer's available, noninfringing alternative over the patented invention.[58]

The requirement of causation implicates the patentee's manufacturing capacity and marketing capability, the desires of customers for the claimed invention, the relationship of the claimed invention to the product sold, and other factors pertinent to the particular market or parties. Causation is most easily found where only two companies, the patentee and the infringer, are in the market. Where there is evidence of a third-party competitor, the lost profits theory would appear to be nonviable inasmuch as the third party could have made the sale rather than the patentee. Under such circumstances, there appears to be no possible causation. But patentees have successfully urged modifications to the basic damage theory so as to cover situations other than the simple two-supplier market. There is precedent for finding causation despite an alternative source of supply if that source is an infringer or puts out a noninfringing product that is an unacceptable alternative, or if the source accounts for only insignificant sales. There is also precedent for lost profits damages calculated on a portion of an infringer's sales based on the patentee's market share.[59] A purchaser unable to obtain the infringing device is presumed to seek an acceptable substitute.[60]

Reconstructing the market, by definition a hypothetical enterprise, requires the patentee to project economic results that did not occur. To prevent the hypothetical from lapsing into pure speculation, the court requires sound economic proof of the nature of the market and likely outcomes with infringement factored out of the economic picture. Within this framework, trial courts consistently permit patentees to present market reconstruction theories showing all of the

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[58]*Micro Chem. Inc. v. Lextron Inc.*, 318 F.3d 1119, 65 USPQ2d 1695 (Fed. Cir. 2003).

[59]*Micro Motion, Inc. v. Kane Steel Co.*, 894 F.2d 1318, 13 USPQ2d 1696 (Fed. Cir. 1990).

[60]*Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 939 F.2d 1540, 19 USPQ2d 1432 (Fed. Cir. 1991).

ways in which they would have been better off in the "but for world," and accordingly to recover lost profits in a wide variety of forms. But by the same token, a fair and accurate reconstruction of the "but for" market also must take into account, where relevant, alternative actions the infringer foreseeably would have undertaken had it not infringed. Without the infringing product, a rational would-be infringer is likely to offer an acceptable noninfringing alternative, if available, to compete with the patent owner rather than leave the market altogether. The competitor in the "but for" marketplace is hardly likely to surrender its complete market share when faced with a patent, if it can compete in some other lawful manner. Moreover, only by comparing the patented invention to its next-best available alternative—regardless of whether the alternative was actually produced and sold during the infringement—can the court discern the market value of the patent owner's exclusive right, and therefore its expected profit or reward, had the infringer's activities not prevented it from taking full economic advantage of this right. Thus, an accurate reconstruction of the hypothetical "but for" market takes into account any alternatives available to the infringer.[61]

All in all, the critical inquiry is whether the patentee has shown a reasonable probability that it would have made the infringing sales.[62] The but for test does not demand absolute proof.[63] It is not possible and is unnecessary to negate every possibility that a purchaser might have bought another product.[64] The patentee need not prove causation as a certainty, but only as a reasonable probability.[65]

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[61]*Grain Processing Corp. v. American Maize-Prods. Co.*, 185 F.3d 1341, 51 USPQ2d 1556 (Fed. Cir. 1999).

[62]*Bic Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 27 USPQ2d 1671 (Fed. Cir. 1993); *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988); *Del Mar Avionics, Inc. v. Quinton Instr. Co.*, 836 F.2d 1320, 5 USPQ2d 1255 (Fed. Cir. 1987); *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 222 USPQ 4 (Fed. Cir. 1984). When the patentee establishes the reasonableness of the inference that it would have made the infringing sales, it has sustained the burden of proving entitlement to lost profits for those sales. The onus is then placed on the infringer to show that it is unreasonable to infer that some or all of the infringing sales probably caused the patentee to suffer the loss of profits. *Kaufman Co. v. Lantech, Inc.*, 926 F.2d 1136, 17 USPQ2d 1828 (Fed. Cir. 1991).

[63]*American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 220 USPQ 763 (Fed. Cir. 1984).

[64]*State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989); *Marsh-McBirney, Inc. v. Montedoro-Whitney Corp.*, 882 F.2d 498, 11 USPQ2d 1794 (Fed. Cir. 1989); *Del Mar Avionics, Inc. v. Quinton Instr. Co.*, 836 F.2d 1320, 5 USPQ2d 1255 (Fed. Cir. 1987); *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986); *Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 223 USPQ 591 (Fed. Cir. 1984); *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 222 USPQ 4 (Fed. Cir. 1984).

[65]*Marsh-McBirney, Inc. v. Montedoro-Whitney Corp.*, 882 F.2d 498, 11 USPQ2d 1794 (Fed. Cir. 1989); *King Instr. Corp. v. Otari Corp.*, 767 F.2d 853, 226 USPQ 402 (Fed. Cir. 1985); *Bio-Rad Labs., Inc. v. Nicolet Inst. Corp.*, 739 F.2d 604, 222 USPQ 654 (Fed. Cir. 1984). Of course, the proof may not be speculative. *Yarway Corp. v. Eur-Control USA Inc.*, 775 F.2d 268, 227 USPQ 352 (Fed. Cir. 1985). In *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988), the court rejected a contention that a decline in the patentee's sales was due to a slump in the agricultural economy. That same slump must have affected the infringer's sales as well, and it is those sales that are relevant to lost profits.

The patent owner's burden of proof is not an absolute one, although liability does not extend to speculative profits.[66]

Nor is it absolutely necessary that the trial court make a specific finding of causation, where it is clear that it understood the requirement of causation and that such a finding naturally flowed from an ultimate finding of lost profits.[67] Where the plaintiff's sales decrease after the defendant begins to sell devices incorporating the designs and features of plaintiff's devices, causation can be inferred in the absence of any evidence by the defendant that there was some other convincing explanation for the plaintiff's loss of sales.[68]

The infringer's ability to customize and its reputation for competitive pricing do not tend to show that the patentee would not have made the sales but for the infringement.[69] Moreover, the fact that the patentee might not have competed for every infringing sale does not indicate that the inference the patentee would probably have made the sale absent the infringement is unreasonable.[70] In response to an argument that many sales were due to customer loyalty, the court held that it is illogical to consider the preference of customers for the infringer as a source of supply, because that presumes a legitimate choice between two manufacturers. The real question is whether a showing of loyalty of some customers overcomes the reasonable inference, when the patentee and infringers are the only suppliers of the patented product, that the patent owner would have made the sales made by the infringers.[71]

In *Bic v. Windsurfing,* the court again[72] indicated that the *Panduit* test is an acceptable but not exclusive test for determining "but for" causation. *Panduit* assumes that the patent owner and the infringer sell products sufficiently similar to compete in the same market segment. Both the "demand" and the "noninfringing alternative" *Panduit* factors rely on such an assumption. Similarly, the market share approach endorsed by the court in *State Industries*[73] assumes competition in the same market. But where the market is elastic, the patent

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[66]*State Indus., Inc. v. Mor-Flo Indus., Inc.,* 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989).

[67]*Del Mar Avionics, Inc. v. Quinton Instr. Co.,* 836 F.2d 1320, 5 USPQ2d 1255 (Fed. Cir. 1987); *Amstar Corp. v. Envirotech Corp.,* 823 F.2d 1538, 3 USPQ2d 1412 (Fed. Cir. 1987); *King Instr. Corp. v. Otari Corp.,* 767 F.2d 853, 226 USPQ 402 (Fed. Cir. 1985). It may be possible to infer causation in a two-supplier market. *Lam, Inc. v. Johns-Manville Corp.,* 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983).

[68]*Universal Gym Equip., Inc. v. ERWA Exercise Equip. Ltd.,* 827 F.2d 1542, 4 USPQ2d 1035, 1043 (Fed. Cir. 1987).

[69]*Kaufman Co. v. Lantech, Inc.,* 926 F.2d 1136, 17 USPQ2d 1828 (Fed. Cir. 1991).

[70]*Kaufman Co. v. Lantech, Inc.,* 926 F.2d 1136, 17 USPQ2d 1828 (Fed. Cir. 1991). Here, the patentee conceded that it would not have attempted to make sales to the infringer's distributors, but did establish that the infringing devices were typically resold by the distributors to customers within a year. In the case of lost profits determinations involving large installations, it is not of controlling significance that the patent owner did not bid on every infringing sale, even in a market having more than two suppliers. *Standard Havens Prods., Inc. v. Gencor Indus., Inc.,* 953 F.2d 1360, 21 USPQ2d 1321 (Fed. Cir. 1992).

[71]*Datascope Corp. v. SMEC, Inc.,* 879 F.2d 820, 11 USPQ2d 1321 (Fed. Cir. 1989).

[72]See note 15:53.

[73]See note 15:115.

owner and the infringer sell to different segments of the market, and the patent owner had valued its patent in terms of licensing royalties, by licensing nearly every competitor, a patent owner may not be entitled to lost profits. But it is entitled to royalties, including lost royalties that its own licensees would have paid it but for the infringement.[74]

Demand. A substantial number of sales by the infringer is said to be compelling evidence of demand for the patented product.[75]

Acceptable noninfringing substitutes. The court requires reliable economic proof of the market that establishes an accurate context to project the likely results "but for" the infringement. The availability of substitutes invariably will influence the market forces defining this "but for" marketplace.[76] It is axiomatic that if a device is not available for purchase, an infringer cannot argue that the device is an acceptable noninfringing alternative for the purpose of avoiding a lost profits award. A lost profits award reflects the realities of sales actually lost, not the possibilities of a hypothetical market that the infringer might have created.[77] But a substitute need not be openly on sale to be "available." Thus, with proper economic proof of availability, an acceptable substitute not on the market during the infringement may nonetheless become part of the lost profits calculus and therefore limit or preclude those damages.[78] There is no rigid test for determining whether alternative technology that was not actually "on sale" during the infringement period was nevertheless "available," as a noninfringing substitute, for purposes of lost profits calculation. Factors to be considered include whether material and know-how for the alleged

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[74]*Bic Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 27 USPQ2d 1671, 1674 (Fed. Cir. 1993).

[75]*Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 222 USPQ 4 (Fed. Cir. 1984).

[76]*Grain Processing Corp. v. American Maize-Prods. Co.*, 185 F.3d 1341, 51 USPQ2d 1556 (Fed. Cir. 1999).

[77]*Zygo Corp. v. Wyko Corp.*, 79 F.3d 1563, 38 USPQ2d 1281 (Fed. Cir. 1996).

[78]*Grain Processing Corp. v. American Maize-Prods. Co.*, 185 F.3d 1341, 51 USPQ2d 1556 (Fed. Cir. 1999). Accordingly, an available technology not on the market during the infringement period can constitute a noninfringing alternative. The critical time period for determining availability of an alternative is the period of infringement for which the patent owner claims damages, i.e., the "accounting period." Switching to a noninfringing substitute after the accounting period does not alone show availability of the noninfringing substitute during this critical time. When an alleged alternative is not on the market during the accounting period, a trial court may reasonably infer that it was not available as a noninfringing substitute at that time. The accused infringer then has the burden to overcome this inference by showing that the substitute was available during the accounting period. Mere speculation or conclusory assertions will not suffice to overcome the inference. After all, the infringer chose to produce the infringing, rather than noninfringing, product. Thus, the trial court must proceed with caution in assessing proof of the availability of substitutes not actually sold during the period of infringement. Acceptable substitutes that the infringer proves were available during the accounting period can preclude or limit lost profits; substitutes only theoretically possible will not. *Id.* In *Micro Chem. Inc. v. Lextron Inc.*, 317 F.3d 1387, 65 USPQ2d 1532 (Fed. Cir. 2003), the court passed the question whether the holding of *Grain Processing* has applicability in the reasonable royalty context.

substitute were readily available at the time of infringement, whether the high cost of necessary material effectively rendered the substitute unavailable, and whether the infringer had to design or invent around patented technology to develop the alleged substitute.[79]

The word "acceptable" is also an important qualification on noninfringing substitutes.[80] Mere existence of a competing device does not make it an acceptable substitute. A product lacking the advantages of that patented can hardly be termed a substitute acceptable to the customer who wants those advantages.[81] The fact that some alternatives were available that incorporate some but not all of the patent claim elements does not establish that a finding of no acceptable noninfringing substitutes was erroneous. A contrary result would ignore the fact that the patent claim is a total combination of elements, viewed as a whole.[82] The fact that there are other infringing substitutes is obviously not significant.[83]

While sales data showing market acceptance of a noninfringing alternative may provide significant evidence that the alternative was acceptable to consumers, such evidence is not the sole means for demonstrating acceptability. Accused infringers routinely rely on witness testimony to show that a noninfringing alternative is acceptable because customers do not seek the patented features absent from the substitute product. It is true that in many cases it may be difficult to prove acceptability of a noninfringing alternative without sales figures illustrating market behavior. But that does not mean that a damages award of lost profits should be reopened after trial if market data probative of acceptability become available once a noninfringing alternative replaces the infringing product in the marketplace.[84]

In deciding whether there are acceptable noninfringing alternatives for purposes of assessing damages, it appears the court will insist upon a rigorous infringement analysis.[85] Factors that point

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[79]*Micro Chem. Inc. v. Lextron Inc.*, 318 F.3d 1119, 65 USPQ2d 1695 (Fed. Cir. 2003).

[80]*Yarway Corp. v. Eur-Control USA Inc.*, 775 F.2d 268, 227 USPQ 352 (Fed. Cir. 1985).

[81]*TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986). The trial court found that none of the alleged substitutes possessed all the advantages of the patented device. The Federal Circuit, without deciding whether such a finding is absolutely required, simply indicated that the finding supported a determination of no acceptable substitutes. See also *Smithkline Diagnostics, Inc. v. Helena Labs. Corp.*, 926 F.2d 1161, 17 USPQ2d 1922 (Fed. Cir. 1991); *Kalman v. Berlyn Corp.*, 914 F.2d 1473, 16 USPQ2d 1093 (Fed. Cir. 1990). To be deemed acceptable, the alleged noninfringing substitute must not have a disparately higher price than or possess characteristics significantly different from the patented product. *Kaufman Co. v. Lantech, Inc.*, 926 F.2d 1136, 17 USPQ2d 1828 (Fed. Cir. 1991). To prove that there are no acceptable noninfringing substitutes, the patent owner must show either that the purchasers in the marketplace generally were willing to buy the patented product for its advantages, or that the specific purchasers of the infringing product purchased on that basis. *Standard Havens Prods., Inc. v. Gencor Indus., Inc.*, 953 F.2d 1360, 21 USPQ2d 1321 (Fed. Cir. 1992).

[82]*Radio Steel & Mfg. Co. v. MTD Prods., Inc.*, 788 F.2d 1554, 229 USPQ 431 (Fed. Cir. 1986).

[83]*Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 222 USPQ 4 (Fed. Cir. 1984).

[84]*Fiskars Inc. v. Hunt Mfg. Co.*, 279 F.3d 1378, 61 USPQ2d 1851 (Fed. Cir. 2002).

[85]*Datascope Corp. v. SMEC, Inc.*, 879 F.2d 820, 11 USPQ2d 1321 (Fed. Cir. 1989). The court found clear error in a finding that an alternative was noninfringing on the basis that the analysis was made with reference to the patentee's commercial embodiment rather than

toward an absence of noninfringing alternatives include (1) failure of the infringer to design its own device, (2) an election to infringe despite having expended only minimal sums on design when notified of infringement, (3) willful infringement, (4) failure to successfully market other allegedly acceptable designs, (5) violation of an injunction against infringement, and (6) withdrawal from the business after enforcement of such an injunction.[86] Where the infringer ignores the supposed substitutes, its argument is of limited influence.[87] On the other hand, the fact that neither the patentee's nor the infringer's market share changed significantly after introduction of the accused device is very probative of the availability of noninfringing substitutes.[88] Consumer demand defines the relevant market and relative substitutability among products therein. Important factors shaping demand may include consumers' intended use for the patentee's product, similarity of physical and functional attributes of the patentee's product to alleged competing products, and price. Where the alleged substitute differs from the patentee's product in one or more of these respects, the patentee often must adduce economic data supporting its theory of the relevant market in order to show "but for" causation.[89]

In *Pall v. Micron*,[90] the court held squarely that (1) a product licensed to a third party as a result of litigation is a noninfringing substitute, but (2) such a product is not a noninfringing substitute during the period prior to the license, and (3) voluntary settlement of the litigation by licensing does not retrospectively transform an accused infringing product into a noninfringing substitute. It also held that, after such a license, lost profits are limited to the share of the defendant's sales that the patent owner would reasonably have made, with the remaining sales assessed according to a reasonable royalty. In this latter connection it rejected the patent owner's argument that such a result provides a windfall to the infringer, which was premised on the logic that when there are multiple infringers the infringement will be profitable to the remaining infringers once

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the patent claims. In *Comair Rotron, Inc. v. Nippon Densan Corp.*, 49 F.3d 1535, 33 USPQ2d 1929 (Fed. Cir. 1995), the defendant's accused device had been found, along with several other devices, to be an acceptable noninfringing substitute in a prior case on the same patent against a different defendant. Naturally, the present defendant attempted to use that judgment as collateral estoppel on the infringement question. The lower court granted a summary judgment in its favor but the Federal Circuit reversed on the ground that the prior finding was not necessary to the judgment. Its reasoning seemed to be that economic complexities such as multiple competitors, some of whom infringe and some of whom don't, have not led to a bright-line rule on this aspect of lost profits.

[86]*TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986). The fact that the patentee sells several lines of products, some patented and some not, does not of itself justify an inference that the lines are acceptable substitutes. *Kaufman Co. v. Lantech, Inc.*, 926 F.2d 1136, 17 USPQ2d 1828 (Fed. Cir. 1991).

[87]*TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986).

[88]*Slimfold Mfg. Co. v. Kinkead Indus.*, 932 F.2d 1453, 18 USPQ2d 1842 (Fed. Cir. 1991).

[89]*Grain Processing Corp. v. American Maize-Prods. Co.*, 185 F.3d 1341, 51 USPQ2d 1556 (Fed. Cir. 1999).

[90]*Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 36 USPQ2d 1225 (Fed. Cir. 1995).

the patentee settles with any one of them. The court reasoned that the purpose of compensatory damages is not to punish the infringer, but to make the patentee whole. The correct point at which to solve this problem, apparently, is in the setting of the royalty rate and the discretionary multiplication of damages.[91]

The existence of noninfringing substitutes is a question of fact, reviewable under the clearly erroneous standard.[92]

Ability to meet demand. Aggressive development of the market by the patentee is good evidence of ability to meet the market demand.[93] Lost profits are a particularly appropriate measure of damages where the patentee and the infringer are the only suppliers in the market.[94] Lost profits for all sales are easier to obtain where there are only two suppliers in the market, the patent owner and the infringer.[95] However, lost profits may be too speculative where the patentee is not in the business of making the same machine as the infringer.[96] An exclusive licensee may be able to recover lost profits in an infringement suit, on the theory that it is entitled to be compensated on the basis of its ability to exploit the patent.[97]

Calculation of lost profits. The amount of lost profits cannot be speculative but need not be proved with unerring precision either.[98] The infringer bears the risk of any uncertainty as to computation,[99]

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[91]*Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 36 USPQ2d 1225 (Fed. Cir. 1995). Apparently, the noninfringing alternative must be available other than only through the patentee, however. See *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 35 USPQ2d 1065 (Fed. Cir. 1995).

[92]*Zygo Corp. v. Wyko Corp.*, 79 F.3d 1563, 38 USPQ2d 1281 (Fed. Cir. 1996); *Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Radio Steel & Mfg. Co. v. MTD Prods., Inc.*, 788 F.2d 1554, 229 USPQ 431 (Fed. Cir. 1986).

[93]*Yarway Corp. v. Eur-Control USA Inc.*, 775 F.2d 268, 227 USPQ 352 (Fed. Cir. 1985).

[94]*Kori Corp. v. Wilco Marsh Buggies, Inc.*, 761 F.2d 649, 225 USPQ 985 (Fed. Cir. 1985); *Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983).

[95]*Micro Motion, Inc. v. Kane Steel Co.*, 894 F.2d 1318, 13 USPQ2d 1696 (Fed. Cir. 1990); *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988). When the contesting parties are the only suppliers of the product, it is not inappropriate to infer that the patentee would have had the sales made by the infringer. *Marsh-McBirney, Inc. v. Montedoro-Whitney Corp.*, 882 F.2d 498, 11 USPQ2d 1794 (Fed. Cir. 1989).

[96]*Stickle v. Heublein, Inc.*, 716 F.2d 1550, 219 USPQ 377 (Fed. Cir. 1983). But see *Hebert v. Lisle Corp.*, 99 F.3d 1109, 40 USPQ2d 1611 (Fed. Cir. 1996). Expert testimony to the effect that, if the infringer had not been in the market, and if the patentee had been able to make all the sales that the infringer made, the patentee's sales would have increased 68% was held not to support a conclusion that the patentee would have made 68% of the infringer's sales but for the infringement. *Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 220 USPQ 929 (Fed. Cir. 1984). But see *King Instr. Corp. v. Perego*, 65 F.3d 941, 36 USPQ2d 1129 (Fed. Cir. 1995); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 35 USPQ2d 1065 (Fed. Cir. 1995).

[97]*Kori Corp. v. Wilco Marsh Buggies, Inc.*, 761 F.2d 649, 225 USPQ 985 (Fed. Cir. 1985). A nonexclusive licensee may be limited to a reasonable royalty.

[98]*Bio-Rad Labs., Inc. v. Nicolet Inst. Corp.*, 739 F.2d 604, 222 USPQ 654 (Fed. Cir. 1984).

[99]*Yarway Corp. v. Eur-Control USA Inc.*, 775 F.2d 268, 227 USPQ 352 (Fed. Cir. 1985); *King Instr. Corp. v. Otari Corp.*, 767 F.2d 853, 226 USPQ 402 (Fed. Cir. 1985). When the amount of damages is not ascertainable with precision, reasonable doubt is appropriately

especially where it is due to its failure to keep accurate or complete records.[100] The amount of detailed testimony and documentation regarding computations of the patentee's lost profits will vary with the size and complexity of the patentee's company and with the extent to which that information is challenged or contradicted by the infringer.[101]

Lost profits may be in the form of diverted sales, eroded prices, or increased expenses.[102] For example, if the patentee can show that it had to sell at a lower price in order to keep the infringer from making the sale, it can recover the difference.[103] Where the infringer's sales cause an artificial depression of the patentee's sales and thus depress the patentee's profit margin, the infringer should not be the beneficiary. It is therefore appropriate to use the patent owner's profit margin, unaffected by the infringing sales, to estimate what the patent owner's profits would have been in the absence of the infringement.[104]

The court has acknowledged that a patentee may be able to produce sufficient evidence to recover projected future losses. In fact, it says it has affirmed future lost profit awards where the patentee has presented reliable economic evidence of "but for" causation. Although future lost profit calculations necessarily contain some speculative elements, a patentee may supply adequate evidence to enable the factfinder to responsibly estimate future losses based on sound economic models and evidence, not pure guesswork. But the court has not provided much in the way of guidance on how to evaluate the soundness of particular theories, other than to question assumptions of continued demand and growth rates, profit margins, and other market factors.[105]

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resolved against the infringer. *Del Mar Avionics, Inc. v. Quinton Instr. Co.*, 836 F.2d 1320, 5 USPQ2d 1255 (Fed. Cir. 1987).

[100]*Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 2 USPQ2d 1826 (Fed. Cir. 1987); *Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983). But see *Beatrice Foods Co. v. New England Printing & Lith. Co.*, 899 F.2d 1171, 14 USPQ2d 1020 (Fed. Cir. 1990), where the defendant destroyed many of its records, which made it impossible for the plaintiff to reconstruct all of the infringing sales. The district court awarded lost profits equal to the total sales that could be proved. The Federal Circuit held that the district court had no equitable discretion to equate gross provable sales with lost profits, and remanded. It did, however, indicate that if the records destruction seemed to warrant it, the district court on remand could exercise its discretion to increase damages, and thus end up with an award even greater than the defendant's gross sales.

[101]*Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 231 USPQ 644 (Fed. Cir. 1986).

[102]*Amstar Corp. v. Envirotech Corp.*, 823 F.2d 1538, 3 USPQ2d 1412 (Fed. Cir. 1987); *Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983). A decrease in a company's stock value is generally too remotely related to patent infringement to be compensable under the patent laws. *Interactive Pictures Corp. v. Infinite Pictures Inc.*, 274 F.3d 1371, 61 USPQ2d 1152, 1165 (Fed. Cir. 2001).

[103]*Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983). See also *Kalman v. Berlyn Corp.*, 914 F.2d 1473, 16 USPQ2d 1093 (Fed. Cir. 1990).

[104]*King Instr. Corp. v. Otari Corp.*, 767 F.2d 853, 226 USPQ 402 (Fed. Cir. 1985).

[105]*Shockley v. Arcan Inc.*, 248 F.3d 1349, 58 USPQ2d 1692 (Fed. Cir. 2001). See *Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983). In *Brooktree Corp. v. Advanced Micro-Devices, Inc.*, 977 F.2d 1555, 24 USPQ2d 1401 (Fed. Cir. 1992), the court

In general, an infringer's sales at a lower price do not defeat the patentee's recovery of its losses at the patentee's price, for the principle of patent damages is to return the patentee to the pecuniary position it would have been in but for the infringement.[106] Thus, where the infringer's pricing practices forced the patentee to give discounts, the patentee would be entitled to recover those discounts in computing its lost profits.[107] Similarly, where the evidence showed that the infringement caused the patentee to reduce its price an average of $100 per unit, it was proper to award the patentee, in addition to its actual lost profits, $100 for each of its own sales and $100 for each of the infringer's sales.[108] Price erosion as a damages element can become extremely significant.[109] To prove price erosion damages, a patentee must show that, but for the infringement, it would have been able to charge higher prices.[110] It is not required that the patentee knew that the competing system infringed the patent, if the patentee reduced its price to meet the infringer's competition.[111] Whether competitive price reductions are properly included as lost profits is a question of fact.[112]

Reduction of prices, and consequent loss of profits, enforced by infringing competition, form a proper ground for awarding of damages. The only question is as to the character and sufficiency of the evidence in the particular case. That question places the burden on the patentee to show that but for the infringement, it would have sold its product at higher prices. Moreover, in a credible economic

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approved a refusal to permit the jury to consider whether projected future losses due to price erosion could be included in a damage award. That question was simply too speculative. Although projected future losses may be recovered when sufficiently supported, the burden of proving future injury is commensurately greater than that for damages already incurred.

[106]*Ball Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 36 USPQ2d 1225 (Fed. Cir. 1995). It should be noted, however, that the court affirmed a lost profits rate that was less than the patentee's actual rate.

[107]*TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986). A failure to consider the fact that the infringer sold at a lower price than the patent owner is not error from the standpoint of the infringer. The patent owner's disregard of that fact could only reduce the profit that it might have proved. *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988).

[108]*TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986). Interestingly, there was a period during which reasonable royalty was found to be the appropriate measure of damage. During this period, the extra $100 was not awarded because it presumably would have been factored into the reasonable royalty calculation. In a combined patent and mask work infringement case, the court affirmed a lost profits award that included as an element losses due to the patent owner lowering prices as a result of the infringer's preinfringing announcement of the new product. In so doing, it noted that for products of high technology, the innovator's opportunity to recover the investment made in research and development is often concentrated in the few years immediately following introduction of a new product. *Brooktree Corp. v. Advanced Micro-Devices, Inc.*, 977 F.2d 1555, 24 USPQ2d 1401 (Fed. Cir. 1992).

[109]In *Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992), this factor apparently accounted for $29 million of the award.

[110]*Minco, Inc. v. Combustion Eng'g, Inc.*, 95 F.3d 1109, 40 USPQ2d 1001 (Fed. Cir. 1996).

[111]*Vulcan Eng'g Co. v. FATA Alum. Inc.*, 278 F.3d 1366, 61 USPQ2d 1545 (Fed. Cir. 2002).

[112]*Brooktree Corp. v. Advanced Micro-Devices, Inc.*, 977 F.2d 1555, 24 USPQ2d 1401 (Fed. Cir. 1992).

analysis, the patentee cannot show entitlement to a higher price divorced from the effect of that higher price on demand for the product. In other words, the patentee must also present evidence of the (presumably reduced) amount of product the patentee would have sold at the higher price. Thus, the patentee's price erosion theory must account for the nature, or definition, of the market, similarities between any benchmark market and the market in which price erosion is alleged, and the effect of the hypothetically increased price on the likely number of sales at that price in that market.[113]

In lost profits determinations involving large installations, noninfringing installations cannot form the basis for a lost profits recovery, even if the sales of those noninfringing installations result from "bait-and-switch" tactics on the part of the infringer.[114]

Lost profits can be based on market shares.[115] If a patentee can show that its growth rate during the period of infringement was less than the rate projected from the preinfringement period, it can recover expected profits for the differential (less, of course, any actual lost profits on sales made by the infringer during the period). The court indicated that such a measure of damages was not unduly speculative or conjectural and seemed to justify it on such considerations as injury to goodwill and drain of resources and personnel caused by the litigation.[116] But projections of lost profits must not be speculative. The burden of proving future injury is commensurately greater than that for damages already incurred, for the future always harbors unknowns. While estimates of lost future profits may necessarily contain some speculative elements, the factfinder must have before

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[113]*Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l Inc.*, 246 F.3d 1336, 57 USPQ2d 1953 (Fed. Cir. 2001). This case contains a useful discussion of price erosion analysis, and concludes that the patent owner could not establish lost profits due to price erosion because its expert employed an inappropriate benchmark and could find no other. Just because the marketplace does not supply another market for comparison, a poor benchmark cannot supply sufficient evidence to show the likely reaction of the market in question but for infringement. Economists can define hypothetical markets, derive a demand curve, and make price erosion approximations without relying on inapposite benchmarks. Compare *Ericsson Inc. v. Harris Corp.*, 352 F.3d 1369, 69 USPQ2d 1109 (Fed. Cir. 2003).

[114]*Standard Havens Prods., Inc. v. Gencor Indus., Inc.*, 953 F.2d 1360, 21 USPQ2d 1321 (Fed. Cir. 1992).

[115]*State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989). The patentee had 40% of a total market that consisted of infringements and a less preferable but noninfringing substitute. The district court effectively neutralized the noninfringing alternative by crediting each competitor in the market with its share of the total market. Thus, it held that the patentee was entitled to lost profits on 40% of the infringer's sales, and a reasonable royalty on the remaining 60%. See also *Micro Motion, Inc. v. Kane Steel Co.*, 894 F.2d 1318, 13 USPQ2d 1696 (Fed. Cir. 1990). In *Slimfold Mfg. Co. v. Kinkead Indus.*, 932 F.2d 1453, 18 USPQ2d 1842 (Fed. Cir. 1991), the court distinguished *State v. Mor-Flo* on the ground it held only that the grant of lost profits based on market share was not an abuse of discretion. That does not mean that a failure to award lost profits based on market share would necessarily constitute an abuse of discretion.

[116]*Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983). The court was not required to deal with the possibility that the postinfringement growth rate might remain at the reduced level; here it picked up again to the preinfringement level. It should also be considered whether this decision might be limited to a market with only two suppliers.

it such facts and circumstances to enable it to make an estimate of damage based upon judgment not guesswork.[117]

In ITC cases, the court has recognized that it may be appropriate to employ a more lenient standard with respect to the actual quantum of lost sales, on the theory that an emerging domestic industry may need additional protection. However, the standard of proof remains the same: a but for analysis must be employed and that requires a showing that a sale by the infringer represented a lost sale to the industry.[118]

The court has indicated that it is willing to employ an "incremental profits" approach to calculating loss. This approach recognizes that it does not cost as much to produce unit *n+1* if the first *n* or fewer units have already paid the fixed costs.[119] The court also has vigorously embraced the "entire market rule" for lost profits calculations as well as reasonable royalty determinations.[120]

In *Rite-Hite v. Kelley*,[121] the patentee made two types of devices: a low priced unit that was covered by its patent, and a high priced unit that was not. The defendant's infringing device was intended to compete with the plaintiff's unpatented high priced unit. In an en banc decision, the court held that the patentee was entitled to recover profits that it lost on the diverted sales of the unpatented device. The court adopted a test of reasonable foreseeability, not unlike the concept of "proximate cause" traditionally encountered in tort law. Thus, lost sales of the unpatented device that directly competed with the infringing device were reasonably foreseeable and therefore compensable.[122]

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[117]*Oiness v. Walgreen Co.*,88 F.3d 1025, 39 USPQ2d 1304 (Fed. Cir. 1996). Speculative or contingent profits, as opposed to those a plaintiff would certainly earn but for the default, are recoverable only when the record permits estimation of probable profits with reasonable certainty. *U.S. Valves Inc. v. Dray,* 212 F.3d 1368, 54 USPQ2d 1834 (Fed. Cir. 2000).

[118]*Corning Glass Works v. United States ITC,* 799 F.2d 1559, 230 USPQ 822 (Fed. Cir. 1986).

[119]*Paper Converting Mach. Co. v. Magna-Graphics Corp.,* 745 F.2d 11, 223 USPQ 591 (Fed. Cir. 1984). Fixed costs are those that do not vary with increases in production, such as management salaries, property taxes, insurance, etc. *Id.* An award of incremental profits is well established and appropriate for determining damages for patent infringement where any increase in fixed costs per unit is found to be minimal. *State Indus., Inc. v. Mor-Flo Indus., Inc.,* 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989).

[120]*State Indus., Inc. v. Mor-Flo Indus., Inc.,* 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989); *Paper Converting Mach. Co. v. Magna-Graphics Corp.,* 745 F.2d 11, 223 USPQ 591 (Fed. Cir. 1984) (lost profits case). The *Panduit* test applies here as well. Thus, there must be a reasonable probability that the patentee would have made the sale of an unpatented accessory had the defendant not made the infringing sale. *Kaufman Co. v. Lantech, Inc.,* 926 F.2d 1136, 17 USPQ2d 1828 (Fed. Cir. 1991). See §15.1(d) for a general discussion of the entire market rule.

[121]*Rite-Hite Corp. v. Kelley Co.,* 56 F.3d 1538, 35 USPQ2d 1065 (Fed. Cir. 1995).

[122]The court rejected various policy arguments, such as that inventors should be encouraged by the law to practice their patented inventions, and that a patent cannot be used to restrict competition in the sale of products not covered by the patent. It also distinguished the noninfringing alternative prong of the lost profits test on the grounds that here, the noninfringing alternative was available only through the patentee. In a vigorous dissent, Judge Nies pointed out that the plaintiff could not mark the unpatented products with the patent number for notice purposes, and yet could recover for profits lost as a result of the diverted sales of

(c) Reasonable Royalty

The two methods by which damages are usually calculated under 35 U.S.C. §284 are assessment of actual damages (the profits the patentee lost due to the infringement) or, if actual damages cannot be ascertained, determination of a reasonable royalty.[123]

The statute mandates a reasonable royalty as the floor below which damages shall not fall.[124] A reasonable royalty is the amount a person, desiring to manufacture, use, or sell a patented article as a business proposition, would be willing to pay as a royalty and yet be able to make a reasonable profit.[125]

Can damages be assessed at greater than a reasonable royalty without a lost profits analysis? Apparently so.[126] Yet care must be taken to avoid confusing the two modes of analysis.[127]

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those products. This, according to her, puts the patentee who does not practice the patented invention at an advantage versus one who does. The majority brushed this argument aside, implying that the lost sales had occurred after actual notice of the infringement. In *King Instr. Corp. v. Perego,* 65 F.3d 941, 36 USPQ2d 1129 (Fed. Cir. 1995), a 2–1 majority reaffirmed the *Rite-Hite* holding that lost profits are available to the patent owner despite its failure to produce the patented product. The dissent accused the majority of extending *Rite-Hite* to cover a situation where the patentee is not even putting out a competitive product; rather, it was one that did not offer the advantage of the patented device. At one point, the majority decision sets up a hypothetical situation that would lead to the result that "infringement may actually be profitable." With all respect, one might venture to inquire what is wrong with that? Is there something morally reprehensible about infringement if everyone profits? As the majority points out, Congress decided 50 years ago that a defendant infringer should no longer be made to disgorge its own profits; actual damages or a reasonable royalty are sufficient as long as they are adequate to compensate for the infringement.

[123]*Trell v. Marlee Elec. Corp.,* 912 F.2d 1443, 16 USPQ2d 1059 (Fed. Cir. 1990). Where the plaintiff does not sell its invention in the United States, it must present evidence of a reasonable royalty. *Id.*

[124]35 U.S.C. §284. See *Stickle v. Heublein Inc.,* 716 F.2d 1550, 219 USPQ 377, 385 (Fed. Cir. 1983). A statement by the trial court that it was awarding "nominal" damages is not necessarily in conflict with the reasonable royalty standard as the statutory floor, where it appeared that the court was using that term to indicate that it was giving the plaintiff far less than it had demanded. *Lindemann Maschinenfabrik v. American Hoist & Derrick Co.,* 895 F.2d 1403, 13 USPQ2d 1871 (Fed. Cir. 1990). In *Dow Chem. Co. v. Mee Indus. Inc.,* 341 F.3d 1370, 68 USPQ2d 1176 (Fed. Cir. 2003), the trial court excluded the reasonable royalty opinion testimony of the patentee's damages expert under Rule 702, FRE. It then concluded that plaintiff had failed to prove any damages. This was error. Section 284 permits, but does not require, expert testimony. The trial court is in any event obliged to award at least a reasonable royalty. Without the expert testimony the patentee might well have no basis for contesting the amount of such an award, but the trial court must at least make the award in the first instance, using any available evidence.

[125]*Trans-World Mfg. Corp. v. Al Nyman & Sons,* 750 F.2d 1552, 224 USPQ 259, 269 (Fed. Cir. 1984).

[126]In *Maxwell v. J. Baker, Inc.,* 86 F.3d 1098, 39 USPQ2d 1001 (Fed. Cir. 1996), the court found no abuse of discretion in a jury interrogatory that asked "What is the reasonable royalty? Was the plaintiff damaged in excess of the reasonable royalty and, if so, by how much?" This approach was justified in part by the absurdity of a hypothetical negotiation where the parties had previously been unable to reach agreement. This case stands for the proposition that the factfinder may consider additional factors to assist in the determination of adequate compensation for the infringement. See also note 15:136.

[127]In *Mahurkar v. C.R. Bard, Inc.,* 79 F.3d 1572, 38 USPQ2d 1288 (Fed. Cir. 1996), the trial court properly found a reasonable royalty rate but then assessed an additional 9% that it called a "*Panduit* kicker." The Federal Circuit viewed this as an enhancement of the damages

The hypothetical negotiation. In *Fromson v. Western,*[128] the court had some interesting things to say about the very concept of a reasonable royalty. Determining a fair and reasonable royalty is often a difficult judicial chore, seeming often to involve more the talents of a conjurer than those of a judge. Lacking adequate evidence of an established royalty, the court is left with the judge-created methodology described as "hypothetical negotiations between willing licensor and willing licensee." The reasonable royalty methodology encompasses fantasy and flexibility: fantasy because it requires a court to imagine what warring parties would have agreed to as willing negotiators; flexibility because it speaks of negotiations as of the time infringement began, yet permits and often requires a court to look to events and facts that occurred thereafter and that could not have been known to or predicted by the hypothesized negotiators. When one is forced to erect a hypothetical situation, it is easy to forget a basic reality—a license is fundamentally an agreement by the patent owner not to sue the licensee. In a normal negotiation, the potential licensee has three basic choices: (1) forego all use of the invention; (2) pay an agreed royalty; or (3) infringe the patent and risk litigation. The reasonable royalty methodology presumes that the licensee has made the second choice, when in fact it selected the third. Whatever royalty may result from employment of the methodology, the law is not without means for recognizing that an infringer is unlike a true "willing licensee"; nor is the law without means for placing the injured patentee in the situation it would have occupied if the wrong had not been committed. Increased damages under 35 U.S.C. §284 is one such means. Attorney fees in "exceptional" cases under §285 is another. Prejudgment interest is a third.

Like all methodologies based upon a hypothetical situation, there will be an element of uncertainty in determining a reasonable royalty. But a court is not at liberty, in pursuing the methodology, to abandon entirely the statutory standard of damages "adequate to compensate" for the infringement. The royalty arrived at must be reasonable under all the circumstances; that is, it must be at least a close approximation of what would be "adequate to compensate" for the "use made of the invention by the infringer" as required by §284.[129]

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award and reversed. *Panduit* had to do with lost profits, not reasonable royalty, and nowhere does that decision authorize additional damages or a "kicker" on top of a reasonable royalty. In *Rodime PLC v. Seagate Tech. Inc.,* 174 F.3d 1294, 50 USPQ2d 1429 (Fed. Cir. 1999), the plaintiff elected to forego lost profits as a measure of damages in favor of reasonable royalty. But it still sought "consequential business damages" resulting from the defendant's refusal to take a license (theoretically depriving plaintiff of an income stream sufficient to have enabled it to avoid bankruptcy). The Federal Circuit hinted that this might be acceptable methodology if the impending bankruptcy were factored into the hypothetical negotiations. But here the plaintiff sought such damages above and beyond the reasonable royalty. As such, these damages were merely a species of lost profits, which plaintiff had elected to forego.

[128]*Fromson v. Western Litho Plate & Supp. Co.,* 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988).

[129]*Fromson v. Western Litho Plate & Supp. Co.,* 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988). See also *Trell v. Marlee Elec. Corp.,* 912 F.2d 1443, 16 USPQ2d 1059 (Fed. Cir. 1990).

It is a hypothetical royalty resulting from arm's-length negotiations between a willing licensor and a willing licensee.[130] The willing licensor/licensee approach must be flexibly applied as a device in the aid of justice.[131] In using the test, it is important to understand that there is no actual willingness on either side.[132]

Section 284 does not mandate how the district court must compute a reasonable royalty, but only that it compensate for the infringement.[133] The court has held squarely that a district court is not limited to selecting one or the other of the specific royalty figures urged by opposing parties as reasonable,[134] nor is a jury, although the award must be within the range encompassed by the record as a whole.[135] Also, damages can be increased above a reasonable royalty so that the award is adequate to compensate for the infringement. Such an increase can be justified either on the basis that reasonable means "reasonable for an infringer," or simply under the statute.[136]

That the patentee might have agreed to a lesser royalty is of little relevance, for to look only at that question would be to pretend that the infringement never happened. It would also make an election to infringe a handy means for competitors to impose a compulsory license policy upon every patent owner.[137] In determining the true measure of a reasonable royalty, a court should not select a diminished royalty rate that a patentee may have been forced to accept by the disrepute of its patent and the open defiance of its rights.[138] Nonetheless, it is important to leave the hypothetical licensee a profit margin.[139] On the other hand, it is not unreasonable to base the award

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[130]*State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989); *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986).

[131]*TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986). Relevant economic facts may inform this judicially sanctioned speculation. *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 38 USPQ2d 1288 (Fed. Cir. 1996).

[132]*Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 219 USPQ 679 (Fed. Cir. 1983).

[133]*TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986).

[134]*Smithkline Diagnostics, Inc. v. Helena Labs. Corp.*, 926 F.2d 1161, 17 USPQ2d 1922 (Fed. Cir. 1991).

[135]*Unisplay S.A. v. American Elec. Sign Co.*, 69 F.3d 512, 36 USPQ2d 1540 (Fed. Cir. 1995).

[136]*Stickle v. Heublein, Inc.*, 716 F.2d 1550, 219 USPQ 377 (Fed. Cir. 1983). See also *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 39 USPQ2d 1001 (Fed. Cir. 1996). In *Slimfold Mfg. Co. v. Kinkead Indus.*, 932 F.2d 1453, 18 USPQ2d 1842 (Fed. Cir. 1991), the court approved an award of a reasonable royalty and an additional amount for cost savings in manufacture attributable to the patented invention. But see *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 38 USPQ2d 1288 (Fed. Cir. 1996).

[137]*TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986). Courts have recognized the need to distinguish between royalties payable by infringers and noninfringers. *Fromson v. Western Litho Plate & Supp. Co.*, 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988).

[138]*Fromson v. Western Litho Plate & Supp. Co.*, 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988).

[139]*Hughes Tool Co. v. Dresser Indus., Inc.*, 816 F.2d 1549, 2 USPQ2d 1396 (Fed. Cir. 1987); *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 219 USPQ 679 (Fed. Cir. 1983). Of course, it is proper to resolve difficulty in determining a reasonable royalty against an infringer that has lost its financial records. *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986).

on the expected profits of the patentee rather than the infringer, even though this turns out to be many times the infringer's net profit.[140] There is no rule that a royalty be no higher than the infringer's net profit margin.[141] In contrast to a lost profits inquiry, the fact that an infringer could have continued to market a noninfringing alternative is a factor relevant to the determination of a proper royalty during hypothetical negotiations.[142]

The *Fromson* court also commented thoughtfully on the status of the individual inventor in the reasonable royalty compensation scheme. Historically, the methodology for determining a reasonable royalty has been problematic as a mechanism for doing justice to individual, nonmanufacturing patentees. Because courts routinely denied injunctions to such patentees, infringers could perceive nothing to fear but the possibility of a compulsory license at a reasonable royalty, resulting in some quarters in a lowered respect for the rights of such patentees and a failure to recognize the innovation-encouraging social purpose of the patent system. Thus a cold "bottom-line" logic would dictate to some a total disregard of the individual inventor's patent because if the case be lost, a license could be compelled, probably at the same royalty that would have been paid if the patentee's rights had been respected at the outset. Though the methodology must on occasion be used for want of a better one, it must be carefully applied to achieve a truly reasonable royalty, for the methodology risks creation of the perception that blatant, blind appropriation of inventions patented by individual, nonmanufacturing inventors is the profitable, "can't-lose" course.[143]

Compensation for infringement can take cognizance of the actual commercial consequences of the infringement, and the hypothetical negotiators for a reasonable royalty need not act as if there had been no infringement, no litigation, and no erosion of market position or patent value.[144] In applying the "reasonable royalty" methodology, emphasis on an individual inventor's lack of money and manufacturing capacity can tend to distinguish the respect due the patent rights of impecunious individual inventors from that due the patent rights of well-funded, well-lawyered, large manufacturing corporations. Any such distinction should be rejected as the disservice it is to the public interest in technological advancement.[145]

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[140]*Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 35 USPQ2d 1065 (Fed. Cir. 1995).

[141]*Golight Inc. v. Wal-Mart Stores Inc.*, 355 F.3d 1327, 69 USPQ2d 1481, 1490 (Fed. Cir. 2004).

[142]*Zygo Corp. v. Wyko Corp.*, 79 F.3d 1563, 38 USPQ2d 1281 (Fed. Cir. 1996).

[143]*Fromson v. Western Litho Plate & Supp. Co.*, 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988).

[144]*Sun Studs, Inc. v. ATA Equip. Leasing, Inc.*, 872 F.2d 978, 10 USPQ2d 1338 (Fed. Cir. 1989). The court refused to concern itself with whether the date of the hypothetical negotiations should be as of the date of contributory infringement, or of direct infringement, terming it "too fine" a line to draw.

[145]*Fromson v. Western Litho Plate & Supp. Co.*, 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988).

Infringer's anticipated profit. Among the factors to be considered in applying the willing licensor/licensee approach is the infringer's anticipated profit from the use of the patented invention, including the effect of using the patented item in promoting sales of other products of the licensee.[146] Evidence of the infringer's actual profits is generally admissible as probative of its anticipated profits.[147] Although the court has allowed that it is not illogical to hypothesize a negotiation as of the time of notice of infringement, it continues to insist that the hypothetical exercise be set at the time infringement began.[148] A vast disparity between actual and hypothetically negotiated profits will rarely be sustainable when the invention was recognized by both parties as highly valuable at the time infringement began and a negotiation is hypothesized. Yet each case must be judged on its own merits in light of the evidentiary record created and introduced by counsel.[149] A hypothetical negotiation may be predicated upon the infringer's business plan even though it turns out to have been too optimistic.[150] The infringer's actual profit, however, does not act as a cap on the amount of a reasonable royalty.[151] Nor does an

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[146]*Trans-World Mfg. Corp. v. Al Nyman & Sons,* 750 F.2d 1552, 224 USPQ 259 (Fed. Cir. 1984). See also *Trell v. Marlee Elec. Corp.,* 912 F.2d 1443, 16 USPQ2d 1059 (Fed. Cir. 1990). Collateral sales certainly may be taken into account in determining what a willing licensor would have charged a willing licensee. *Deere & Co. v. International Harvester Co.,* 710 F.2d 1551, 218 USPQ 481 (Fed. Cir. 1983).

[147]*TWM Mfg. Co. v. Dura Corp.,* 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986); *Trans-World Mfg. Corp. v. Al Nyman & Sons,* 750 F.2d 1552, 224 USPQ 259 (Fed. Cir. 1984).

[148]*Wang Labs., Inc. v. Toshiba Corp.,* 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993). The focus should be on the date infringement began rather than events subsequent to the initial infringement. *TWM Mfg. Co. v. Dura Corp.,* 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986). See also *Unisplay S.A. v. American Elec. Sign Co.,* 69 F.3d 512, 36 USPQ2d 1540 (Fed. Cir. 1995).

[149]*Datascope Corp. v. SMEC, Inc.,* 879 F.2d 820, 11 USPQ2d 1321 (Fed. Cir. 1989).

[150]*Interactive Pictures Corp. v. Infinite Pictures Inc.,* 274 F.3d 1371, 61 USPQ2d 1152 (Fed. Cir. 2001).

[151]*State Indus., Inc. v. Mor-Flo Indus., Inc.,* 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989); *Fromson v. Western Litho Plate & Supp. Co.,* 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988). See also *Mahurkar v. C.R. Bard, Inc.,* 79 F.3d 1572, 38 USPQ2d 1288 (Fed. Cir. 1996). It is not unreasonable to base the award on the expected profits of the patentee rather than the infringer, even though this turns out to be many times the infringer's net profit. *Rite-Hite Corp. v. Kelley Co.,* 56 F.3d 1538, 35 USPQ2d 1065 (Fed. Cir. 1995). In *Snellman v. Ricoh Co.,* 862 F.2d 283, 8 USPQ2d 1996 (Fed. Cir. 1988), the jury awarded $12 million, which was more than four times the defendant's total sales. The justification was a reasonable royalty based upon a high, albeit disputed, projection of expected sales at the time infringement began. The district court felt this was a miscarriage of justice and granted a new trial on damages, with a resultant award of less than $1 million. The Federal Circuit vacated and remanded, either to reinstate the jury verdict or for a new trial based on its statements about what evidence is admissible on the issue. In *Radio Steel & Mfg. Co. v. MTD Prods. Inc.,* 788 F.2d 1554, 229 USPQ 431, 433 (Fed. Cir. 1986), the court rejected an argument that a 10% royalty was unreasonable because it exceeded the infringer's profit. It should be noted that there was evidence that the profit figure was low because the infringing product was at the time used as a loss leader. In *Lindemann Maschinenfabrik v. American Hoist & Derrick Co.,* 895 F.2d 1403, 13 USPQ2d 1871 (Fed. Cir. 1990), the court termed an expert's statement that the infringer would, in hypothetical negotiations, agree to pay a royalty in excess of what it expected to make in profits "absurd" in light of the evidence in the case.

industry standard profit. The court seems willing to employ an analytical approach in its weighting of anticipated profits.[152]

An award of a 25 percent royalty was based upon a finding that the infringer would have made a profit of 60 percent. The Federal Circuit, in analyzing the evidence, determined that the 60 percent expectation was profit on incremental investment rather than cost. The 60 percent finding was therefore seen to be clearly erroneous, and the 25 percent royalty was rejected as arbitrary.[153] On the other hand, the court found no abuse of discretion in applying a royalty rate to the selling price alone rather than to the selling price plus the royalty amount.[154]

One interesting case dealt with the infringer's profits in the context of a patented design for a display rack for selling goods. Inasmuch as the infringing racks may well have contributed to the infringer's sales of, and therefore profits on, the goods themselves, those profits would be relevant to a reasonable royalty under §284.[155]

Established royalty. A very logical measure of a hypothetical reasonable royalty is an actual, established royalty. And even if there is no existing royalty rate, it is appropriate to consider royalties paid by others in the industry for use of a comparable patent.[156] The task

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[152]*TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986). The court affirmed a 30% royalty as reasonable, where the infringer projected an anticipated net profit of 37–42% and the industry standard net profit was 7–12%. Despite the infringer's anguished cry that this rate was grossly inflated and exorbitant, the court seemed to be persuaded by facts such as commercial success, long-felt need, copying, and the absence of competing products.

[153]*Hughes Tool Co. v. Dresser Indus., Inc.*, 816 F.2d 1549, 2 USPQ2d 1396 (Fed. Cir. 1987). There is no rule that a royalty be no higher than the infringer's net profit margin. Nor is it inappropriate for a district court to consider gross profits. *State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989).

[154]*Nickson Indus., Inc. v. Rol Mfg. Co.*, 847 F.2d 795, 6 USPQ2d 1878 (Fed. Cir. 1988). This is an interesting theory—the patentee seems to be saying that the infringer would have upped its price to cover the royalty. Thus, if R is the nominal rate, the effective rate would be R/(1–R).

[155]*Trans-World Mfg. Corp. v. Al Nyman & Sons*, 750 F.2d 1552, 224 USPQ 259 (Fed. Cir. 1984). It should be noted that 35 U.S.C. §289 provides an additional remedy for infringement of design patents, over and above that available under 35 U.S.C. §284: the patentee is entitled to the total profit of the infringer (not less than $250). Here, the total profit on the racks to which the patented design had been applied was small compared to the profit from the sale of the displayed goods. The patentee was not entitled to the profits from the sale of the goods under §289, but those profits were a consideration under §284. *Id.* A patentee that receives infringer profits for infringement of a design patent under §289 cannot also receive a lesser reasonable royalty under §284 for the same sale, even if it infringes a utility patent, because the award of infringer profits is "adequate to compensate for the infringement" within the meaning of §284. *Catalina Lighting Inc. v. Lamps Plus Inc.*, 295 F.3d 1277, 63 USPQ2d 1545 (Fed. Cir. 2002). In *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 25 USPQ2d 1913 (Fed. Cir. 1993), the defendant supplier had indemnified its large retail customer and plaintiff did not join the customer because of assurances from the defendant that it could provide any and all relief. Later, the defendant argued that it should be permitted to deduct, from the "total profit" under §289, the profits of the customer. The Federal Circuit rejected this argument on the grounds that actions induced by attorney representations cannot be disclaimed by their instigator. Reliance by the plaintiff was sought and obtained, and it was not unreasonable. Having induced that reliance, the defendant could not renounce the consequences.

[156]*American Original Corp. v. Jenkins Food Corp.*, 774 F.2d 459, 227 USPQ 299 (Fed. Cir. 1985).

is simplified when the record shows an established royalty for the patent in question or for related patents or products.[157] However, evidence of royalties for products entirely distinct from the patented product is insufficient to establish an industry standard.[158] Also, evidence of actual licenses that were negotiated some years after the date of first infringement may not be probative.[159] Conversely, established rates do not necessarily fix a ceiling for the royalty that may be assessed after an infringement trial.[160]

The reasonableness of a rate in a single license is sometimes questioned because there is no general acquiescence,[161] or because it involves only a minor competitor.[162] Thus, a single licensing agreement, without more, is insufficient proof of an established royalty. For a royalty to be established, it must be paid by such a number of persons as to indicate a general acquiescence in its reasonableness by those who have occasion to use the invention. Where no established royalty exists, the court must use a hypothetical willing buyer/willing seller analysis.[163]

Where an established royalty exists, it will usually be the best measure of what is a reasonable royalty. Nonetheless, a reasonable royalty may be greater than an established royalty. For example, a higher figure may be awarded when the evidence clearly shows that widespread infringement made the established royalty artificially low. But the patentee must come forward with evidence that an established royalty rate makes the award inadequate.[164]

The general principle is that for an established royalty to be regarded as reasonable, it must relate to the value of the invention. In other words, the defendant's infringing acts must be commensurate in quality and extent with those that were contemplated under the actual license.[165] In calculating a reasonable royalty by reference to an established royalty, the court is perfectly willing to employ the detailed terms of the actual license.[166]

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[157]*Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 38 USPQ2d 1288, 1292 (Fed. Cir. 1996).

[158]*Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 220 USPQ 929 (Fed. Cir. 1984).

[159]*Odetics Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 51 USPQ2d 1225 (Fed. Cir. 1999).

[160]*Bio-Rad Labs., Inc. v. Nicolet Inst. Corp.*, 739 F.2d 604, 222 USPQ 654 (Fed. Cir. 1984). A rate of one-third the selling price was held reasonable against evidence of industry rates of 3–10%. Cf. *Hanson v. Alpine Valley Ski Area Inc.*, 718 F.2d 1075, 219 USPQ 679 (Fed. Cir. 1983).

[161]*Hanson v. Alpine Valley Ski Area Inc.*, 718 F.2d 1075, 219 USPQ 679 (Fed. Cir. 1983).

[162]*Deere & Co. v. International Harvester Co.*, 710 F.2d 1551, 218 USPQ 481 (Fed. Cir. 1983).

[163]*Trell v. Marlee Elec. Corp.*, 912 F.2d 1443, 16 USPQ2d 1059, 1061 (Fed. Cir. 1990). In this case the district court settled upon a rate in a single agreement, and the defendant did not introduce any evidence to show that rate was unreasonable. Nonetheless, the Federal Circuit indicated that the defendant was not required to rebut proof of a royalty paid by another for an exclusive license that involved additional inventions. The burden was upon the plaintiff to show that the agreement rate was reasonable.

[164]*Nickson Indus., Inc. v. Rol Mfg. Co.*, 847 F.2d 795, 6 USPQ2d 1878 (Fed. Cir. 1988).

[165]*Bandag, Inc. v. Gerrard Tire Co.*, 704 F.2d 1578, 217 USPQ 977 (Fed. Cir. 1983). The existing license agreements also conferred trademark and other rights, and it was held error to fail to apportion between the patent and nonpatent elements of the established royalty.

[166]*Allen Archery, Inc. v. Browning Mfg. Co.*, 898 F.2d 787, 14 USPQ2d 1156 (Fed. Cir. 1990). Plaintiff's industrywide license agreement provided for calculating the royalty as a

The requirement to determine actual damages is not diminished by the difficulty of the determination. The use of a royalty as a measure of damages is suited to those circumstances where there is an established royalty or licensing program, or where the patentee is not itself in the business, or where the profits are too speculative to estimate. But where a percentage figure is not an established royalty and is not found to be an approximation of the damages actually sustained, its imposition on a patent owner who would not have licensed its invention for that figure is a form of compulsory license, against the will and interest of the person wronged, in favor of the wrongdoer.[167] When lost profits are the measure, the amount is normally provable by the facts in evidence or as a factual inference from the evidence. When a reasonable royalty is the measure, the amount may again be considered a factual inference from the evidence, yet there is room for exercise of a common sense estimation of what the evidence shows would be a "reasonable" award. One challenging only the court's finding as to amount of damages awarded as a reasonable royalty must therefore show that the award is, in view of all the evidence, either so outrageously high or so outrageously low as to be unsupportable as an estimation of a reasonable royalty.[168]

Licensing offers. The court has refused to adopt any hard and fast rule that offers to license others at a particular rate establish that rate as a ceiling for a reasonable royalty. The entirety of the circumstances, including the consequence of widespread infringement, must be considered.[169] A defendant may often seek to minimize the award of damages by presenting evidence of licensing offers at favorable rates. But offers to license present special problems. A royalty at which a patentee offers to license its invention, particularly when coupled with a claim of infringement, is not necessarily the same rate as that upon which a hypothetical willing licensee and

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percentage of the net selling price established in normal, bona fide, arm's-length transactions. The Federal Circuit found error in calculating a royalty based upon the infringer's sales to its subsidiary rather than the subsidiary's sales to customers.

[167]*Del Mar Avionics, Inc. v. Quinton Instr. Co.,* 836 F.2d 1320, 5 USPQ2d 1255 (Fed. Cir. 1987). Indeed, the principle underlying damage measurement is unchanged even when there is an established royalty, for it is reasonable to assume that such a royalty is a fair measure of the actual damage to a patentee who has authorized others to practice the patented invention. *Id.* The patentee's usual licensing approach should be considered in assessing a reasonable royalty. *Studiengesellschaft Kohle v. Dart Indus., Inc.,* 862 F.2d 1564, 9 USPQ2d 1273 (Fed. Cir. 1988). In *Sun Studs, Inc. v. ATA Equip. Leasing, Inc.,* 872 F.2d 978, 10 USPQ2d 1338 (Fed. Cir. 1989), the patentee was complaining that it should have received damages measured by the much higher value of the invention to the ultimate user rather than to the manufacturer or supplier of the invention. But its only established royalty was that to a supplier, and it made no effort to show at trial that it would have adopted a user royalty structure.

[168]*Lindemann Maschinenfabrik v. American Hoist & Derrick Co.,* 895 F.2d 1403, 13 USPQ2d 1871 (Fed. Cir. 1990). Although the reasonable royalty standard of 35 U.S.C. §284 obviates the need to show the fact of damage when infringement is admitted or proven, that does not mean that a patentee who puts on little or no satisfactory evidence of a reasonable royalty can successfully appeal on the ground that the amount awarded was not reasonable. *Id.*

[169]*Hughes Aircraft Co. v. United States,* 86 F.3d 1566, 39 USPQ2d 1065 (Fed. Cir. 1996).

willing licensor would agree.[170] Moreover, offers to license in settlement of actual or contemplated litigation may well be inadmissible under Rule 408, FRE.[171] However, evidence of a license agreement resulting from other litigation may be admissible where the agreement is not just an effort to resolve the dispute or avoid litigation. The avoidance of the risk and expense of litigation is always a potential motive for settlement.[172] Also, the terms of a settlement are admissible as to a reasonable royalty where litigation has established liability and the settling defendant was facing an accounting and an injunction. The patentee's argument that the settlement represents an erosion, because of the threat of the litigation causing the patentee to compromise, is not applicable in such a situation. Both parties know that the next step is the exact type of accounting exercise that is being undertaken in the present case.[173] Unaccepted offers to the industry,[174] or to major competitors that approach on their own initiative,[175] may lack probative value.

(d) Calculation

In proving damages, the patent owner's burden of proof is not absolute, but rather one of reasonable probability. The district court is thus free to use its discretion in choosing a method for calculating damages, as long as the measure of damages is just and reasonable.[176] The methodology of assessing and computing damages under 35 U.S.C. §284 is within the sound discretion of the district court, and the appellant therefore has the burden of establishing an abuse of discretion by showing an error of law, or a clear error of judgment, or findings that were clearly erroneous.[177]

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[170]*American Original Corp. v. Jenkins Food Corp.*, 774 F.2d 459, 227 USPQ 299 (Fed. Cir. 1985).

[171]*Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 219 USPQ 679 (Fed. Cir. 1983). Such an offer is admissible in the absence of an actual contemporaneous dispute. *Deere & Co. v. International Harvester Co.*, 710 F.2d 1551, 218 USPQ 481 (Fed. Cir. 1983). See also *Studiengesellschaft Kohle v. Dart Indus., Inc.*, 862 F.2d 1564, 9 USPQ2d 1273 (Fed. Cir. 1988); *Snellman v. Ricoh Co.*, 862 F.2d 283, 8 USPQ2d 1996 (Fed. Cir. 1988).

[172]*Snellman v. Ricoh Co.*, 862 F.2d 283, 8 USPQ2d 1996 (Fed. Cir. 1988). The court distinguished *Deere & Co. v. International Harvester Co.*, 710 F.2d 1551, 218 USPQ 481 (Fed. Cir. 1983), on the ground that the license agreement being relied on here was to take effect only if the licensee's liability were upheld on appeal.

[173]*Studiengesellschaft Kohle v. Dart Indus., Inc.*, 862 F.2d 1564, 9 USPQ2d 1273 (Fed. Cir. 1988).

[174]*American Original Corp. v. Jenkins Food Corp.*, 774 F.2d 459, 227 USPQ 299 (Fed. Cir. 1985).

[175]*Deere & Co. v. International Harvester Co.*, 710 F.2d 1551, 218 USPQ 481, 486 (Fed. Cir. 1983).

[176]*Kori Corp. v. Wilco Marsh Buggies, Inc.*, 761 F.2d 649, 225 USPQ 985 (Fed. Cir. 1985).

[177]*Stryker Corp. v. Intermedics Orthopedics, Inc.*, 96 F.3d 1409, 40 USPQ2d 1065 (Fed. Cir. 1996); *Unisplay S.A. v. American Elec. Sign Co.*, 69 F.3d 512, 36 USPQ2d 1540 (Fed. Cir. 1995); *State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989); *Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 2 USPQ2d 1826 (Fed. Cir.

Contract law has long been held to preclude recovery for speculative damages. This principle applies to the threshold issue of whether damages have actually been sustained, however, and does not bar the award of damages for a proven injury of uncertain measure.[178] This approach appears to govern patent infringement damages as well. Thus, estimates or compromises are not improper per se.[179] The determination of a damage award is not an exact science and the amount need not be proven with unerring precision. The trial court is required to approximate, if necessary, the amount to which the patent owner is entitled. In such a case, while the damages may not be determined by mere speculation or guess, it will be enough if the evidence shows the extent of the damages as a matter of just and reasonable inference, although the result be only approximate.[180] There is no absolute requirement for documentary corroboration where a court's determination of damages is based upon credible testimony only. It is not always necessary to produce books or records to support a damage award.[181] Fundamental principles of justice require the court to throw any risk of uncertainty upon the wrongdoer rather than upon the injured party,[182] and any doubts regarding the

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1987). The methodology of assessing and computing damages under 35 U.S.C. §284 is within the sound discretion of the district court. To prevail on appeal, the appellant must convince the court of appeals that the district court abused its discretion by basing its award on clearly erroneous factual findings, legal error, or a manifest error of judgment. *Nickson Indus., Inc. v. Rol Mfg. Co.*, 847 F.2d 795, 6 USPQ2d 1878 (Fed. Cir. 1988).

[178]*Roseburg Lumber Co. v. Madigan*, 978 F.2d 660 (Fed. Cir. 1992).

[179]Testimony that a royalty of about 4%, coupled with a substantial downpayment, would be reasonable does not mean that an award of 5% is speculative. *Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 225 USPQ 634 (Fed. Cir. 1985). Testimony that an infringing process is used "maybe one-half or three-quarters" of the time does not render a two-thirds figure erroneous. *Bandag, Inc. v. Gerrard Tire Co.*, 704 F.2d 1578, 217 USPQ 977 (Fed. Cir. 1983). Acceptance of 2% as an annual price erosion figure is not erroneous in view of defendant's argument that there would have been no price inflation in the absence of the infringement while plaintiff introduced evidence to show that it would have raised prices 4% per annum. *Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992). Use of disjunctive "or" in license agreement supports failure to apportion between two licensed patents where only one infringed. *Underwater Devices, Inc. v. Morrison-Knudsen Co.*, 717 F.2d 1380, 219 USPQ 569 (Fed. Cir. 1983). No error in finding that patentee would have required uniformity among licensees. *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 219 USPQ 679 (Fed. Cir. 1983). No merit to argument that a 10% royalty is too high because the invention is only a combination of old elements. *Radio Steel & Mfg. Co. v. MTD Prods., Inc.*, 788 F.2d 1554, 229 USPQ 431 (Fed. Cir. 1986).

[180]*Del Mar Avionics, Inc. v. Quinton Instr. Co.*, 836 F.2d 1320, 5 USPQ2d 1255 (Fed. Cir. 1987). Contempt damages, like other damages, need not be calculated with mathematical precision. All that is necessary is credible evidence sufficient to establish the amount of damages. Courts are allowed to act upon probable and inferential as well as direct and positive proof. *Graves v. Kemscop Group, Inc.*, 864 F.2d 754, 9 USPQ2d 1404 (Fed. Cir. 1988). The amount of damages is a question of fact and a jury award that is within the range of high and low values established by the evidence is not easily overturned on appeal. *Standard Havens Prods., Inc. v. Gencor Indus., Inc.*, 953 F.2d 1360, 21 USPQ2d 1321 (Fed. Cir. 1992).

[181]*Graves v. Kemscop Group, Inc.*, 864 F.2d 754, 9 USPQ2d 1404 (Fed. Cir. 1988).

[182]*Kori Corp. v. Wilco Marsh Buggies, Inc.*, 761 F.2d 649, 225 USPQ 985 (Fed. Cir. 1985). The principle that the infringer must bear the risk of uncertainty cannot alone justify increasing the actual damages, however. *Beatrice Foods Co. v. New England Printing & Lith. Co.*, 923 F.2d 1567, 17 USPQ2d 1553 (Fed. Cir. 1991).

precise amount of damages must therefore be resolved against the infringer.[183] Under the wrongdoer rule, a wrongdoer may not object to the plaintiff's reasonable estimate of the cause of injury and of its amount, supported by the evidence, as not based on more accurate data that the wrongdoer's misconduct has rendered unavailable.[184] When manufacturing records are destroyed after the litigation commenced, strong inferences adverse to the infringer may be drawn.[185] Where it is impossible to make a mathematical or approximate apportionment between infringing and noninfringing items, the infringer must bear the burden and the entire risk.[186]

The traditional approach is to calculate damages based upon the use of a patented process or the sale of a patented product. However, alternatives are often appropriate. It is error to suppose that damages can only be assessed based upon the number of units sold before expiration of the patent. Manufacture is an act of infringement also, so the correct measure is the number manufactured, regardless when they were sold.[187] The court found no error in selecting as the royalty base the amount of materials consumed in an infringing process, where the patentee had other agreements that so provided.[188] Similarly, it is proper to measure damages for infringement of a patented process by reference to sales of the product produced by the process.[189] On the other hand, the court has approved an award based upon a portion of the estimated savings produced by the patented invention,

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[183]*Kaufman Co. v. Lantech, Inc.*, 926 F.2d 1136, 17 USPQ2d 1828 (Fed. Cir. 1991); *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 222 USPQ 4 (Fed. Cir. 1984).

[184]*Tronzo v. Biomet Inc.*, 236 F.3d 1342, 57 USPQ2d 1385 (Fed. Cir. 2001). The court held that the plaintiff waived this argument by failing to press it below. In dictum, the court also indicated that the wrongdoer rule does not obviate the requirement for a nexus between an injury and the claimed damages. The wrongdoer rule is a principle explained in *Bigelow v. R.K.O. Pictures, Inc.*, 327 U.S. 251 (1946).

[185]*Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 38 USPQ2d 1551 (Fed. Cir. 1996).

[186]*Nickson Indus., Inc. v. Rol Mfg. Co.*, 847 F.2d 795, 6 USPQ2d 1878 (Fed. Cir. 1988). In this case, however, the infringer had prepared a document from which estimates could be made, and the patentee had introduced the document in evidence, albeit for a different purpose (to show discrepancies in the infringer's sales figures). The patentee argued that the document was too flaw-riddled to be credible and that it would be unfair to permit it to be relied upon for an unanticipated purpose. However, the court found a colloquy that indicated some forewarning that the document might be used to distinguish infringing and noninfringing sales and held that the patentee had failed to identify sufficient flaws to preclude such reliance. See also *Oiness v. Walgreen Co.*,88 F.3d 1025, 39 USPQ2d 1304 (Fed. Cir. 1996), where the court rejected a rather convoluted technique for estimating sales. In *Electro Scientific Indus. Inc. v. General Scanning Inc.*, 247 F.3d 1341, 58 USPQ2d 1498 (Fed. Cir. 2001), a patent for severing nonmetal links was held invalid, while one for severing metal links was held valid. The accused machine could do both. The court placed the burden upon the infringer to come forward with evidence that its customers only put the machines to the noninfringing use.

[187]*Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 38 USPQ2d 1551 (Fed. Cir. 1996). The portion of the sale price of a business attributable to goodwill is not recoverable on a reasonable royalty theory; however, proceeds from the sale of infringing inventory might be. *Transclean Corp. v. Bridgewood Serv. Inc.*, 290 F.3d 1346, 62 USPQ2d 1865 (Fed. Cir. 2002).

[188]*Bandag, Inc. v. Gerrard Tire Co.*, 704 F.2d 1578, 217 USPQ 977 (Fed. Cir. 1983).

[189]*Central Soya Co. v. Geo. A. Hormel & Co.*, 723 F.2d 1573, 220 USPQ 490 (Fed. Cir. 1983). The court rejected an argument, akin to file wrapper estoppel, that it would be wrong

rather than a royalty based upon actual use.[190] In other cases a flat fee may be appropriate.[191] The patent owner may be entitled to lost royalties that its own licensees would have paid it but for the infringement.[192]

Where the claimed invention is made in this country, it is of course irrelevant for damages purposes where it is sold. It is therefore proper to include foreign sales in damages calculations if the product is made in this country.[193] The court has applied the reasoning of *Hanover Shoe*[194] to patent infringement cases, in holding that British corporate taxes should not be deducted from the computation of a corporation's lost profits.[195]

It is error to award damages for contributory infringement that occurs prior to the infringer's knowledge of the patent.[196]

The court has indicated that it views absolute intervening rights as a damages issue—the identification of those sales that properly serve as a measure of damages. Thus, it does not become ripe for decision until the patent owner secures a liability judgment.[197]

The entire market rule. In the case of a patented product, it is sometimes difficult to know to what, precisely, the royalty should be applied. Where the claim is in so-called Jepson form, and the parties sell and the customers buy the entire assembly rather than just the improved element, it is proper to apply royalty to the entire assembly.[198] And where a hypothetical licensee would have anticipated an increase in sales of collateral unpatented items because of the patented device, the patentee should be compensated accordingly.[199]

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to calculate damages by reference to the product, because all product claims had been voluntarily surrendered during the prosecution of the patent.

[190]*Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 219 USPQ 679 (Fed. Cir. 1983).

[191]*Trans-World Mfg. Corp. v. Al Nyman & Sons*, 750 F.2d 1552, 224 USPQ 259 (Fed. Cir. 1984); *Stickle v. Heublein, Inc.*, 716 F.2d 1550, 219 USPQ 377 (Fed. Cir. 1983).

[192]*Bic Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 27 USPQ2d 1671 (Fed. Cir. 1993).

[193]*Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 220 USPQ 929 (Fed. Cir. 1984). But cf. *Amstar Corp. v. Envirotech Corp.*, 823 F.2d 1538, 3 USPQ2d 1412 (Fed. Cir. 1987).

[194]*Hanover Shoe, Inc. v. United Shoe Mach. Corp.*, 392 U.S. 481 (1968).

[195]*Kalman v. Berlyn Corp.*, 914 F.2d 1473, 16 USPQ2d 1093 (Fed. Cir. 1990). *Electro Scientific Indus. Inc. v. General Scanning Inc.*, 247 F.3d 1341, 58 USPQ2d 1498 (Fed. Cir. 2001), provides an example of complex accounting for the tax consequences of both the principal of the jury award and the attendant prejudgment interest.

[196]*Trell v. Marlee Elec. Corp.*, 912 F.2d 1443, 16 USPQ2d 1059 (Fed. Cir. 1990).

[197]*Bic Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 27 USPQ2d 1671, 1677 (Fed. Cir. 1993).

[198]*Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 220 USPQ 929 (Fed. Cir. 1984).

[199]*TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986). The infringer failed to show how many, if any, of the patented devices were sold alone, without the collateral unpatented items. Thus no apportionment could be made, and it was proper to include the unpatented items generally in the royalty base. *Id.* The value of collateral sales can be factored into the determination of a reasonable royalty rate. For example, the patented invention can be used to promote a whole line of products, some of which may not use the invention. *State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989).

Thus the Federal Circuit has most definitely embraced the "entire market" rule of damages. The entire market value rule allows recovery based on the value of an entire apparatus containing several features, even though only one feature is patented. It is the financial and marketing dependence on the patented item under standard marketing procedures that determines whether the unpatented features of a machine should be included in calculating compensation for infringement. The ultimate determining factor is whether the patentee or its licensee can normally anticipate the sale of the unpatented components together with the patented components. Where there is no evidence that the unpatented components have been or could be used independently of the patented structure, then the patentee would normally have anticipated the sale of the entire machine, and damages based upon the entire market value are appropriate.[200] The question, then, is simply whether the patentee would have made the sale of the unpatented elements but for the infringement.[201]

In its en banc decision in *Rite-Hite v. Kelley,*[202] the court restated the entire market value rule as it applies to unpatented components. In order to recover for sales of unpatented components sold with patented components, either by way of reasonable royalty or lost profits, it must be shown that the unpatented components 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

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The court has also approved the concept of lost profits for future parts sales. However, if the future parts sales are for installations upon which damages have been paid, the question will be whether those parts are for repair or reconstruction. If for repair, then there would be no damages. Thus the court may refuse to permit lost profits on future parts sales on the grounds that the matter is too speculative. For one thing, it is not yet known whether the defendant will pay the damage award for the past infringement, thus "authorizing" the installations and their future repair. *Standard Havens Prods., Inc. v. Gencor Indus., Inc.,* 953 F.2d 1360, 21 USPQ2d 1321 (Fed. Cir. 1992). Compare *Carborundum Co. v. Molten Metal Equip. Innovations,* 72 F.3d 872, 37 USPQ2d 1169 (Fed. Cir. 1995), which deals with this question in an injunctive setting.

[200]*Festo Corp. v. Shoketsu KKK Co.,* 72 F.3d 857, 37 USPQ2d 1163 (Fed. Cir. 1995); *TWM Mfg. Co. v. Dura Corp.,* 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986); *King Instr. Corp. v. Otari Corp.,* 767 F.2d 853, 226 USPQ 402 (Fed. Cir. 1985); *Kori Corp. v. Wilco Marsh Buggies, Inc.,* 761 F.2d 649, 225 USPQ 985 (Fed. Cir. 1985); *Paper Converting Mach. Co. v. Magna-Graphics Corp.,* 745 F.2d 11, 223 USPQ 591 (Fed. Cir. 1984). Where the patent-related feature of a product is the basis for customer demand, it is appropriate to award lost profits based upon the profit margin on the product as a whole, under the entire market value rule. *State Indus., Inc. v. Mor-Flo Indus., Inc.,* 883 F.2d 1573, 12 USPQ2d 1026 (Fed. Cir. 1989). The entire market value rule allows a patentee to recover damages based on the value of an entire apparatus containing several features, when the feature patented constitutes the basis for customer demand. *Fonar Corp. v. General Elec. Co.,* 107 F.3d 1543, 41 USPQ2d 1801 (Fed. Cir. 1997); *Slimfold Mfg. Co. v. Kinkead Indus.,* 932 F.2d 1453, 18 USPQ2d 1842 (Fed. Cir. 1991). The entire market rule can be applied to damages for breach of a settlement agreement. *Schaefer Fan Co. v. J&D Mfg.,* 265 F.3d 1282, 60 USPQ2d 1194 (Fed. Cir. 2001).

[201]*Kaufman Co. v. Lantech, Inc.,* 926 F.2d 1136, 17 USPQ2d 1828 (Fed. Cir. 1991); *King Instr. Corp. v. Otari Corp.,* 767 F.2d 853, 226 USPQ 402 (Fed. Cir. 1985). Even where the infringer does not make the unpatented items, but simply purchases them and includes them for the convenience of the customer, they may be included in the entire market value. *TWM Mfg. Co. v. Dura Corp.,* 789 F.2d 895, 229 USPQ 525 (Fed. Cir. 1986).

[202]*Rite-Hite Corp. v. Kelley Co.,* 56 F.3d 1538, 35 USPQ2d 1065 (Fed. Cir. 1995).

of a complete machine, or they must constitute a functional unit. There can be no recovery for 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. The court distinguished its holding that certain unpatented devices were compensable on the ground that they were directly competitive with the patented devices, while the unpatented components were sold with the patented devices only for convenience and business advantage. It is a clear purpose of the patent law to redress competitive damages resulting from infringement of the patent, but there is no basis for extending that recovery to include damages for items that are neither competitive with nor function with the patented invention.[203]

The court has expressed a preference that the expression "convoyed sales" be limited to sales made simultaneously with a basic item; repair parts should be called "derivative sales."[204]

§15.2 Interest and Costs

(a) Interest

The matter of interest on money judgments, attributable to the period after the judgment is entered, has been uncontroversial. By statute, 28 U.S.C. §1961, compound interest at Treasury bill rates is mandatory on money judgments of federal district courts[205] and the Court of Federal Claims.[206] Interest on a judgment in a civil case runs from "the date of the entry of the judgment" in the district court, pursuant to 28 U.S.C. §1961. Rule 37(a), FRAP, provides that if a

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[203]But see note 15:117. In *Stryker Corp. v. Intermedics Orthopedics, Inc.*, 96 F.3d 1409, 40 USPQ2d 1065 (Fed. Cir. 1996), the claim covered a hip implant with a sleeve. The accused implants were always offered with a sleeve option, although a sleeve was actually used only about one-fourth of the time. The evidence showed that surgeons needed the entire system in the operating room because in most circumstances the final decision on whether or not to install the implant with the sleeve was made in surgery. On these facts, the court held it was no error to award damages based on the total number of implants sold instead of the much smaller total number of sleeves sold. The basis seemed to be that it did not matter if the surgeon installed the implant without the sleeve, because the compensable injury had already occurred when the accused device was supplied to the surgeon rather than the patented device. In *Riles v. Shell Exploration & Prod. Co.*, 298 F.3d 1302, 63 USPQ2d 1819 (Fed. Cir. 2002), the patent was for a method of installing an offshore oil platform. The court disapproved a damages model based upon the value of the platform, inasmuch as it appeared that the platform could have been installed without infringing the method, albeit at a higher cost. The use of the platform itself could not have been enjoined and thus the platform value did not represent an appropriate royalty base.

[204]*Carborundum Co. v. Molten Metal Equip. Innovations*, 72 F.3d 872, 37 USPQ2d 1169, 1175 n.8 (Fed. Cir. 1995).

[205]*Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 222 USPQ 4 (Fed. Cir. 1984). The statement of the court in *Allen Archery, Inc. v. Browning Mfg. Co.*, 898 F.2d 787, 14 USPQ2d 1156 (Fed. Cir. 1990), to the effect that the district court had not abused its discretion in compounding postjudgment interest, was therefore somewhat misleading.

[206]*Dynamics Corp. v. United States*, 766 F.2d 518, 226 USPQ 622 (Fed. Cir. 1985).

money judgment is affirmed on appeal, interest runs from the date of entry of the original judgment. When a money judgment is modified or reversed on appeal, the appellate court is required to decide questions of interest. Precedent establishes that when the appellate court's mandate does not contain the requisite instructions, the district court is powerless to award interest other than as provided in §1961, that is, from the date the district court enters judgment on return of the mandate. The application of Rule 37 is not unique to judgments in patent cases, and thus the court looks to the law of the regional circuit for guidance.[207] Where no statute specifically authorizes an award of prejudgment interest, such an award lies within the discretion of the court as part of its equitable powers.[208]

Only the question of prejudgment interest or, as it is sometimes called, "delay damages,"[209] has received any substantial attention in the Federal Circuit. As indicated at the beginning of this chapter, the Supreme Court's *Devex*[210] decision held that prejudgment interest on patent infringement damages was to be awarded absent some justification for denying such relief. The Federal Circuit has certainly been faithful to *Devex.*[211] The law is not without means for placing the injured patentee in the situation it would have occupied had the wrong not been committed. Prejudgment interest is such a means.[212] Although the trial court has discretion in the matter, prejudgment interest is compensatory and must be awarded absent justification for withholding it. Thus, where the trial court denies prejudgment interest without giving reasons, there is an abuse of discretion and the case must be remanded.[213] *Devex* arose in the context of damages based upon a reasonable royalty, but the court has made it clear that in the absence of special circumstances prejudgment interest should

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[207]*Tronzo v. Biomet Inc.,* 318 F.3d 1378, 65 USPQ2d 1861 (Fed. Cir. 2003). Here, the district court had, on remand from the Federal Circuit, recomputed a punitive damages award from $20 million down to $52,000. On appeal, the Federal Circuit reversed, holding that the district court had exceeded the mandate on remand, and was powerless to recompute the punitive award. The district court then reinstated the $20 million award, and assessed interest from the date of the original judgment. On this appeal, the Federal Circuit held that the interest should have begun as of the date of reinstatement, rather than the original judgment. *Id.* Interest is allowed on "any money judgment" under 28 U.S.C. §1961. Any judgment in §1961 includes a judgment awarding attorney fees under 35 U.S.C. §285. Such interest is to be calculated from the date of entry of the judgment. The provision for calculating interest from entry of judgment deters use of the appellate process by the judgment debtor solely as a means of prolonging its free use of money owed the judgment creditor. Interest on an attorney fee award thus runs from the date of the judgment establishing the right to the award, not the date of the judgment establishing its quantum. *Mathis v. Spears,* 857 F.2d 749, 8 USPQ2d 1029 (Fed. Cir. 1988).

[208]*United States v. Imperial Food Imports,* 834 F.2d 1013 (Fed. Cir. 1987).

[209]See *Hughes Aircraft Co. v. United States,* 86 F.3d 1566, 39 USPQ2d 1065 (Fed. Cir. 1996).

[210]*General Motors Corp. v. Devex Corp.,* 461 U.S. 648, 217 USPQ 1185 (1983).

[211]E.g., *Stickle v. Heublein, Inc.,* 716 F.2d 1550, 219 USPQ 377 (Fed. Cir. 1983).

[212]*Fromson v. Western Litho Plate & Supp. Co.,* 853 F.2d 1568, 7 USPQ2d 1606 (Fed. Cir. 1988).

[213]*Laitram Corp. v. Cambridge Wire Cloth Co.,* 785 F.2d 292, 228 USPQ 935 (Fed. Cir. 1986); *Bio-Rad Labs., Inc. v. Nicolet Inst. Corp.,* 739 F.2d 604, 222 USPQ 654 (Fed. Cir. 1984).

be granted on a lost profits award as well.[214] Prejudgment interest is the rule on both patent infringement and trade secret misappropriation damage awards.[215]

It is clear that *Devex* did not disturb the prior holding of the Supreme Court in *Duplate Corp. v. Triplex Safety Glass Co.*,[216] that a court has authority to award prejudgment interest on unliquidated damages where there was bad faith or other exceptional circumstances. The Federal Circuit has now extended *Duplate* to cover attorney fee awards under 35 U.S.C. §285. Thus, a district court has discretion to award prejudgment interest on such awards, but need not do so in every case or, indeed, in every exceptional case.[217]

Inasmuch as prejudgment interest is not punitive but compensatory,[218] it cannot be applied to the punitive portion of an award.[219] There can be no prejudgment interest on the increased portion of treble damages,[220] nor can prejudgment interest itself be trebled.[221] Nonetheless, the district court has discretion and can select an award above the statutory rate, including prime interest or above.[222] The rate at which prejudgment interest is to be assessed is within the discretion of the trier of fact. There is no rule that it must be at the prime rate, nor is there a rule that it must be at some lesser, reasonable commercial rate for an investor, not a lender.[223] By the same

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[214]*Lummus Indus., Inc. v. D.M. & E. Corp.*, 862 F.2d 267, 8 USPQ2d 1983 (Fed. Cir. 1988); *Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 222 USPQ 4 (Fed. Cir. 1984).

[215]*Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989).

[216]298 U.S. 448, 29 USPQ 306 (1936).

[217]*Mathis v. Spears*, 857 F.2d 749, 8 USPQ2d 1029 (Fed. Cir. 1988). The court postulates a situation where litigation initiated in good faith may acquire an exceptional cast as it progresses. Presumably, it might be an abuse of discretion to award prejudgment interest on attorney fees in such a case, but not in a case where the litigation was conducted in bad faith from the beginning.

[218]*Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983). Prejudgment interest is designed to compensate for the delay a patentee experiences in obtaining money it would have received sooner if no infringement occurred, while damages are enhanced as punishment. *Beatrice Foods Co. v. New England Printing & Lith. Co.*, 923 F.2d 1567, 17 USPQ2d 1553 (Fed. Cir. 1991).

[219]*Beatrice Foods Co. v. New England Printing & Lith. Co.*, 923 F.2d 1567, 17 USPQ2d 1553 (Fed. Cir. 1991); *Leinoff v. Louis Milona & Sons*, 726 F.2d 734, 220 USPQ 845 (Fed. Cir. 1984). Liquidated damages are not punitive if they are reasonable and the exact amount of actual damages would be difficult to prove. Thus prejudgment interest may be assessed, in appropriate circumstances, on liquidated damages. *United States v. Imperial Food Imports*, 834 F.2d 1013 (Fed. Cir. 1987). *Monsanto Co. v. McFarling*, 363 F.3d 1336, 70 USPQ2d 1481 (Fed. Cir. 2004), contains an interesting analysis of the matter of liquidated damages under Missouri law. A license clause providing for liquidated damages of 120 times the royalty was found to be invalid.

[220]*Underwater Devices, Inc. v. Morrison-Knudsen Co.*, 717 F.2d 1380, 219 USPQ 569 (Fed. Cir. 1983). The purpose is to make plaintiff whole, not to punish.

[221]*Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983).

[222]*Lam, Inc. v. Johns-Manville Corp.*, 718 F.2d 1056, 219 USPQ 670 (Fed. Cir. 1983).

[223]*Studiengesellschaft Kohle v. Dart Indus., Inc.*, 862 F.2d 1564, 9 USPQ2d 1273 (Fed. Cir. 1988). A patentee need not demonstrate that it borrowed at the prime rate or above in order to be entitled to prejudgment interest at that rate. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 939 F.2d 1540, 19 USPQ2d 1432 (Fed. Cir. 1991). In *Hughes Aircraft Co. v. United States*, 86 F.3d 1566, 39 USPQ2d 1065 (Fed. Cir. 1996), the court rejected an interesting theory that,

token, the mere assertion that a particular rate is too low does not establish abuse of that discretion.[224]

The justification for refusing prejudgment interest should bear some relationship to the award of prejudgment interest, such as delay in the prosecution of the patent.[225] Difficulty in calculation is no justification for denying prejudgment interest.[226] Dilatory action during discovery, without resultant delay in the trial, does not justify limiting the period of prejudgment interest; a district court has available other sanctions to remedy abuses of the discovery process.[227] Generally, prejudgment interest should be awarded from the date of infringement to the date of judgment. District courts have discretion to limit prejudgment interest where, for example, the patent owner has caused undue delay in the lawsuit, but there must be justification bearing a relationship to the award.[228] Prejudgment interest on projected lost profits has been denied on the ground that it would amount to an award of interest for the use of money that had not yet been used.[229]

Inasmuch as the purpose of prejudgment interest is to compensate the patentee for its foregone use of the money between the time of the infringement and the date of the judgment, the merits of the infringer's challenges are immaterial in determining the amount of prejudgment interest.[230] It is also immaterial what use the plaintiff might have made of the money it should have received.[231]

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inasmuch as a loan to the government carries no risk, the rate should be that paid on Treasury bills.

[224]*Railroad Dynamics, Inc. v. A. Stucki Co.*, 727 F.2d 1506, 220 USPQ 929 (Fed. Cir. 1984).

[225]*Radio Steel & Mfg. Co. v. MTD Prods., Inc.*, 788 F.2d 1554, 229 USPQ 431 (Fed. Cir. 1986). The infringer argued that the patentee's failure to omit patent markings for some time after expiration should bar prejudgment interest as an equitable matter. The court held that postexpiration circumstances were irrelevant to the matter of prejudgment interest, which was for the period prior to expiration.

[226]*Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 38 USPQ2d 1551 (Fed. Cir. 1996).

[227]*Bio-Rad Labs., Inc. v. Nicolet Instr. Corp.*, 807 F.2d 964, 1 USPQ2d 1191 (Fed. Cir. 1986). Where a complaint was filed one year after delivery of the first infringing device and eight months after termination of efforts to resolve the dispute, and trial began within a year of the first status conference, it was clearly erroneous to find that the trial had been unduly delayed. *Id.*

[228]*Nickson Indus., Inc. v. Rol Mfg. Co.*, 847 F.2d 795, 6 USPQ2d 1878 (Fed. Cir. 1988). Here, the district court found no basis for withholding prejudgment interest but limited the award to the filing of the suit. The Federal Circuit vacated and remanded for an award running to judgment or a statement of reasons for limiting the term. See also *Lummus Indus., Inc. v. D.M. & E. Corp.*, 862 F.2d 267, 8 USPQ2d 1983 (Fed. Cir. 1988). Determining the dividing line between pre- and postjudgment interest is a question that is not unique to patent law. It invokes 28 U.S.C. §1961 and the court therefore looks to the law of the regional circuit. In the Sixth Circuit, that is the date damages were meaningfully ascertained. *Transmatic Inc. v. Gulton Indus. Inc.*, 180 F.3d 1343, 50 USPQ2d 1591 (Fed. Cir. 1999). In *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 939 F.2d 1540, 19 USPQ2d 1432 (Fed. Cir. 1991), the court found no error in refusing prejudgment interest during a period when the court proceedings were stayed at the joint request of both parties.

[229]*Oiness v. Walgreen Co.*, 88 F.3d 1025, 39 USPQ2d 1304 (Fed. Cir. 1996).

[230]*Bio-Rad Labs., Inc. v. Nicolet Instr. Corp.*, 807 F.2d 964, 1 USPQ2d 1191 (Fed. Cir. 1986). The merits may be relevant to avoidance of an increase in damages for willful infringement.

[231]*Allen Archery, Inc. v. Browning Mfg. Co.*, 898 F.2d 787, 14 USPQ2d 1156 (Fed. Cir. 1990). In *Hughes Aircraft Co. v. United States*, 86 F.3d 1566, 39 USPQ2d 1065 (Fed. Cir. 1996),

An award of prejudgment interest to a patent owner for the period during which its patent was subject to a judgment of invalidity is appropriate if, after exercising its discretion, the district court decides that such an award is necessary to put the patent owner in as good a position as it would have enjoyed had the infringer entered into a reasonable royalty agreement when the infringement began.[232] Similarly, the court found an abuse of discretion in refusing to award prejudgment interest for the period during which a patent infringement case was stayed pending the outcome of another case on the same patent, where the stay seemed reasonable and both parties apparently favored it.[233] In another case, a delay of nearly six years in bringing suit was held not to justify a denial of prejudgment interest where the patentee was in litigation during much of that period with the defendant's customer.[234]

In affirming an award of prejudgment interest calculated as simple interest at a state statutory rate, the court concluded that Congress did not intend to make the postjudgment rates and compounding of 28 U.S.C. §1961 mandatory with respect to prejudgment interest.[235] In dealing with the same question as applied to judgments of the Claims Court, the Federal Circuit was moved to note that, in particular cases, compound interest may more nearly fit with the policy to accomplish justice as between the plaintiff and the government. Thus the case was remanded to consider whether "reasonable and entire compensation" contemplates compounded prejudgment interest.[236]

In the end, the rate of prejudgment interest and whether it should be compounded or uncompounded are matters left largely to the discretion of the trial court. In exercising that discretion, however, the court must be guided by the purpose of prejudgment interest, which is to ensure that the patent owner is placed in as good a position as it would have been in had the infringer entered into a reasonable royalty agreement.[237] The grant or denial of prejudgment interest is

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the court extended to delay damages (prejudgment interest) the rule that a damage award need not be reduced by the amount of taxes that would had to have been paid.

[232]*Hughes Tool Co. v. Dresser Indus., Inc.*, 816 F.2d 1549, 2 USPQ2d 1396 (Fed. Cir. 1987). It appeared that the district court had concluded that prejudgment interest can never be awarded under such circumstances; this was legal error and required remand.

[233]*Allen Archery, Inc. v. Browning Mfg. Co.*, 898 F.2d 787, 14 USPQ2d 1156 (Fed. Cir. 1990).

[234]*Kalman v. Berlyn Corp.*, 914 F.2d 1473, 16 USPQ2d 1093 (Fed. Cir. 1990). But in *Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l Inc.*, 246 F.3d 1336, 57 USPQ2d 1953 (Fed. Cir. 2001), the court approved a denial of prejudgment interest on the grounds that the plaintiff delayed in filing suit.

[235]*Gyromat Corp. v. Champion Spark Plug Co.*, 735 F.2d 549, 222 USPQ 4 (Fed. Cir. 1984).

[236]*Dynamics Corp. v. United States*, 766 F.2d 518, 226 USPQ 622 (Fed. Cir. 1985). It would seem that "delay damages" are appropriate under 28 U.S.C. §1498.

[237]*Bio-Rad Labs., Inc. v. Nicolet Instr. Corp.*, 807 F.2d 964, 1 USPQ2d 1191 (Fed. Cir. 1986). See also *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 35 USPQ2d 1065 (Fed. Cir. 1995). Where the only evidence of record relating to the appropriate rate suggested the use of either the prime rate or the rate that the patentee paid on its corporate borrowings, it was an abuse of discretion to employ a 7% rate, uncompounded, as provided by state law. *Id.* The district court has discretion to award either simple or compound interest. *Hughes Aircraft Co. v. United States*, 86 F.3d 1566, 39 USPQ2d 1065 (Fed. Cir. 1996); *Nickson Indus., Inc. v. Rol Mfg. Co.*, 847 F.2d 795, 6 USPQ2d 1878 (Fed. Cir. 1988). The ascertainment of the prejudgment interest

reviewed to determine whether the district court abused the available range of discretion in so doing.[238]

(b) Costs

At early common law, no costs were awarded to either party. At least as early as 1278, English legislation changed that rule in actions at law. The English practice was adopted by American courts at an early time, and the ability to award costs has become more a part of the inherent authority of the courts than a matter of statutory authorization. Nonetheless, the American common law recognized limitations on the ability of a court to award costs. First, under the doctrine of sovereign immunity, the United States cannot be held liable for costs without its consent. Also, under the common law, a court that lacks jurisdiction over the subject matter does not have the power to award costs. These common law rules have been changed in both respects by statute. The prevailing party in suits involving the government is now entitled to costs by virtue of 28 U.S.C. §2412(a), and 28 U.S.C. §1919 provides for costs to be awarded whenever an action in a district court is dismissed for want of jurisdiction.[239] Rule 54(d)(1), FRCP, allows costs other than attorney fees to the prevailing party as of course.[240]

In deciding how to define "prevailing party" for purposes of Rule 54(d)(1), the court follows Supreme Court precedent. Thus, a plaintiff "prevails" when actual relief on the merits of its claim materially alters the legal relationship between the parties by modifying the defendant's behavior in a way that directly benefits the plaintiff. It should be understood, however, that whether a party is the prevailing party is only a threshold inquiry. A trial court may lawfully award minimal costs or no costs after considering the amount and nature of the party's success. This question of how much is decided according to regional circuit law and reviewed under an abuse of discretion standard.[241]

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rate is within the sound discretion of the district court. *Kaufman Co. v. Lantech, Inc.*, 926 F.2d 1136, 17 USPQ2d 1828 (Fed. Cir. 1991).

[238]*Lummus Indus., Inc. v. D.M. & E. Corp.*, 862 F.2d 267, 8 USPQ2d 1983 (Fed. Cir. 1988). See also *Electro Scientific Indus. Inc. v. General Scanning Inc.*, 247 F.3d 1341, 58 USPQ2d 1498 (Fed. Cir. 2001).

[239]*Johns-Manville Corp. v. United States*, 893 F.2d 324 (Fed. Cir. 1989). The specific holding was that §1919 does not apply to the Claims Court; nor does §2412(a) authorize the Claims Court to award costs in a case that is dismissed for want of jurisdiction, not even where lack of jurisdiction is not immediately apparent on the face of the pleadings. Where the Claims Court has no jurisdiction, it has no power to do anything but strike the case from its docket.

[240]*Manildra Milling Corp. v. Ogilvie Mills, Inc.*, 76 F.3d 1178, 37 USPQ2d 1707 (Fed. Cir. 1996). Dismissal of a claim with prejudice is a judgment on the merits, and the party against whom the claim was asserted is the "prevailing party" for purposes of Rule 54. *Power Mosfet Tech. LLC v. Siemens AG*, 378 F.3d 1396, 72 USPQ2d 1129, 1142 (Fed. Cir. 2004).

[241]*Manildra Milling Corp. v. Ogilvie Mills, Inc.*, 76 F.3d 1178, 37 USPQ2d 1707 (Fed. Cir. 1996). A plaintiff who succeeds in having a competitor's patent declared invalid "prevails." *Id.*

Inasmuch as costs at the district-court level are largely a matter of statute[242] and are clearly within the discretion of the trial judge,[243] we may expect little attention to this subject by the Federal Circuit. Nevertheless, there have been a few decisions.

The expenses that a federal court may award as costs under its Rule 54(d)(1) discretionary authority are enumerated in 28 U.S.C. §1920.[244] In a dictum, the court has remarked that cost awards to winners are regarded as a fair price that losers pay for using the judicial system, and that a trial court should deny costs to winners only when the award would be unjust. It may therefore turn out to be an abuse of discretion to disregard the presumption of costs to the prevailing party in the absence of a finding of special circumstances.[245]

In *Mathis v. Spears,*[246] the court held that necessary and reasonable expert witness fees may be included in awards of attorney fees under 35 U.S.C. §285. Costs are governed by Rule 54(d), FRCP, and 28 U.S.C. §§1821 and 1920, and the rule does not grant federal courts discretion to award witness fees beyond the limitations of the statute. But the rule and statues relate to good faith proceedings, i.e., to court resolutions of controversies about which reasonable persons may disagree. In such cases, the American Rule is that each party bears its own attorney fees and expenses, and Rule 54(d) and the statutes modify the American Rule only slightly, to provide for reimbursement to the winner for its relatively low "costs." However, nothing in the rule or statutes impedes or precludes a district court from exercising its inherent equitable power to make whole a party injured by an egregious abuse of the judicial process. Though courts have exercised that inherent power in the absence of express statutory authorization, Congress has not been unaware of the distinction between good faith litigation to which the American Rule applies and bad faith litigation to which it does not. Congress enacted §285 to codify in patent cases the "bad faith" equitable exception to the American Rule. It would

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[242]28 U.S.C. §1920. The question of costs under Rule 54(d), FRCP, and 28 U.S.C. §1920 is governed by regional circuit law. *Kohus v. Cosco Inc.,* 282 F.3d 1355, 62 USPQ2d 1145 (Fed. Cir. 2002).

[243]*Syntex Ophthalmics, Inc. v. Novicky,* 795 F.2d 983, 230 USPQ 427 (Fed. Cir. 1986). The court reviews costs under §284 and compliance with district court rules, including those dealing with taxation of costs, under the abuse of discretion standard. A district court does not abuse its discretion by recalculating costs itself rather than remanding to the clerk of the court. *Electro Scientific Indus. Inc. v. General Scanning Inc.,* 247 F.3d 1341, 58 USPQ2d 1498 (Fed. Cir. 2001).

[244]*Manildra Milling Corp. v. Ogilvie Mills, Inc.,* 76 F.3d 1178, 37 USPQ2d 1707 (Fed. Cir. 1996). Included are fees of the court reporter for all or any part of the stenographic transcript necessarily obtained for use in the case. This covers both trial and deposition testimony. As a general rule, daily trial transcript costs should not be awarded absent court approval prior to the trial; but a court may overlook lack of prior approval if the case is complex and the transcripts invaluable both to court and counsel. As for depositions, although use at trial is direct evidence of necessity, an item may still be reasonably necessary for use in the case even if unused at trial. The underlying inquiry is whether the depositions reasonably seemed necessary at the time they were taken. *Id.*

[245]*Connell v. Sears, Roebuck & Co.,* 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983).

[246]*Mathis v. Spears,* 857 F.2d 749, 8 USPQ2d 1029 (Fed. Cir. 1988).

be inconsistent with the intent of [illegible] is to discourage conduct that falls within the scope of exceptional, to limit the prevailing party to something less than the fees and expenses to which it was subjected by "very exceptional" conduct. This includes necessary and reasonable expert witness fees.[247]

The lower court has the power to tax and award costs after a notice of appeal has been filed.[248] Indeed, a district court may award costs even when a case is settled, where the settlement agreement and stipulated order of dismissal do not address the matter.[249]

The court has affirmed awards of costs for translations and transcripts of oral arguments[250] and for depositions, even where they were not referred to in the lower court's opinion[251] or actually read into the record at trial.[252] In one unusual case, the court held that if one uses a word processor to produce multiple copies, as by printing several ribbon copies from an original stored in the machine, the costs would be reimbursable; but not so where the use of the word processor was simply as a fancy typewriter to produce a single ribbon copy from which multiple copies were made by another method.[253] Applying Sixth Circuit law, the court held that the cost of producing a video animation, although considered "necessary" by the district judge, is not recoverable under §1920(4) as "fees for exemplification and copies of papers."[254] Attorney fees do not typically include taxable costs.[255]

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[247]*Mathis v. Spears*, 857 F.2d 749, 8 USPQ2d 1029 (Fed. Cir. 1988).

[248]*Chore-Time Equip., Inc. v. Cumberland Corp.*, 713 F.2d 774, 218 USPQ 673 (Fed. Cir. 1983).

[249]*Reactive Metals & Alloys Corp. v. ESM, Inc.*, 769 F.2d 1578, 226 USPQ 821 (Fed. Cir. 1985). The defendant had come up with some good prior art shortly before trial and the plaintiff voluntarily dismissed; thus the award of costs to the "prevailing" defendant was not an abuse of discretion. However, an accompanying award of attorney fees was reversed as clearly erroneous.

[250]*Chore-Time Equip., Inc. v. Cumberland Corp.*, 713 F.2d 774, 218 USPQ 673 (Fed. Cir. 1983).

[251]*Chore-Time Equip., Inc. v. Cumberland Corp.*, 713 F.2d 774, 218 USPQ 673 (Fed. Cir. 1983).

[252]*Syntex Ophthalmics, Inc. v. Novicky*, 795 F.2d 983, 230 USPQ 427 (Fed. Cir. 1986).

[253]*CTS Corp. v. Piher Int'l Corp.*, 754 F.2d 972, 221 USPQ 954 (Fed. Cir. 1984). Note that this case dealt with costs of appeal not trial. One would guess that technology has made this decision obsolete.

[254]*Kohus v. Cosco Inc.*, 282 F.3d 1355, 62 USPQ2d 1145 (Fed. Cir. 2002). The panel majority referred to an old Sixth Circuit case that had allowed recovery for charts and drawings but not for physical models. The majority likened the video animation more to a model than a chart or drawing. The dissent felt that the Sixth Circuit decision would have allowed recovery of costs for the video.

[255]*Bennett v. Department of Navy*, 699 F.2d 1140 (Fed. Cir. 1983).