

United States Court of Appeals. Federal Circuit.
King Instruments Corp. v. Perego, 65 F. 3d 941 1995

King Instrument Corporation (King) sued Luciano Perego and Tapematic Srl (Tapematic) for infringement of U.S. Patents Nos. 3,637,153 (the '153 patent), 3,825,461 (the '461 patent), and 3,997,123 (the '123 patent). The United States District Court for the District of Massachusetts awarded King damages for Tapematic's infringement of the '461 patent. *King Instrument Corp. v. Perego*, 737 F.Supp. 1227, 1242, 16 USPQ2d 1994, 2007 (D.Mass.1990) (King). The district court found that Tapematic did not infringe the '153 patent or the '123 patent. *Id.* at 1242-43. Finding no clear error in the district court's infringement analysis, and no abuse of discretion in the district court's assessment of the amount of damages, this court affirms.[1]

Nos. 91-1125, 91-1132.
September 19, 1995.

NOTES: In *King* the court ruled that when calculating a patentee's sales but for the infringement of a competing product, the patent holder is not required to have made their own product with the patented features which may be the case when the market responds best to excluding the use of the patented product. "The *Rite-Hite* court did not explain how the entire market value rule should work when dealing with a patentee's claim for lost profits on its unpatented goods and the defendant's device contains only an infringing feature, as here" in *King*.

David J. Brezner, Richard F. Trecartin and Richard P. Doyle, Jr., Flehr, Hohbach, Test, Albritton & Herbert, of San Francisco, CA, were on the brief for plaintiff-appellant. Also on the brief was Nicholas A. Pandiscio, Schiller, Pandiscio & Kusmer, of Cambridge, MA, of counsel.

Edgar H. Haug, Adam L. Brookman and Mary Ann G. Mullen, Curtis, Morris & Safford, P.C., of New York City, were on the brief for defendant/cross-appellants.

Before NIES, NEWMAN, and RADER, Circuit Judges.

Opinion of the court filed by Circuit Judge RADER. Dissenting-in-part opinion filed by Circuit Judge NIES.

RADER, Circuit Judge.

BACKGROUND

King's three patents relate to loading magnetic audio or video tape into closed cassettes. A fully loaded cassette contains two types of tape: the magnetic audio or video tape and a non-magnetic leader tape. The magnetic tape — also called "use" tape — functions to permit customers to record or play back recordings. The non-magnetic leader tape — a short length of plastic, often clear, tape — leads both

ends of the magnetic tape. One end of the leader tape attaches to the winding hub of the cassette; the other end attaches to the magnetic tape.

The manufacturer produces closed tape cassettes without any magnetic tape. Each closed cassette contains only a leader tape connected to its two winding hubs. The manufacturer adds magnetic tape later by splicing magnetic tape into the middle of the leader tape and winding it into the cassette. King and Tapematic market competing machines that automatically splice and wind magnetic tape into otherwise completed video cassettes.

The '153 Patent

The '153 patent discloses a partially automated machine for loading magnetic tape into a cassette. The '153 patent claims a mechanical splicing block whose arms swing to bring the magnetic tape into contact with the leader tape.

The invention of the '153 patent manually extracts the leader tape from the cassette and places it over a splicing head. A vacuum holds the leader tape in place while a knife cuts it into two sections. At this point, the moveable track swings out of alignment with the stationary track. A second moveable track holding the magnetic tape then swings into alignment with the leader tape. The invention applies a splice between the leader tape and the magnetic tape which are held in place by a vacuum. The vacuum then releases the tape and the machine turns the hub to load magnetic tape into the cassette. When the cassette is full, the vacuum again grabs and a knife cuts the magnetic tape. The swinging arm brings the end of the magnetic tape back in contact with the other end of the leader tape and applies a splice. The hubs tighten the tape in the cassette to complete the loading.

The '123 Patent

The '123 patent claims a winding machine which more fully automates the invention disclosed in the '153 patent. Instead of loading cassettes one at a time, the invention of the '123 patent enables an operator to load a stack of cassettes (e.g., 20 to 30) into a cassette magazine. The magazine advances each cassette in sequential order for loading by the '153 patent device. The '123 patent also claims a mechanism for automatically extracting the leader tape from the cassette and positioning it on the splicing blocks. The '123 patent's invention thus automates the '153 patent's manual extraction and positioning functions.

The '461 Patent

The '461 patent claims a splicing assembly for connecting the magnetic and leader tapes. The splicing assembly includes three splicing blocks. Two of the three blocks shift to align the magnetic tape with the leader tape; the third is a stationary splicing block.

The District Court

The district court found that Tapematic infringed the '461 patent and awarded King damages. King, 737 F.Supp. at 1242. The district court did not find willful infringement. Id. at 1241. The district court also upheld the validity of the '153 patent, id. at 1230, but found that Tapematic did not infringe, literally or under the doctrine of equivalents, either the '153 or the '123 patent. Id. at 1234, 1239, 1241.

King appeals the district court's findings of noninfringement of the '153 and '123 patents and seeks enhanced damages for willful infringement of the '153 patent. Tapematic cross-appeals the trial court's infringement finding on the '461 patent and challenges the damages award. Tapematic does not appeal the trial court's validity findings on the '153 patent.

Appellate History

This panel heard oral argument on the cross-appeals on August 5, 1991. More than two years later, on January 13, 1994, the court decided sua sponte to consider this appeal en banc. The court then deferred action on this appeal pending en banc resolution of Rite-Hite Corp. v. Kelley Co., an appeal brought in 1992 involving damages issues overlapping with those raised by Tapematic. On June 15, 1995, the court issued its opinion in Rite-Hite resolving the damages issues. Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 35 USPQ2d 1065 (Fed.Cir.1995) (en banc). On July 10, 1995, the court returned the present appeal to this panel for disposition in accordance with Rite-Hite.

DISCUSSION

This court reviews the district court's findings of fact under Fed.R.Civ.P. 52(a):

Findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses.

See Heisig v. United States, 719 F.2d 1153, 1158 (Fed.Cir.1983). Legal conclusions of the district court stand unless incorrect as a matter of law. Id.

This court does not review de novo proceedings of the district court. Medtronic, Inc. v. Daig Corp., 789 F.2d 903, 904, 229 USPQ 664, 666 (Fed.Cir.), cert. denied, 479 U.S. 931, 107 S.Ct. 402, 93 L.Ed.2d 355

(1986). The party seeking reversal of a district court decision bears the burden of showing reversible legal error or clear factual errors in light of the trial record. *Carl Schenck, A.G. v. Nortron Corp.*, 713 F.2d 782, 785, 218 USPQ 698, 700 (Fed.Cir.1983). Where the record viewed in its entirety renders the district court's account of the evidence plausible or discloses two permissible readings of the evidence, the factfinder has committed no clear error. *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1375, 231 USPQ 81, 87 (Fed.Cir.1986), cert. denied, 480 U.S. 947, 107 S.Ct. 1606, 94 L.Ed.2d 792 (1987).

I. Infringement

The district court assessed infringement using the standard tests. See *King*, 737 F.Supp. at 1231 (citing *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448, 452, 227 USPQ 293, 295-96 (Fed.Cir. 1985); *Martin v. Barber*, 755 F.2d 1564, 1567, 225 USPQ 233, 234 (Fed.Cir.1985)). All three *King* patents contain "means-plus-function" language. *King*, 737 F.Supp. at 1231. This court construes means-plus-function claim language "to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C. § 112 (1988); *Valmont Indus., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042, 25 USPQ2d 1451, 1454 (Fed.Cir.1993); *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1580, 12 USPQ2d 1382, 1386 (Fed.Cir.1989). Thus, for a means-plus-function limitation to read on an accused device, the accused device must employ means identical or equivalent to the structures, material, or acts described in the patent specification. The accused device must also perform the identical function as specified in the claims. *Valmont*, 983 F.2d at 1042.

A. The '153 Patent

The district court held that *Tapematic* did not infringe the '153 patent. *King*, 737 F.Supp. at 1242-43. The district court found that the accused device aligns and splices tape differently than the claimed structure. *Id.* at 1233. *Tapematic*'s accused machines used a horizontal shift block assembly to align and splice. The trial court found that this shift block device did not literally infringe the '153 patent's swing arm claims. *Id.* at 1234. Moreover the accused device operates in such a different "way" that the district court found no infringement under the doctrine of equivalents. *Id.* at 1239.

Specifically, the district court noted several differences between the '153 claims and the accused device. For instance, the '153 patent claims a swing arm assembly which pivots in a single plane; the accused *Tapematic* device's shift block assembly slides in two planes. The '153 patent discloses three separate splicing blocks, one fixed and two pivoting; the accused device uses only two splicing blocks, one fixed and the other sliding. Finally, the trial court cited testimony by E. Blanco (*Tapematic*'s expert), W. Isom (*King*'s expert), and J. King (inventor of the '153 patent), who all agreed that the accused product worked differently than the claimed device. *Id.* at 1234. In performing its infringement analysis, the trial court correctly construed claim 16 in connection with the specification to include the pivoting swing arm assembly. The trial court correctly interpreted claims 2, 10, and 16 to encompass the structure disclosed in the specification for holding, aligning, and splicing tapes — and equivalents thereof.

After comparing the claimed device with the accused product, the court correctly determined that the '153 patent was not infringed — either literally or under the doctrine of equivalents. *Id.* at 1234, 1239. Moreover, the district court's finding of noninfringement of the '153 patent is consistent with this court's earlier decision in *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 226 USPQ 402 (Fed.Cir.1985) (*Otari*), cert. denied, 475 U.S. 1016, 106 S.Ct. 1197, 89 L.Ed.2d 312 (1986), which based a finding of infringement upon a disclosure of the *Otari* mechanism in the patent specification. See *King*, 737 F.Supp. at 1233 n. 6. Because it affirms the district court's finding of noninfringement on the '153 patent, this court need not address willfulness and enhanced damages on that patent.

B. The '123 Patent

The district court also held that Tapematic did not infringe the '123 patent. *King*, 737 F.Supp. at 1242-43. The district court compared the claims of the '123 patent with each of the Tapematic accused devices (Tapematic 900, 2,002, and 3,000 Series). See *id.* at 1237. The district court found that the leader extracting and positioning mechanisms in the Tapematic machines operate very differently from that recited in the '123 patent claims. *Id.* Specifically, claims 1 and 12 of the '123 patent claim a single mechanism to extract and position the leader tape in a single movement. The Tapematic machines, on the other hand, have at least two different components performing these tasks in a substantially different way. The '123 patent described extraction of the leader tape with a vacuum device. Tapematic's devices use a mechanical extractor. Therefore, the district court correctly concluded that the Tapematic machines did not literally, nor under the doctrine of equivalents, infringe the '123 patent. *Id.* at 1237-39.

C. The '461 Patent

Although finding no literal infringement of claim 1 of the '461 patent, *King*, 737 F.Supp. at 1235, the district court found that the splicer in the Tapematic 2,002's reel changer literally infringed claim 12. *Id.* at 1235-36. The Tapematic 2,002 is a "dual pancake" loader, i.e., it includes a reel changer assembly that automatically switches to a second reel of magnetic tape when the first reel runs out. Tapematic's reel changer spliced magnetic tape to magnetic tape. Because claim 1 includes only a structure for splicing magnetic tape to leader tape, the district court determined that Tapematic's assembly did not literally infringe claim 1. Claim 12, however, contained no such limitation. Moreover, claim 12 does not require alignment of "abutting" ends of the leader and magnetic tapes.

The district court properly found infringement of claim 12 because all limitations of claim 12 read on the splicing assembly of the Tapematic 2,002's reel changer. *Id.* at 1236. Therefore, this court affirms the district court's finding that Tapematic infringed the '461 patent.

II. Lost Profits

The district court found that Tapematic infringed the '461 patent. The district court found that this infringement caused King to sustain economic injury in the form of lost profits. In other words, "but for" the infringement, King would have sold more of its competing product. See *Otari*, 767 F.2d at 863; *Paper Converting Mach. Co. v. Magna-Graphics Corp.*, 745 F.2d 11, 21, 223 USPQ 591, 598 (Fed.Cir.1984). The district court also took into account that King's competing product did not embody the invention of the '461 patent asserted against Tapematic. The district court, however, found reason to redress King's injury notwithstanding King's election to refrain from making or selling the patented invention. Tapematic challenges the award of lost profits in such an instance, alleging instead that lost profits can be awarded only to one who makes or sells the patented device.

This court must reject Tapematic's challenge. This court held in *Rite-Hite*, sitting en banc, that a patent owner who has suffered lost profits is entitled to lost profits damages regardless of whether the patent owner has made, used, or sold the patented device. See *Rite-Hite*, 56 F.3d at 1546, 35 USPQ2d at 1072.[2] Furthermore, the language and history of the patent act and sound policy require this result, as demonstrated in the following analysis.

A. The Patent Act — Language and History

Title 35 of the United States Code provides that a patent grant confers "the right to exclude others from making, using, or selling the invention." 35 U.S.C. § 154(a)(1) (West Supp.1995) (emphasis added). An act of infringement — i.e., making, using, or selling the patented invention "without authority," 35 U.S.C. § 271(a) (1988) — trespasses on this right to exclude. Title 35 redresses such a violation of rights by "award[ing] the claimant damages adequate to compensate for the infringement." 35 U.S.C. § 284 (1988).

Section 284 imposes no limitation on the types of harm resulting from infringement that the statute will redress. The section's broad language awards damages for any injury as long as it resulted from the infringement. Though this section sets a lower limit of a reasonable royalty on the amount of recovery, it mandates an amount "adequate to compensate for the infringement." *Id.* The Patent Act also includes enhanced damages for willful infringement or bad faith and for attorney fees. 35 U.S.C. §§ 284, 285 (1988); see *Beatrice Foods Co. v. New England Printing & Lithographing Co.*, 923 F.2d 1576, 1578, 17 USPQ2d 1553, 1555 (Fed.Cir.1991).

Section 284 specifies that compensation takes the form of "damages." Congress and the Supreme Court have had several opportunities to define and construe this term under the Patent Act and section 284. Congress has not amended the Patent Act, nor has the Supreme Court interpreted the term "damages" to require exploitation of the invention as a prerequisite to recovery of lost profits. Moreover, such a prerequisite runs contrary to the language and enactment history of section 284.

The long history of the Patent Act shows that its language does not require a patentee to make the patented invention to qualify for damages. Before 1946, a patentee who proved infringement could recover "in addition to the profits to be accounted for by the defendant, the damages the complainant

has sustained thereby." R.S. § 4921. Thus a patentee could recover "both [its] own damages and the infringer's profits." *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654, 103 S.Ct. 2058, 2062, 76 L.Ed.2d 211, 217 USPQ 1185, 1188 (1983). The law changed in 1946 to provide a recovery of "general damages which shall be due compensation for making, using, or selling the invention." Act of August 1, 1946, ch. 726, 60 Stat. 778, 35 U.S.C. § 70 (1946).

The 1946 amendment eliminated the patentee's right to recover the infringer's "profits as such and allow recovery of damages only." *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 505-07, 84 S.Ct. 1526, 1542-43, 12 L.Ed.2d 457, 141 USPQ 681, 693-94 (1964); *General Motors*, 461 U.S. at 654, 103 S.Ct. at 2061-62. These profits were considered too difficult and cumbersome to prove in court. See H.R.Rep. No. 1587, 79th Cong., 2d Sess. 1-2 (1946); S.Rep. No. 1503, 79th Cong., 2d Sess. 2 (1946). The 1946 amendment thus sought to eliminate the delay and cost of protracted litigation to determine the infringer's profits. *Id.*

The 1946 amendment, however, retained the guarantee of complete compensation for the damages from infringement. The statutory language of the 1946 amendment anticipated the requirement for "adequate" compensation in the present statute. See 35 U.S.C. § 284; see also H.R.Rep. No. 1587, 79th Cong., 2d Sess. 1 (1946). To expedite the legal process, Congress amended the statute to provide for "any damages the complainant can prove." *Id.*[3] Later, the Patent Act of 1952 consolidated the existing provisions relating to damages into section 284. The 1952 Act effected no substantive change other than the addition of an attorney fees clause. *General Motors*, 461 U.S. at 655 n. 9, 103 S.Ct. at 2062 n. 9.

The Supreme Court has reinforced the breadth of section 284 in two cases interpreting the statutory provision. In *General Motors*, the more recent case, the Court held that section 284 provided for the award of prejudgment interest "where necessary to afford the plaintiff full compensation for the infringement." 461 U.S. at 654, 103 S.Ct. at 2062. Discussing the 1946 amendment, the Supreme Court stated: "Congress sought to ensure that the patent owner would in fact receive full compensation for 'any damages' he suffered as a result of the infringement." *Id.* at 654-55, 103 S.Ct. at 2062 (quoting H.R.Rep. No. 1587, 79th Cong., 2d Sess. 1-2 (1946)) (emphasis added).

And in *Aro*, the Court's first interpretation of section 284, the Court read the term "damages" broadly to cover any pecuniary injuries:

[T]he present statutory rule is that only "damages" may be recovered. These have been defined by this Court as "compensation for the pecuniary loss he [the patentee] has suffered from the infringement, without regard to the question whether the defendant has gained or lost by his unlawful acts." *Coupe v. Royer*, 155 U.S. 565, 582 [15 S.Ct. 199, 206, 39 L.Ed. 263]. They have been said to constitute "the difference between his pecuniary condition after the infringement, and what his condition would have been if the infringement had not occurred." *Yale Lock Mfg. Co. v. Sargent*, 117 U.S. 536, 552 [6 S.Ct. 934, 942, 29 L.Ed. 954]. The question to be asked in determining damages is "how much had the Patent Holder and Licensee suffered by the infringement. And that question [is] primarily: had the Infringer not infringed, what would the Patent Holder-Licensee have made?" *Livesay Window Co. v. Livesay Industries, Inc.*, *supra*, 251 F.2d [469] at 471 [5th Cir.1958].

Aro, 377 U.S. at 507, 84 S.Ct. at 1543 (emphasis added; second and third alterations in original); see *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156, 197 USPQ 726, 729 (6th Cir.1978) (quoting *Aro*).

By using the phrase "damages adequate to compensate," the Act provides economic redress sufficient to restore the patentee to its rightful position absent the infringement. 35 U.S.C. § 284. The Supreme Court has underscored this meaning of section 284. Similarly, construing section 284, this court held: "If the record permits the determination of actual damages, namely, the profits the patentee lost from the infringement, that determination accurately measures the patentee's loss." *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1078, 219 USPQ 679, 681 (Fed.Cir.1983); see also *Weinar v. Rollform Inc.*, 744 F.2d 797, 807, 223 USPQ 369, 375 (Fed.Cir.1984), cert. denied, 470 U.S. 1084, 105 S.Ct. 1844, 85 L.Ed.2d 143 (1985).

Section 284 provides adequate compensation for the infringement of rights. The nature of the protected rights explains as well the breadth of section 284's protection. Before the 1952 Act, the Patent Act defined the bundle of patent rights in terms of "the exclusive right to make, use, and vend the invention or discovery." 35 U.S.C. § 40 (1946). This wording — defining the grant in terms of the right to make the invention, rather than the right to exclude others from making the invention — caused confusion.

The 1952 Act, § 154, clarified that a patent empowered its owner "to exclude others from making, using, or selling" the invention. 35 U.S.C. § 154 (1952) (emphasis added). The 1952 amendment should have corrected any mistaken belief that patent rights somehow hinged upon the patentee's exploitation of the invention. Inventors possess the natural right to exploit their inventions (subject to the patent rights of others in a dominant patent) apart from any Government grant. Therefore, patent rights do not depend upon the exercise of rights already in the patentee's possession. Thus, the 1952 Act clarified that a patent confers the right to exclude others from exploiting an invention. It does not confer the right to exploit the invention already possessed by the inventor.

This understanding of the right protected by section 284 informs the purpose and scope of the damages provision. Section 284 protects the right to exclude others from exploiting an invention. To invoke that protection, a patentee need not have exercised its natural right to itself make, use, or sell the invention. The damages section, section 284, protects the right to exclude, not the right to exploit. A patentee qualifies for damages adequate to compensate for infringement without exploiting its patent.

Thus the language, the context, the enactment history, and the Supreme Court's interpretation of the Patent Act clarify that "damages" in section 284 encompasses an amount necessary to redress any direct injury from infringement. Moreover, the award of damages compensates for the violation of the patentee's right to exclude others from making, using, or selling the invention. The patentee need not make, use, or sell the invention to sustain an injury to that right.

B. The Patent Act — Policy

A patentee may suffer injury resulting from the violation of its right to exclude infringing, competing products. The most obvious form of injury from such a violation, as mentioned above, is profits lost to the infringer in the market for the product. The patentee's sale of a competing product not covered by the patent within that market does not change the policy justifications for restoring the parties to the positions they would have occupied absent the infringement.

A patentee is awarded a patent for disclosure of a patentable invention "[t]o promote the Progress of ... useful Arts." U.S. Const. art I, § 8, cl. 8. A patentee need not make, use, or sell an invention to gain patent protection. Upon proper disclosure of a protectable invention, a patentee acquires the right to exclude others from making, using, or selling the invention.

"The encouragement of investment-based risk is the fundamental purpose of the patent grant, and is based directly on the right to exclude." *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 599, 225 USPQ 243, 247 (Fed.Cir.), modified, 771 F.2d 480, 226 USPQ 985 (Fed. Cir.1985). "The federal patent system thus embodies a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design in return for the exclusive right to practice the invention for a period of years." *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-51, 109 S.Ct. 971, 977, 103 L.Ed.2d 118 (1989).

Thus, the Patent Act creates an incentive for innovation. The economic rewards during the period of exclusivity are the carrot. The patent owner expends resources in expectation of receiving this reward. Upon grant of the patent, the only limitation on the size of the carrot should be the dictates of the marketplace. Section 284 attempts to ensure this result by deterring infringers and recouping market value lost when deterrence fails.

Providing lost profits compensation in this case preserves those constitutional incentives. Moreover, construing section 284 in harmony with the breadth of its language allows the market, rather than courts, to dictate the incentives. This court should not presume to determine how a patentee should maximize its reward for investing in innovation. Yet denying the patentee its provable lost profits in this or any case where the patentee chooses to market a competing nonpatented product would have this result.

The market may well dictate that the best use of a patent is to exclude infringing products, rather than market the invention. A patentee, perhaps burdened with costs of development, may not produce the patented invention as efficiently as an infringer. Indeed, the infringer's presence in the market may preclude a patentee from beginning or continuing manufacture of the patented product. Thus, as apparent in this case, the patentee may acquire better returns on its innovation investment by attempting to exclude infringers from competing with the patent holder's nonpatented substitute.

Under this situation, the Patent Act is working well. The patentee is deriving proper economic return on its investment in acquiring a patent right. The public benefits from the disclosure of the invention and the ability to exploit it when the patent term expires. As the Supreme Court noted:

Congress, in the choice of means of promoting the useful arts by patent grants, could have provided that the grant should be conditioned upon the use of the patented invention, as in fact it did provide by the Act of 1832.... But Congress was aware that an unpatented invention could be suppressed and the public thus deprived of all knowledge or benefit of it.

Special Equip. Co. v. Coe, 324 U.S. 370, 378, 65 S.Ct. 741, 745, 89 L.Ed. 1006 (1945). Moreover, the government can simply "take" the invention where warranted by public interest concerns and provide "adequate compensation" to the patent holder. 28 U.S.C. § 1498 (1988).

As long as the patentee receives a proper economic return on its investment in the acquisition of a patent, the Act does not require that return to come from the sale of patented products.[4] The Act

supplies a carrot in the form of economic rewards resulting from the right to exclude. The Act further guarantees adequate damages in the form of provable lost profits to underscore the value of the invention and the incentive to innovate. The Act does not dictate that a patentee must manufacture its own invention to recover the costs of innovation.[5]

Requiring exploitation of the claimed invention for a recovery of lost profits would cause a systematic failure to award "damages adequate to compensate for the infringement" in cases where the patent holder could otherwise prove causation. Requiring exploitation would force patent owners to accept a reasonable royalty in cases where a reasonable royalty is inadequate compensation. Infringers would in effect receive the windfall of a retroactive compulsory license from the patent owner.

A hypothetical example shows how an infringer could profit from such a rule. A hypothetical patentee could market a product covered by a patent and efficiently supply all demand for the product. A competitor seeking a license under the patent would not succeed. The patentee profits more by supplying the demand itself than by granting a license on terms which would allow the competitor to reasonably operate. In this situation, no reasonable royalty exists. Willing negotiators, assuming they both act in their own best interests, would not agree to any royalty. The value of exercising the right to exclude is greater than the value of any economically feasible royalty. If the competitor infringes in this situation and the patentee can recover only a "reasonable royalty," the patentee does not receive "adequate compensation" as the statute requires. The same reasoning applies anytime the patent owner benefits more by excluding others than by licensing.

In such situations, if lost profits are not available simply because the patent holder does not market a product pursuant to its patent, infringement may actually be profitable. If licensing (rather than excluding) competitors would have proven more rewarding to the patentee, the patentee would have licensed. Instead, the market dictated that exclusion was the best way to recover innovation investments. Limiting the patentee's recovery to a reasonable royalty, however, would give the infringer what the market denied — a license. Fortunately the Patent Act does not create such incentives to infringe. Rather, it guarantees damages adequate to compensate for infringement — which include provable lost profits.[6]

Requiring a patentee to exploit the infringed claims as a prerequisite for lost profits damages would also create two significant practical problems. First, the remedy for infringement would depend partly on the type and number of claims selected by the inventor, rather than on their scope. Second, infringement trials would become more cumbersome and complex because a patentee would have to prove that the claims cover both its competitor's product and its own.

A hypothetical again illustrates this problem. An inventor originates a useful, nonobvious device composed of the elements A, B, C, and Q1. A device consisting of ABC is well known. The addition of Q1 is a significant advance. The inventor or someone on the research team knows, however, that element Q2 or element Q3 could function in the device in place of Q1. Because of the different characteristics of the elements Q1, Q2, and Q3, and the different language necessary to describe these elements, the three embodiments are not readily comprehended in a single claim. Thus, in order to cover the subject matter of the three independent claims, ABCQ1, ABCQ2, and ABCQ3, three separate patents could issue, perhaps with differing inventive entities. See *In re Kaplan*, 789 F.2d 1574, 229 USPQ 678 (Fed.Cir. 1986) (independently derived best mode created an independently patented invention even though it was described in an earlier patent).

The inventor then markets a device covered by claim ABCQ1. Competitors — unable to acquire a license — deliberately market devices which literally infringe claims ABCQ2 and ABCQ3. According to the dissenting opinion, the inventor cannot recover his lost profits for this infringement. The inventor instead must, in effect, grant a compulsory license to willful infringers. Moreover, the infringers have an incentive to infringe to acquire what the market does not supply, a mandatory license.

The potential for increasing the complexity of patent litigation is especially disturbing. The inventor would have to prove that its own product falls under the patent. Infringers would escape lost profits and acquire a mandatory license by showing the inventor's product is not within the claims. The length, cost, and complexity of an infringement trial would conceivably double. The damages phase of a trial would feature an entire new issue of "reverse infringement." The inventor would have to show that the patent's claims read on the inventor's own product, while the infringer would try to show they do not. Once again, as a precondition for lost profits, the parties would parse the claims and call on experts to apply the claim language to an unaccused device.

The language of the 1952 Act did not contemplate creation of an entire new issue of "reverse infringement." The language of the Patent Act recognizes that the value of a claim to the patentee, and the extent of harm from infringement, do not depend on whether the patentee markets the claimed device. To adequately compensate for infringement of the right to exclude, as section 284 requires, "damages" includes lost profits on competing products not covered by the infringed claims.

III. Application of the "But For" Standard

To recover lost profits damages for patent infringement, the patent owner must show that it would have received the additional profits "but for" the infringement. The patent owner bears the burden to present evidence sufficient to show a reasonable probability that it would have made the asserted profits absent infringement. See, e.g., *Del Mar Avionics, Inc. v. Quinton Instr. Co.*, 836 F.2d 1320, 1326, 5 USPQ2d 1255, 1260 (Fed.Cir.1987). This court has prescribed no one particular method by which the patent owner must meet this burden; "the methodology of assessing and computing damages is committed to the sound discretion of the district court." *State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 1576-77, 12 USPQ2d 1026, 1028 (Fed.Cir.1989), cert. denied, 493 U.S. 1022, 110 S.Ct. 725, 107 L.Ed.2d 744 (1990).

To prevail in its appeal of the amount of damages imposed, Tapematic must show that the district court committed an abuse of discretion, basing the award on clearly erroneous factual findings, legal error, or a manifest error of judgment. *State Industries*, 883 F.2d at 1577.

In determining the amount of damages to which King was entitled, the district court considered:

- (1) the number of lost sales; (2) the gross receipts King would have obtained from the lost sales had there been no infringement by Tapematic; (3) the cost of sales to be deducted from gross receipts; and (4) King's profit on the lost sales.

King, 737 F.Supp. at 1241.

The district court determined that King controlled 70% of the tapeloader market prior to Tapematic's infringement. The district court also found that Tapematic sold 77 infringing machines (Tapematic Model 2,002). *Id.* The district court determined that, absent Tapematic's infringing Model 2,002, buyers would have purchased replacements according to the other sellers' market share. Because King controlled 70% of the market, the district court initially determined that King could have made 70% of those replacement sales. *Id.* at 1242.

The district court then took into account the differences between the Tapematic Model 2,002 and the King Model 790. The Tapematic 2,002 is a double, not a single, pancake loader. Therefore, Tapematic argued that its customers would not have bought a single pancake loader like the King Model 790. Giving some weight to this argument, the district court reduced the number of King's lost sales. The district court also awarded King lost profits on the spare parts for the machines it would have sold but for Tapematic's infringement. *Id.*

The district court also found that the machines which, but for Tapematic's sales, would have been sold by companies other than King were acceptable noninfringing alternatives. The district court determined that King was entitled to a reasonable royalty based on Tapematic's sales price and the number of these machines. Finally, the district court gave King prejudgment interest at the rate of 11%.

This court finds no clear error or abuse of discretion in the district court's careful analysis. Accordingly, this court affirms the district court's damages assessment. See *State Industries*, 883 F.2d at 1577.

CONCLUSION

Because it detects no clear error, this court affirms the district court's finding of infringement of the '461 patent. Similarly, this court detects no clear error and affirms the district court's findings that Tapematic has not infringed either the '153 or the '123 patent. Finally, this court detects no clear error or abuse of discretion and affirms the district court's damages assessment.

COSTS

Each party shall bear its own costs for this appeal.

AFFIRMED

NIES, Circuit Judge, dissenting-in-part

In *Rite-Hite v. Kelley Co.*, 56 F.3d 1538, 35 USPQ2d 1065 (Fed.Cir1995) (in banc), this court divorced lost profit damages from injury to the patentee's business in goods protected by the infringed patent. A patentee was held entitled to damages based on lost trade in its goods protected under an unlitigated patent which competed with the infringing goods. In this case, the panel majority eliminates the Rite-Hite requirement for the patentee to put out, at least, a competitive counterpart for the infringing product. Under this decision, any economic loss to a patentee's business is held legally compensable as

damages for patent infringement. The court has now twice declared that the remedy Congress has provided of damages calculated as a reasonable royalty are inadequate and judicially fashions a better one for patentees which conforms to the majority's view of the public interest.

The panel majority holds that the district court did not "abuse its discretion"[1] in awarding the patentee King lost profits based on King's share of the tape loader market, which it held at the time of Tapematic's infringement of U.S. Patent No. 3,825,461 (the '461 patent). The infringed '461 patent covers a splicer head assembly for use as part of a tape loader. The award was calculated based on the profit margin on King's model 790 tape loader, a device which does not use the technology of the '461 patent. In addition, lost profits were awarded on spare parts for King's unpatented machines. For convenience I will refer to King's 790 tape loader as "unpatented," meaning that it does not embody the invention of the infringed '461 patent. However, the 790 machine may be covered by other extant, expired, or invalidated patents in King's portfolio. See *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 226 USPQ 402 (Fed.Cir.1985), cert. denied, 475 U.S. 1016, 106 S.Ct. 1197, 89 L.Ed.2d 312 (1986) ("Otari") (U.S. Patent No. 3,737,358 on a "shift block" splicer held invalid.).

The Rite-Hite court ruled that patent infringement damages under 35 U.S.C. § 284 encompass profits lost by the patentee in its business in goods which compete with the infringer whether or not the patentee's goods embody the invention of the patent in suit. The in banc court rejected the argument that legal injury for loss of trade was limited to diversion of business from the patentee's market in the patented goods in issue. Under the Rite-Hite decision, a patentee may be awarded lost profits without proving that the invention created consumer demand for the goods which the patentee would have satisfied but for the infringement. The in banc court interpreted the statute to provide "only a lower limit of a reasonable royalty and no other limitation" on patent infringement damages. *Rite-Hite*, 56 F.3d at 1544. The in banc court also declared the policy of encouraging the patentee to commercialize patented inventions by the "carrot" of damages for injury to its market in patented goods is not meaningful or persuasive.[2] Rejecting all arguments based on the statute, prior precedent, policy and logic, the Rite-Hite court ruled that lost sales in the patentee's business in competitive goods which were protected not by the patent in suit but by an unasserted patent were "legally compensable." The Rite-Hite decision went on to opine (albeit in dicta) that a patentee's lost sales of goods in the public domain were equally compensable if customers would not have obtained such goods from a third party.

I reject this change in patent damages law. My reasons are more fully explained in my dissenting opinion in *Rite-Hite*, 56 F.3d at 1556-78, 35 USPQ2d at 1078-96 (in which Chief Judge Archer, Senior Circuit Judge Smith and Circuit Judge Mayer joined). I conclude that patent infringement damages for loss of trade depend on injury to the patentee's market in goods utilizing the invention of the infringed patent. A patent grants the patentee a legal right to a protected market only for patented goods. A patent does not grant the patentee a right to a protected market in unpatented goods. A patent entitles the patent owner to the fruits of the invention, not the fruits of the patentee's business generally. In sum, lost profits are not a legal injury, but only a measure of damages for a legal injury. To constitute legal injury to a patentee's business for which lost profits may be awarded for patent infringement, the patentee must have a market in the patented goods from which sales were diverted by the infringer. Further, it must be proved that, but for the infringer's acts, the customers would have bought the patented goods from the patentee because of the customer demand for the patented invention. Absent such proof, the patentee is entitled to damages calculated as a reasonable royalty for the use of the invention made by an infringer. 35 U.S.C. § 284. Such award satisfies the requirement for "full compensation" recognized in

General Motors Corp. v. Devex Corp., 461 U.S. 648, 653-54, 103 S.Ct. 2058, 2061-62, 76 L.Ed.2d 211, 217 USPQ 1185, 1187-88 (1983).

The Supreme Court stated the principle over 100 years ago in Crosby Steam-Gage & Valve Co. v. Consolidated Safety Valve Co., 141 U.S. 441, 452-53, 12 S.Ct. 49, 53, 35 L.Ed. 809 (1891), that, to recover for loss of trade, a patentee must prove it was "putting on the market goods embodying the [patented] invention." See also, Seymour v. McCormick, 57 U.S. (16 How.) 480, 14 L.Ed. 1024 (1853) (actual damages depends on patentee's commercial exploitation of the patented product either by satisfying the market demand or licensing); Rude v. Westcott, 130 U.S. 152, 165-67, 9 S.Ct. 463, 468-69, 32 L.Ed. 888 (1889); Yale Lock Mfg. v. Sargent, 117 U.S. 536, 552-53, 6 S.Ct. 934, 942-43, 29 L.Ed. 954 (1886). Apparently, the majority of this court assumes that the Supreme Court would overturn this precedent because of the statement in the Devex case cited above that, under the present Act, a patent owner is entitled to "full compensation for `any damages' he suffered as a result of the infringement." However, the Supreme Court has to date pronounced no expansion in the legal scope of "damages," which all circuits, except this one, have followed.[3] It ill behooves this court to anticipate that the Supreme Court will overturn controlling precedent. *Rodriguez de Quijas v. Shearson/American Express, Inc.*, 490 U.S. 477, 484, 109 S.Ct. 1917, 1921-22, 104 L.Ed.2d 526 (1989) ("If a precedent of this Court has direct application in a case, yet appears to rest on reasons rejected in some other line of decisions, the Court of Appeals should follow the case which directly controls, leaving to this Court the prerogative of overruling its own decisions."). Supreme Court precedent unequivocally holds that lost profits awards are reserved solely for injuries caused by an infringer's interference with the patent owner's trade in goods embodying the invention of the infringed patent.

The in banc court remanded this appeal, which also had been taken in banc, for decision in accordance with *Rite-Hite* by the original panel. However, the majority of the panel makes a quantum leap from *Rite-Hite* in expanding the scope of legal injuries for patent infringement. As will be more fully explained, the infringed patent is used in an optional accessory for the infringer's tape loader, a reel changer, an accessory for which the patentee offers no counterpart. In addition, the invention, a splicer head, is only a part of the reel changer. The majority ignores the requirement for proof that the patented splicer head provides the commercial magnetism for the entire device. Where a patented invention is only a part of the infringing machine, the patentee must show "that the profits and damages are to be calculated on the whole machine, for the reason that the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature." *Garretson v. Clark*, 111 U.S. 120, [4 S.Ct. 291, 28 L.Ed. 371]." *Westinghouse Co. v. Wagner Mfg. Co.*, 225 U.S. 604, 615, 32 S.Ct. 691, 694, 56 L.Ed. 1222 (1912) (emphasis added); accord *Marconi Wireless Telegraph Co. v. United States*, 320 U.S. 1, 50, 63 S.Ct. 1393, 1416, 87 L.Ed. 1731 (1943) (defendant not liable for "non-infringing and valuable improvements which had contributed to the making of the profits."); see also *Sheldon v. Metro-Goldwyn Corp.*, 309 U.S. 390, 400-405, 60 S.Ct. 681, 685-87, 84 L.Ed. 825 (1940) (analyzing patent and copyright damages). The "entire market value rule," as it is known, surfaces only in a footnote in the majority opinion and is not applied. However, as reaffirmed in *Rite-Hite*, 56 F.3d at 1549-50, the entire market value rule permits recovery of damages on the value of an entire machine only where the patent-related feature is the basis for customer demand.

The majority panel opinion is strangely devoted to justification of the in banc ruling on damages in *Rite-Hite* which, of course, needs no endorsement by this panel. In contrast, the majority is virtually silent on the justification for the award of lost profits on the facts of this case to which I turn.

The Facts

King and Tapematic market machines called tape loaders that cut, splice and wind magnetic audio or video tape into closed cassettes. The magnetic tape must be spliced to leader tape affixed to the winding hubs in the cassette. King charged Tapematic with infringement of its U.S. Patent Nos. 3,637,153 and 3,997,123 directed respectively to a tape loader and to a more automated version thereof. The majority affirms that Tapematic's tape loaders are not infringements of those patents.

In addition to the un infringed '153 and '123 patents, King also charged Tapematic with infringement of a third patent, U.S. Patent No. 3,825,461 ('461 patent), which is directed to a particular splicing head assembly for connecting magnetic tape to leader tape in a tape loader. Neither King nor Tapematic use this invention in a tape loader. As an optional accessory to its tape loader, Tapematic provides a reel changer that automatically switches to and splices a second reel of magnetic audio or video tape when the first reel runs out. Obviously, a reel changer splices magnetic tape to magnetic tape. A different type of splice is used in this procedure from that required for splicing magnetic tape to leader tape in the tape loader. However, the majority construes one claim of the '461 patent, which is written in broad "means-plus-function" terms (35 U.S.C. § 112, ¶ 6), to cover the splicing of magnetic tape to magnetic tape in a reel changer. The splicing head used in Tapematic's reel changer is found to be an equivalent of the splicing head assembly disclosed in the '461 patent and is held to be an infringement within the construction it gives the claim language under section 112, ¶ 6.

No Competitive Products

Assuming that the finding that Tapematic's splicing head in its reel changer infringes the '461 claim is correct,[4] it does not follow that lost profits are awardable under Rite-Hite for King's losses in sales of its tape loader. Under Rite-Hite, King would have to, at least, offer a reel changer. King offers no reel changer — competitive or otherwise — for its own tape loader. Similarly, the award of lost profits on unpatented spare parts for an unpatented machine does not meet the requirement in Rite-Hite for proof of competition between the unpatented product and goods of the infringer. There is no allegation or finding that Tapematic competed with spare parts. Thus, the awards of lost profits here expand upon the Rite-Hite ruling.

The Entire Market Value Rule

When a patentee either seeks damages on an entire machine where its patent covers only a patented component or seeks damages for lost sales of unpatented goods sold along with a patented device ("convoyed" sales), a patentee must satisfy the entire market value rule, that is, the patentee must prove that the patent-related feature is the basis for customer demand for the unpatented parts to

which it seeks to extend its damages. *Westinghouse*, 225 U.S. at 615, 32 S.Ct. at 694-95. In *Rite-Hite*, the in banc court reaffirmed the viability of the entire market value rule and imposed a further limitation that "convoyed" sales must bear a functional relationship with the patented goods. In *Rite-Hite*, lost profits were awarded for the patentee's lost sales of truck restraints, a device which holds a vehicle to a loading dock, (even though protected only under an unasserted patent) and lost profits were denied on "convoyed" sales of a loading dock leveler.

Perhaps the panel majority here did not attempt to apply the entire market value rule to a lost profits award involving a patentee's unpatented goods because it makes no sense. This is a classic case where apportionment of a defendant's ill-gained profits in an equitable accounting and of a patentee's claim for its own lost profits as actual "damages" would have been required under earlier statutes.[5] *Dobson v. Dornan*, 118 U.S. 10, 6 S.Ct. 946, 30 L.Ed. 63 (1886); *Dobson v. Hartford*, 114 U.S. 439, 444-46, 5 S.Ct. 945, 947-49, 29 L.Ed. 177 (1885). Because a patentee was entitled only to the defendant's profits and/or its own lost profits to the extent attributable to its patented invention, and because of the virtual impossibility and difficulties of apportionment to reflect that amount, Congress was persuaded to change the statute.[6] Congress expressly did away with equitable accountings for the defendant's profits, which was the usual starting place for determination of compensation. At the same time, Congress provided that damages may be calculated as a reasonable royalty in all cases. The statute was not otherwise changed respecting "damages." Either Congress intended to maintain apportionment of actual "damages" or it intended that "damages" be awarded as a reasonable royalty in lieu of apportionment. Congress did not eliminate the prior restriction for apportionment of a patentee's lost profits in calculating "damages." See *Devex*, 461 U.S. at 653, 103 S.Ct. at 2061 ("appropriate to infer that Congress intended to adopt the established judicial interpretation.")

Our case law, pre-*Rite-Hite*, dealt of course with the entire market value rule only in connection with the patentee's claim for lost profits on its own goods of which the patented invention was a part. "[T]he entire market value rule ... permits recovery of damages based on the value of a [patentee's] entire apparatus containing several features, where the patent related feature is the basis for consumer demand." *State Indus. v. Mor-Flo Indus.*, 883 F.2d 1573, 1580, 12 USPQ2d 1026, 1031 (Fed.Cir.1989); *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 900-901, 229 USPQ 525, 528 (Fed.Cir.), cert. denied, 479 U.S. 852, 107 S.Ct. 183, 93 L.Ed.2d 117 (1986). The *Rite-Hite* court did not explain how the entire market value rule should work when dealing with a patentee's claim for lost profits on its unpatented goods and the defendant's device contains only an infringing feature, as here. In this context, I find the application of an entire market value rule mind-boggling. Obviously the patented splicer head did not create demand for King's tape loader because that type of splicer is not used at all in the patentee's goods. Assuming the in banc court meant that the patentee gets the entirety of its lost profits on a competitive unpatented product if the patented component is the basis for consumer demand for the infringer's goods (the logic of which escapes me), then the lost profit award here fails for lack of proof. Indeed, King did not attempt to prove, and does not even argue, that the patented invention created demand for the infringer's reel changer, much less its tape loader, or for the spare parts. The district court found that numerous noninfringing products were available. *King Instrument Corp. v. Perego*, 737 F.Supp. 1227, 1242 (D.Mass.1990). King argues only that "but for" the competition from Tapematic's admittedly improved tape reeler with a reel changer, the "dual pancake" device, King would have kept its share of the market with its "single pancake" tape loaders.[7] King proved no actual loss of sales to the infringer because of the public's demand for the patented splicer technology.

The award of the patentee's lost profits on spare parts for its unpatented machine reveals the full extent of the change in the law by this panel. In *Otari*, supra, which involved the '153 King patent, one of the patents asserted here but not infringed, King was awarded lost profits on its tape loader which did embody the '153 invention. In addition, King sought lost profits on sales of unpatented spare parts it expected to sell along with its patented tape loader. In overturning the damages awarded in connecting with injury to King's spare parts business, this court explained:

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*958 King asserts that its spare parts ... are parts which it normally sells with the patented swing arm machine. Such simplistic outlook fails to perceive the underlying significance of the entire market value rule, which was accurately applied by one of our predecessor courts in *Leesona Corp. v. United States*, supra. In defining those spare parts for which a patent owner may recover, the Court of Claims recognized that parts [must] ... derive their existence and value from the patent.

Otari, 767 F.2d at 865, 226 USPQ at 411; See also *Leesona Corp. v. United States*, 599 F.2d 958, 975, 220 Ct.Cl. 234, 202 USPQ 424, 440, cert. denied, 444 U.S. 991, 100 S.Ct. 522, 62 L.Ed.2d 420 (1979) (award of compensation made on unpatented replacement anodes part of patent value where patented "battery's very uniqueness ... lies in replacing anodes to be recharged"). Having just reendorsed the entire market value rule, it is anomalous in the extreme that this court now approves lost profits for injury to King's spare parts business for an unpatented machine when this court in *Otari* denied damages for injury to King's spare parts business for its patented machine. The entire market value rule is simply jettisoned in this case. However, the panel has no license to change prior precedent.

Additional Comments

With respect to this panel's substitute analysis of the statute for that of *Rite-Hite*, a few comments are in order.

The panel majority posits that the language of section 154 of the Act of 1952 clarified that a patent empowers its owner to exclude others from practicing the invention and that the damages action, section 284, protects the right to exclude, not the right to exploit.[8] While correct, actual damages, nevertheless, depend on the patentee's manner of exploitation, i.e., manufacturing or licensing. The right to exclude is not "injured" by an infringer, anymore than a landowner's right to exclude is "injured" by a trespasser. The right to exclude remains enforceable to its fullest. A trespasser can inflict injury only on the property on which the trespass is committed, for example by cutting the trees. Similarly, a patent infringer cannot injure the patent itself, but only property rights protected by the patent, namely, the patentee's exclusive market for patented goods.

The majority states that "inventors have a natural right to exploit their inventions apart from any government grant. Therefore, patent rights do not depend upon the exercise of rights already in the patentee's possession. [A patent] does not confer the right to exploit the invention already possessed by the inventor." Slip op. p. 949. However, if an inventor merely exercises his natural right to exploit his invention without a patent, once the product is in the market, all competitors have the same right.

Bonito Boats v. Thunder Craft Boats, 489 U.S. 141, 156, 109 S.Ct. 971, 980, 103 L.Ed.2d 118 (1989). A patent provides what an inventor's natural right does not — namely, a right to exclusivity in the market place during the patent term. The patent right to exclusivity is far different from the natural right to exploit an invention.

The panel majority next proclaims that requiring the patentee's "exploitation of the claimed invention for a recovery of lost profits would cause a systematic failure to award damages adequate to compensate for the infringement." Slip op. at 951. Such a requirement, according to the majority, "would force patent owners to accept a reasonable royalty in cases where a reasonable royalty is inadequate compensation" and would amount to a compulsory license. At the same time the majority approves the anathema of a compulsory license in this case. Damages are calculated as a reasonable royalty for the 30 percent of Tapematic's sales for which lost profits were not awarded. The short answer is that the award of a reasonable royalty as damages is not a license, but is simply a method of calculating damages. *Dowagiac Mfg. Co.*, 235 U.S. at

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*959 649, 35 S.Ct. at 224; *Devex*, 461 U.S. at 652 n. 5, 103 S.Ct. at 2060 n. 5. As I stated in *Rite-Hite*, 56 F.3d at 1574, 35 USPQ2d at 1093, "[a] reasonable royalty is in fact a Congressional largesse for cases where a patentee might otherwise receive only nominal damages. A patentee is now statutorily entitled to a reasonable royalty even though it has not suffered or cannot prove a financial loss to its market in patented goods."

The panel majority's discussion of damages in the form of a reasonable royalty concludes with the pronouncement that a reasonable royalty encourages infringement and quotes *Stickle v. Heublein, Inc.*, 716 F.2d 1550, 219 USPQ 377, (Fed.Cir.1983). Noting the language is attributable to me as author, I must acknowledge the inartfulness of some of my language. However, *Stickle* says no more than that a reasonable royalty for an infringer is not a normal, routine, or established royalty.[9] Supreme Court precedent on damages calculated as a reasonable royalty better explains the concept. See *Dowagiac Mfg.*, 235 U.S. at 648-50, 35 S.Ct. at 224-25. In any event, where infringement is innocent as here, the amount of damages cannot operate as a "deterrent," except as a brake to legitimate challenges to a charge of infringement. A patent now hangs like the sword of Damocles over competition with unpatented goods and serves as a powerful means for extortion. In contrast, Congress has provided a balanced rational system of penalties and rewards. All infringers are liable for damages, either actual or a statutory royalty award. Innocent infringement theoretically may be profitable where damages are calculated as a reasonable royalty. (See *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1081, 219 USPQ 679, 684 (Fed.Cir. 1983)) (it is implicit that a reasonable royalty leaves an infringer with a reasonable profit); *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F.Supp. 1116, 1122, 166 USPQ 235, 239 (S.D.N.Y.1970) (reasonable royalty leaves a profit margin). That was the choice Congress made. The evil, which Congress discerned, was knowing infringement. Where infringement is willful, damages may be increased up to three times. Here, damages for innocent infringement are increased more than ten times over the statutory entitlement.[10]

A reasonable royalty is adequate damages where a patentee is in the market with patented goods but along with competitive non-infringing substitutes which would have shared the infringing sales, *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1157-60 (6th Cir.1978), as well as for patentees

who do not exploit the market for the patented goods. Id. What Congress has so fixed by statute cannot be inadequate.

In note 2, the panel decrees that all economic harm to the patentee is compensable as "a direct and foreseeable result of infringement." Congress disagrees. To recover any damages — lost profits or a reasonable royalty — a manufacturing patentee must mark its products with a notice of patent rights or provide actual notice of infringement. 35 U.S.C. § 287 (1988). The products on which King receives lost profit damages are not marked and could not be marked with notice that they are protected by the '461 patent. Further, no actual notice of infringement of the '461 patent was given prior to the date from which damages are awarded. The award here conflicts with section 287.

One final comment. In *Continental Paper Bag Co. v. Eastern Paper Bag Co.*, 210 U.S. 405, 424-430, 28 S.Ct. 748, 753-56, 52 L.Ed. 1122 (1908), the Supreme Court held that commercialization of an invention was not necessary for an injunction against infringement. The panel majority cites another equity

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*960 case which held that a patent could not be refused on the ground it might be used only to protect another patented invention of which it was a part. *Special Equipment Co. v. Coe, Comm'r of Patents*, 324 U.S. 370, 65 S.Ct. 741, 89 L.Ed. 1006 (1945). A majority of the court believes it follows that disclosure of an invention is, in itself, sufficient for damages to a patentee's business in unpatented goods. However, an injunction is directed to the equity power of the court and may be denied. *Rite-Hite*, 56 F.3d at 1547-48. Damages are provided by a rule of law respecting what constitutes legal injury and may not be refused as a matter of the court's discretion. The majority compares apples and oranges. To amplify the words of the panel with appropriate inserts: "The economic rewards [from the patented invention] during the period of exclusivity are the carrot. The patent owner expends resources in expectation of receiving this reward. Upon grant of the patent, the only limitation on the size of the carrot should be the dictates of the marketplace [for the patented invention]." Slip op. 949. In the present case, while the market has provided a carrot that King disdains, the panel majority, contrary to its admonition to let the market determine rewards, furnishes King with a full course meal. Despite two hundred years of our patent system without such awards, there is no evidence of a systematic failure which the majority elevates to one of constitutional dimension. If anything, the systemic failure now goes the other way. The public is deprived of the benefits of the invention during the term of the patent while the patentee is assured its market share of profits on unpatented goods if it keeps the invention from the public. This is not the bargain Congress intended by granting the patentee an exclusive market for the patented goods.

In the majority view, "[u]nder this situation [an award of damages connected to unpatented products], the Patent Act is working well." Slip op. p. 950. I disagree. Only if one elevates rewards to patentees over other public interests could one reach this conclusion. And it is not the view espoused by the Supreme Court. Contrary to the majority, *Aro Mfg. Co.*, 377 U.S. at 505-507, 84 S.Ct. at 1542-43, 141 USPQ at 693-94, did not expand the basis for actual damages "to cover any pecuniary injuries" to a patentee's business including lost profits on unpatented goods as the majority asserts. Slip op. at 11. In rejecting that expansive view of patent infringement damages, the Aro Court stated that the patentee's damages theory "would enable the patentee to derive a profit ... on unpatented rather than patented goods — an achievement proscribed by the *Motion Picture Patents* [243 U.S. 502] and *Mercoid* [320 U.S.

661] cases." Aro, 377 U.S. at 510, 84 S.Ct. at 1544 (plurality). As stated in Aro, and prior Supreme Court precedent, a patentee is unequivocally not entitled to lost profits on unpatented goods.[11]

Congress made the policy choice that the "carrot" of an exclusive market for the patented goods would encourage patentees to commercialize the protected inventions so that the public would enjoy the benefits of the new technology during the patent term in exchange for granting a limited patent monopoly. In other words, the public expected benefits during "the embarrassment of an exclusive patent as Jefferson put it." *Graham v. John Deere Co.*, 383 U.S. 1, 10-11, 86 S.Ct. 684, 690, 15 L.Ed.2d 545 (1965). As stated in *Bonito Boats*, 489 U.S. at 150-51, 109 S.Ct. at 977:

The federal patent system thus embodies a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design in return for the exclusive right to practice the invention for a period of years.

(Emphasis added.) If the patentee did not commercialize the invention directly or by license, until now the patentee could not prove actual damages but, nevertheless, was entitled to the remedies of damages calculated as a reasonable royalty and an injunction. Now the patentee is rewarded the same as,

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*961 indeed, more than, if it had made the investment to bring the goods into the market.[12] However, no legislation has ever been proposed to compensate a patentee for losses to its unpatented business in order to correct the inadequacies the majority sees in the legal scope of damages which have heretofore been awardable. This court has simply judicially legislated an expansion of patent rights from protection of an exclusive market in patented goods to protection of the patentee's unpatented business as well. The court does away with the "carrot" Congress determined would get new products into the economy.

I will not burden this opinion by fuller analysis of the meaning of "damages" under 35 U.S.C. § 284, which is fully set out at 56 F.3d at 1556-78, 35 USPQ2d at 1078-96. I will only point out that the dissent and the majority rely on many of the same Supreme Court cases but derive from them absolutely conflicting tenets. Clarification from higher authority is needed on the scope of protection afforded by a patent and the meaning of patent infringement "damages."

[1] In an earlier action brought by King against Otari Corporation, this court discussed similar King technology related to the loading of closed cassettes with magnetic tape. See *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 226 USPQ 402 (Fed.Cir.1985) (Otari), cert. denied, 475 U.S. 1016, 106 S.Ct. 1197, 89 L.Ed.2d 312 (1986). In particular, this court upheld the validity of the '153 patent and found it infringed by Otari Corporation. See *Otari*, 767 F.2d at 857-59, 862-63. This court assumes the reader is familiar with the entirety of this earlier opinion as well as the district court opinion in this case. *King Instrument Corp. v. Perego*, 737 F.Supp. 1227, 16 USPQ2d 1994 (D.Mass.1990) (King).

[2] We remark on the dissent's characterization of the court's en banc ruling in *Rite-Hite*. *Rite-Hite* and this decision do not depart from the requirement that damages shall be adequate to compensate for the infringement, 35 U.S.C. § 284 (1988); Congress set the reasonable royalty as the floor, not the ceiling of damages for infringement.

[3] The types of harm for which infringement damages are recoverable are not, however, completely unlimited. Although broad, the term "damages" in the Patent Act has limits. Compensatory (or actual) "damages" are generally those which are the natural result of the harmful act in question. Black's Law Dictionary 390 (6th ed. 1990). For instance, if the patentee's mother died of a heart attack due to the shock of discovering an infringing product at the supermarket, the Act would not authorize damages for wrongful death or emotional distress. The unfortunate death would not be economic harm, nor the direct and foreseeable result of infringement. Economic harm, such as the profits lost on sales of competing products in this case, however, is a direct and foreseeable result of infringement. Indeed, the infringer actively seeks to attract customers away from competitors. Thus the infringer cannot feign surprise that the lost profits of a competitor are the direct and foreseeable result of infringement. Lost economic profits on products in direct competition with infringing products are clearly foreseeable and constitute "damages."

[4] The "entire market value rule" recognizes that the economic value of a patent may be greater than the value of the sales of the patented part alone. Under this rule, courts have allowed recovery of lost profits or a reasonable royalty based not only on the profit from the patented part, but also on non-patented parts. See, e.g., *State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 1580, 12 USPQ2d 1026, 1031 (Fed. Cir.1989), cert. denied, 493 U.S. 1022, 110 S.Ct. 725, 107 L.Ed.2d 744 (1990).

[5] *Tapematic* cites two cases where this court held lost profits unavailable to patentees who failed to exploit the patented invention. See *Trell v. Marlee Elecs. Corp.*, 912 F.2d 1443, 1445, 16 USPQ2d 1059, 1061 (Fed.Cir.1990); *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., Harris Press & Shear Div.*, 895 F.2d 1403, 1406 n. 2, 13 USPQ2d 1871, 1874 n. 2 (Fed.Cir.1990). In *Trell* and *Lindemann*, however, the record does not show that the patentee sold any product in the United States. The patentee had no possible basis for a lost profits claim. These cases, like others, merely reflect the general rule that lost profits are recoverable only if demonstrated by adequate evidence in the record. *Fromson v. Western Litho Plate & Supply Co.*, 853 F.2d 1568, 1574, 7 USPQ2d 1606, 1612 (Fed.Cir.1988); *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1078, 219 USPQ 679, 681-82 (Fed.Cir.1983).

[6] The problem of inadequate compensation when damages are based on a reasonable royalty has been expressly recognized in several cases. See, e.g., *Fromson*, 853 F.2d at 1574-76; *Stickle v. Heublein, Inc.*, 716 F.2d 1550, 1563, 219 USPQ 377, 387 (Fed.Cir.1983). The solutions suggested include awards of treble damages, attorney fees and prejudgment interest, *Fromson*, 853 F.2d at 1576, and discretionary awards of greater than a reasonable royalty:

[T]he trial court may award an amount of damages greater than a reasonable royalty so that the award is "adequate to compensate for the infringement." ... "[T]he infringer would have nothing to lose, and everything to gain if he could count on paying only the normal, routine royalty non-infringers might have paid. As said by this court in another context, the infringer would be in a 'heads-I-win, tails-you-lose' position." Such an increase, which may be stated by the trial court either as a reasonable royalty for an infringer ... or as an increase in the reasonable royalty determined by the court, is left to its sound discretion.

Stickle, 716 F.2d at 1563 (citation omitted; emphasis in original). Such discretionary increases may be appropriate where plaintiffs cannot prove direct and foreseeable damages in the form of lost profits. But where plaintiffs establish lost profits with reasonable probability, a lost profits award reflecting actual damages is preferable to an essentially arbitrary increase in a reasonable royalty.

[1] For a discussion of the standard of review for patent damages applied in our court, see *Smith-Kline Diagnostics, Inc. v. Helena Lab. Corp.*, 926 F.2d 1161, 1163-65, 17 USPQ2d 1922, 1924-25 (Fed.Cir.1991).

[2] The court found encouragement to practice the invention in the possibility of denial of an injunction, a possibility so remote as to be ludicrous. Moreover, treble damages are assessable where infringement is deliberate. Use of the invention by others merely because no injunction is in place is outside the world of reality.

[3] See *Rite-Hite*, 56 F.3d at 1567-68, 35 USPQ2d at 1087-88 (Nies, J., dissenting), reviewing decisions of other circuits which uniformly hold that a patent protects a patentee's market only for those goods embodying the invention of the infringed patent.

[4] *Tapematic* challenges the expansive legal interpretation given to the scope of the claim under which it is found to infringe.

[5] The panel implies that prior to 1946, a patentee could recover under R.S. § 4921 both its own damages and the infringer's profits. Not so. No double recovery was ever allowed. The equity court would award "damages" (the equity courts were given special power to award "damages" by Act of 1876) only when a patentee's actual losses exceeded the defendant's profits. See *Georgia-Pacific Corp. v. United States Plywood Corp.*, 243 F.Supp. 500, 516-46, 146 USPQ 228, 242-54 (S.D.N.Y.1965), for an extended analysis of statutory remedies in successive patent statutes.

[6] At the Congressional hearings of the 1946 statute, Patent Office officials explained that "[d]amages in a legal sense means the compensation which the law will award for an injury done." House Hearings at 9. With respect to the restriction of profits created by the invention, there was total agreement that "those [are] the only profits to which the patentee is entitled." *Id.* at 3 (Fish letter introduced by Hon. Robert K. Henry, Member of Congress).

[7] While this court has approved a market share award of lost profits, heretofore the market share was based on the patentee's share of the market based on patented products augmented by shares of infringers and licensees. *State Indus.*, *supra*.

[8] See *Aro Mfg. Co., Inc. v. Convertible Top Replacement Co.*, 377 U.S. 476, 505, n. 20, 84 S.Ct. 1526, 1542, n. 20, 12 L.Ed.2d 457, 141 USPQ 681, 693, n. 20 (1964) ("In the 1952 codification, §§ 67 and 70 of the 1946 Code were consolidated in the present § 284. The stated purpose was merely the reorganization in language to clarify the statement of the statutes," quoting H.R.Rep. No. 1923, 82nd Cong., 2d Sess. at 10, 29 (1952)).

[9] What the majority omits from its reference to *Stickle*, however, are my comments relating to damages:

Contrary to [the defendant's] argument, damages to the patent holder cannot simply be calculated in all cases by determining the difference between his pecuniary condition after the infringement, and what his condition would have been if the infringement had not occurred. [citation omitted]. In the absence of exploitation by the patent holder, no damages would be awardable.

Stickle, 716 F.2d at 1560-61 (emphasis added).

[10] A reasonable royalty was fixed at \$1,100 per unit of infringing sales, whereas lost profits amounted to \$14,400 per unit. King, 737 F.Supp. at 1242.

[11] I must point out that Aro is a case on patent damages, not antitrust law, the basis on which the majority in Rite-Hite discounted similar statements in other precedent. 56 F.3d at 1538, 1544-46, 35 USPQ2d at 1069-70.

[12] King's profit margin was determined on an incremental basis on an established line where fixed costs had been recouped. The majority speaks of damages to recoup development costs of the invention. The record here is devoid of evidence respecting such costs.