

**United States Court of Appeals  
for the Federal Circuit**

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**AQUA SHIELD,**  
*Plaintiff-Appellant,*

v.

**INTER POOL COVER TEAM,  
ALUKOV HZ SPOL. S.R.O.,  
ALUKOV SPOL. S.R.O., AND  
POOL & SPA ENCLOSURES,**  
*Defendants-Appellees.*

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2014-1263

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Appeal from the United States District Court for the District of Utah in No. 2:09-cv-00013 TS, Chief Judge Ted Stewart.

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Decided: December 22, 2014

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TODD E. ZENGER, Kirton McConkie, of Salt Lake City, Utah, argued for plaintiff-appellant.

GREGORY J. COFFEY, Coffey & Associates, of Morristown, New Jersey argued for defendants-appellees. Of counsel on the brief was H. DICKSON BURTON, Trask Britt, PC, of Salt Lake City, Utah.

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Before WALLACH, TARANTO, and CHEN, *Circuit Judges*.

TARANTO, *Circuit Judge*.

Aqua Shield sued Inter Pool Cover Team, Alukov Hz spol. s.r.o., Alukov spol. s.r.o., and Pool & Spa Enclosures (collectively, IPC) for infringement of U.S. Patent No. 6,637,160. Aqua Shield won summary judgment that IPC infringed and that no claim was invalid. A bench trial led eventually to determinations that Aqua Shield was entitled to damages in the form of a royalty of \$10,800 and that IPC had not been willful in its infringement. Aqua Shield appeals the amount of the royalty award and the finding of no willfulness that led to the denial of enhanced damages and attorney's fees. For the reasons set forth below, we vacate the district court's decision on those issues, affirm on one narrow infringement issue also raised by Aqua Shield, and remand for further proceedings consistent with this opinion.

#### BACKGROUND

The '160 patent claims enclosures designed to cover pools or create sun rooms. The enclosures consist of arched sections that can slide over or under one another to enclose or expose the encompassed area as desired. The inventor, Bob Brooks, is the chief executive officer of Aqua Shield, to which he assigned ownership of the patent.

In 2005, Aqua Shield sued IPC in the Eastern District of New York, alleging that IPC, by importing and selling pool enclosures, was infringing claims 1–16 of the '160 patent. The district court in New York denied the requested preliminary injunction because Aqua Shield lacked information needed to show a likelihood of success on the merits and because of questions about personal jurisdiction over the defendants. Eventually, the case was

transferred to the District of Utah. *Aqua Shield, Inc. v. Inter Pool Cover Team*, No. 05 CV 4880(CBA), 2009 WL 29312, at \*3 (E.D.N.Y. Jan. 5, 2009).

Aqua Shield moved for summary judgment of infringement based on IPC's sales of various enclosure models. One allegation involved an installation in Utah (the Utah Installation). IPC responded with non-infringement arguments only as to claims 10 and 15, not the other fourteen asserted claims. The district court held that there was no genuine issue of fact about IPC's infringement of all claims except claim 15, and therefore entered summary judgment of infringement of claims 1–14 and 16. *Aqua Shield, Inc. v. Inter Pool Cover Team*, 830 F. Supp. 2d 1285, 1291 (D. Utah 2011). Aqua Shield later dropped its allegation of infringement of claim 15, and it presented no infringement issues at the later trial.

With respect to invalidity, the parties filed cross-motions for summary judgment. As to anticipation, the district court ruled that IPC failed to “compare[] the construed claims of the '160 patent to the prior art” and did “not introduce[] evidence showing that the [prior art] discloses each limitation of the '160 patent.” *Aqua Shield, Inc. v. Inter Pool Cover Team*, No. 2:09-CV-13 TS, 2013 WL 164244, at \*4 (D. Utah Jan. 15, 2013). As to obviousness, the court ruled that IPC did “not argue[] obviousness on a claim-by-claim basis,” “try to show that all of the elements of even a single claim in the '160 patent were made obvious by prior art,” or “articulate[] why a person of ordinary skill in the art would have been motivated to combine the prior art to produce the claimed invention.” *Id.* at \*5. For those reasons the district court granted summary judgment in favor of Aqua Shield regarding validity. *Id.* Neither party appeals the summary judgment rulings (except for one discrete infringement issue concerning the “Elegant” model).

The district court next conducted a two-day bench trial on issues concerning relief. In one ruling not challenged on appeal, the court found that Aqua Shield failed to prove lost-profit damages. *Aqua Shield, Inc. v. Inter Pool Cover Team*, No. 2:09-CV-13 TS, slip. op. at 13–17 (D. Utah Aug. 14, 2013) (*Initial Damages Op.*). The court also granted Aqua Shield a permanent injunction against IPC’s infringement. *Id.* at 31–38.

The court rejected not only Aqua Shield’s claim for lost-profits damages but also its claim for damages in the form of a reasonable royalty. *Id.* at 17–28. It determined that several familiar considerations favored a “higher” royalty rate, *id.* at 19–23 (citing *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970), *modified*, 446 F.2d 295 (2d Cir. 1971)), but that it lacked sufficient evidence from which to determine an *initial* royalty rate, *id.* at 26–27 (“Although some of the factors weigh in favor of a ‘higher’ royalty rate, the Court is without sufficient evidence to determine what that rate should be higher than.”). The court thus awarded Aqua Shield no damages at all. *Id.* at 27–28.

The court also found no willfulness on IPC’s part. The court determined that, until summary judgment of infringement was granted, IPC had a reasonable belief that its products were non-infringing, based on the New York district court’s denial of Aqua Shield’s motion for a preliminary injunction. *Id.* at 29. And after summary judgment of infringement was granted, the court found, IPC “made a good faith effort to design around the [p]atent.” *Id.* Based on those conclusions, the court found that IPC had not willfully infringed the ’160 patent. *Id.* Further concluding that IPC did not otherwise “act in bad faith, engage[] in litigation misconduct, or exhibit[] bad behavior,” the court determined that this was not an “exceptional case” within the meaning of 35 U.S.C. § 285 and so denied Aqua Shield’s motion for fees. *Id.* at 28–30.

Aqua Shield then moved to alter the district court's judgment. The district court reassessed several of the conclusions it had reached, but it changed only the no-royalty finding. *Aqua Shield, Inc. v. Inter Pool Cover Team*, No. 2:09-CV-13 TS, 2013 WL 6410975, at \*1, \*5–6 (D. Utah Dec. 9, 2013). Noting 35 U.S.C. § 284's "clear" instruction "that the Court 'shall' award damages 'in no event less than a reasonable royalty,'" *id.* at \*5, the court relied on evidence of IPC's profits on past infringing sales as the foundation for a royalty calculation, *id.* at \*3–5. The court found that IPC's net profit on infringing sales had been five percent, amounting to \$135,000. *Id.* at \*5. Then, "[c]onsidering the[] benefits [of the patented invention], while still allowing Defendants a profit on infringing sales," the court stated that, in a hypothetical negotiation occurring before infringement began, IPC would have been willing to pay a royalty of five percent of those net profits, but the court raised that figure to eight percent to reflect the *Georgia-Pacific* considerations that pointed toward a higher royalty. *Id.* The result was an award to Aqua Shield of \$10,800 in damages. *Id.*

Aqua Shield now appeals, principally challenging the royalty-award methodology and the rejection of willfulness. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

## DISCUSSION

### A. Reasonable Royalty

The amount of damages awarded to a patentee, when fixed by the district court, is a factual finding reviewed for clear error. *SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 926 F.2d 1161, 1164 (Fed. Cir. 1991). But the methodology underlying the district court's damages computation is reviewed for abuse of discretion. *Id.* A district court abuses its discretion when it "ma[kes] a clear error of judgment in weighing relevant factors or

exercise[s] its discretion based upon an error of law or clearly erroneous factual findings.” *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1364 (Fed. Cir. 1997). In the damages context, therefore, we examine the methodology for consistency with the legal principles defining a reasonable royalty.

After making a finding of infringement, “the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer.” 35 U.S.C. § 284. The “value of what was taken”—the value of the use of the patented technology—measures the royalty. *Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 648 (1915). A traditional heuristic for assessing this market value is to posit a “hypothetical negotiation” between the patentee and adjudicated infringer and to “attempt[] to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began.” *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009). The inquiry, besides being hypothetical, involves approximation: “[t]he hypothetical negotiation tries, as best as possible, to recreate the *ex ante* licensing negotiation scenario and to describe the resulting agreement.” *Id.* at 1325.

Aqua Shield does not challenge the district court’s decision to use a hypothetical-negotiation approach, but it does challenge how the court applied that approach. We agree with that challenge in part. The district court correctly noted that the infringer’s actual profits earned during the period of infringement can be relevant to the inquiry, see *Trans-World Mfg. Corp. v. Al Nyman & Sons, Inc.*, 750 F.2d 1552, 1568 (Fed. Cir. 1984), but it erred in the use it made of IPC’s profit figures.

What an infringer's profits actually turned out to have been during the infringement period may be relevant, but only in an indirect and limited way—as some evidence bearing on a directly relevant inquiry into anticipated profits. Thus, when the infringer is a profit-making enterprise, a “reasonable royalty is the amount that ‘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[, use, or] sell the patented article, in the market, at a reasonable profit.’” *Id.* (bracketed changes in original; quoting earlier authority). In hypothetical-negotiation terms, the core economic question is what the infringer, in a hypothetical pre-infringement negotiation under hypothetical conditions, would have *anticipated* the profit-making potential of use of the patented technology to be, compared to using non-infringing alternatives. If a potential user of the patented technology would expect to earn X profits in the future without using the patented technology, and X + Y profits by using the patented technology, it would seem, as a prima facie matter, economically irrational to pay more than Y as a royalty—paying more would produce a loss compared to forgoing use of the patented technology. See *Riles v. Shell Exploration & Prod. Co.*, 298 F.3d 1302, 1312 (Fed. Cir. 2002) (“The economic relationship between the patented method and non-infringing alternative methods, of necessity, would limit the hypothetical negotiation.”); *Dowagiac*, 235 U.S. at 648 (it is “permissible to show the value [of using the patented technology] by proving what would have been a reasonable royalty, considering the nature of the invention, *its utility and advantages*, and the extent of the use involved” (emphasis added)); *Suffolk Co. v. Hayden*, 70 U.S. (3 Wall.) 315, 319–20 (1865).

The hypothetical negotiation is hypothetical not only because, in the typical case, no successful pre-infringement negotiation ever occurred, but also because

the negotiation is constructed on hypothetical assumptions. Most basically, the method assumes infringement and validity of the patents and willingness of the parties to negotiate an agreement. *See Lucent*, 580 F.3d at 1325. Another hypothetical assumption, bearing particularly on the anticipated-profits inquiry, abstracts away from the particular infringer's degree of efficiency. An especially inefficient infringer—*e.g.*, one operating with needlessly high costs, wasteful practices, or poor management—is not entitled to an especially low royalty rate simply because that is all it can afford to pay without forfeiting or unduly limiting its profit if it uses the patented technology rather than alternatives. Thus, the royalty the particular infringer could profitably pay by going about its business in its particular way does not set the market value that the hypothetical negotiation aims to identify. *See Mars, Inc. v. Coin Acceptors, Inc.*, 527 F.3d 1359, 1373 (Fed. Cir. 2008), *modified in other respect*, 577 F.3d 1377 (Fed. Cir. 2009); *Monsanto Co. v. Ralph*, 382 F.3d 1374, 1384 (Fed. Cir. 2004); *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1338 (Fed. Cir. 2004); *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1555 (Fed. Cir. 1995); *State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 1580 (Fed. Cir. 1989).

Real-world application of this conceptual structure often involves “approximation and uncertainty,” *Lucent*, 580 F.3d at 1325 (internal quotation marks omitted), and the ultimate royalty determination must reflect the two-sided nature of the posited negotiation.<sup>1</sup> The inquiry, besides

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<sup>1</sup> In copyright law, which uses a hypothetical negotiation to estimate fair market value in a similar way, *see Gaylord v. United States*, 678 F.3d 1339, 1343 (Fed. Cir. 2012), the Ninth Circuit recently wrote:



being hypothetical, asks about a comparative business prediction in an uncertain, complex world, and many variables may affect the hypothetical forecast, including costs and availability of non-infringing alternatives, the patented technology's role in the firm's (expected) overall business, and the (expected) actions of competing firms in the market. Moreover, various kinds of evidence, such as licenses, business prognostications, and information about cost savings or value enhancements compared to alternatives, where such evidence is reliable, relevant, and not unduly prejudicial, may be used in the inquiry to determine "the economic value of the patented technology in the marketplace" at the relevant time. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 79 (Fed. Cir. 2012). But we do not have before us broad questions

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Fair market value in a voluntary licensing transaction between arms-length parties ordinarily lies somewhere between the two poles of cost to the seller and benefit to the buyer. That is, the seller will not ordinarily charge less for a license than its anticipated cost, and the buyer will not ordinarily pay more for a license than its anticipated benefit. In the case of a hypothetical license, it is often difficult to determine what, at the time of the infringement, the seller and buyer thought would be their respective cost and benefit. Further, even if the cost and benefit can be determined with some degree of certainty, it is often difficult to determine the range between the two poles of cost and benefit within which the parties would likely have settled.

*Oracle Corp. v. SAP AG*, 765 F.3d 1081, 1089 (9th Cir. 2014).

about what evidence meets admissibility standards or would support a sustainable royalty award.

We deal here only with a challenge to the soundness of the district court's particular use of IPC's profits in its rationale. For purposes of Aqua Shield's challenge, two points are key. First, anticipated incremental profits under the hypothesized conditions are conceptually central to constraining the royalty negotiation, as recognized in *Trans-World Mfg.*, 750 F.2d at 1568. Second, "[e]vidence of the infringer's actual profits generally is admissible as probative of his anticipated profits." *Id.*; see *Interactive Pictures Corp. v. Infinite Pictures, Inc.*, 274 F.3d 1371, 1385 (Fed. Cir. 2001); see also *Sinclair Ref. Co. v. Jenkins Petrol. Process Co.*, 289 U.S. 689, 698 (1933) (post-infringement evidence can be a relevant "book of wisdom"); *Lucent*, 580 F.3d at 1333.

Contrary to Aqua Shield's broader contention, therefore, the district court did not err in considering IPC's profits. But it did err in treating the profits IPC actually earned during the period of infringement as a royalty cap. That treatment incorrectly replaces the hypothetical inquiry into what the parties would have anticipated, looking forward when negotiating, with a backward-looking inquiry into what turned out to have happened. See *Interactive Pictures*, 274 F.3d at 1385 (expectations govern, not actual results).

The district court's analysis also incorrectly replaces the inquiry into the parties' anticipation of what profits would be earned *if a royalty (of amounts being negotiated) were to be paid* with an inquiry into what profits were earned *when IPC was charging prices without accounting for any royalty*. Thus, the district court seems to have simply assumed that any royalty paid by IPC would have directly reduced its profits, dollar for dollar. But that would not be true, in general, if IPC could have raised its

prices (over what it actually charged for infringing sales) to account (fully or partly) for a royalty payment. The district court did not find, and IPC has not argued here, that IPC was selling in a perfectly competitive market in which it was forced to act as a pure price-taker. We have not been shown proof that this case is different from the typical one in which pricing might be adjusted to account for a royalty based on sales price. Indeed, IPC has not pointed to any evidence supporting the district court's conclusion that a royalty should be a percentage of profits rather than sales revenues.<sup>2</sup>

In *Douglas Dynamics, LLC v. Buyers Prod. Co.*, 717 F.3d 1336, 1346 (Fed. Cir. 2013), this court explained: “The infringer’s selling price can be raised if necessary to accommodate a higher royalty rate, and indeed, requiring the infringer to do so may be the only way to adequately compensate the patentee for the use of its technology.” The court held, for that reason, that “the district court clearly erred by ensuring the ongoing royalty rate it awarded would ‘leave some room for profit’ by [the infringer] at its current prices.” *Id.* On the record before us, we conclude that the district court committed the same error in the present case.

We vacate the district court’s royalty calculation and remand for redetermination in a manner consistent with this opinion. On remand, the court should consider all relevant record evidence, including the advantages of the

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<sup>2</sup> Evidence of the parties’ abandoned settlement negotiations refers to percentages of “selling prices.” J.A. 329. One IPC witness may have recognized a sales-based royalty, though the testimony leaves room for interpretation. J.A. 239–40. On appeal, IPC has not specifically answered Aqua Shield’s assertion that the sale price is the appropriate base on this record.

patented product, the ease and cost of designing around the claimed invention, and the relevance of IPC's actual profits to what IPC's expectations would have been in a hypothetical negotiation. Our correction of the erroneous focus on the net profits IPC *actually* earned may require reconsideration of aspects of the district court's analysis we have not specifically discussed. For example, in rejecting the testimony of Mr. Brooks, the court relied in part on its focus on IPC's actual profits, which we hold to be erroneous. *Initial Damages Op.* at 26. The district court also should reconsider the relevance of Aqua Shield's evidence regarding IPC's gross profits now that the inquiry is not constrained by the erroneous focus on IPC's net profits.

### B. Willful Infringement

To prove that its patent was willfully infringed, a patentee must make two related showings. First, it must “show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent.” *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007). Second, “the patentee must also demonstrate that this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer.” *Id.* The first issue is legal, with our review de novo, *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1006–07 (Fed. Cir. 2012), and the second issue is factual, *see id.* at 1008, which means clear-error review in a bench-trial case. Our disposition here, however, does not turn on the standard of review.

The district court did not lay out its willfulness analysis in *Seagate's* two-part terms. *See Initial Damages Op.* at 10–11, 29–30; *Aqua Shield*, 2013 WL 6410975, at \*1–2. And with regard to infringement that occurred before the

court's decision granting Aqua Shield summary judgment of infringement, the court gave only one reason for concluding that "Defendants[] reasonably believed that their products did not infringe the '160 Patent"—namely, that "the Eastern District of New York denied Aqua Shield's motion for preliminary injunction." *Initial Damages Op.* at 10. The court gave no additional reasons when, in ruling on Aqua Shield's post-judgment motion, it reiterated that IPC "prudently conducted [itself] with confidence that a court might hold the patent invalid or not infringed." *Aqua Shield*, 2013 WL 6410975, at \*2.

Our opinion in *Seagate* expressly connects findings of willfulness to preliminary-injunction rulings. *Seagate*, 497 F.3d at 1374 ("A substantial question about invalidity or infringement is likely sufficient not only to avoid a preliminary injunction, but also a charge of willfulness based on post-filing conduct."). But it states no rigid rule, and it notes that preliminary injunctions can be denied even when a defendant has not raised "substantial question[s] about invalidity or infringement." *See id.* In a later willfulness determination, the significance of a preliminary-injunction denial depends on why the preliminary injunction was denied. In this case, the Eastern District of New York's decision to deny Aqua Shield's motion for a preliminary injunction cannot reasonably be read to support a conclusion that any substantial basis existed for doubting infringement or validity. The New York court denied Aqua Shield's motion because of personal-jurisdiction questions and because Aqua Shield lacked sufficient knowledge of IPC's product to make the required showing of a likelihood of success on the merits. Personal jurisdiction does not speak to infringement or validity at all. And Aqua Shield's ignorance of IPC's products appears irrelevant to a validity analysis and does not indicate what an infringement analysis of those products would show once the details of those products were fully known—as they were all along to IPC. The

denial of Aqua Shield’s motion for a preliminary injunction is thus a legally insufficient reason for determining that IPC did not willfully infringe.

With respect to the willfulness of any infringement that occurred after summary judgment of infringement, the evidence cited by the district court stops short of demonstrating that IPC did in fact design around the ’160 patent and, if so, when. The court pointed to evidence that IPC instructed its factory to fix the end panels of its pool enclosures in place, in a manner it believed to avoid the patent’s claims. *Initial Damages Op.* at 11; *Aqua Shield*, 2013 WL 6410975, at \*2. Questions remain about whether that change was actually implemented or whether the resulting products avoided infringement. Both inquiries are relevant to the issue of willfulness. They may also bear on the royalty issue, because they may be relevant to the ease and cost of designing around the patented technology.

We therefore vacate the court’s decision that IPC did not willfully infringe and remand for an analysis that conforms to *Seagate*’s standard. 497 F.3d at 1371. We do not reach an ultimate conclusion ourselves. We observe, however, that *Seagate*’s first requirement focuses on whether the infringer’s defenses, *as ultimately presented to the court*, were reasonable. *Bard*, 682 F.3d at 1008. On remand, the district court should focus on IPC’s defenses as articulated during the infringement and invalidity proceedings—during which IPC presented no infringement defenses for claims 2–9, 11–14, or 16, *Aqua Shield*, 830 F. Supp. 2d at 1287–89, and presented no element-by-element argument for invalidity, *Aqua Shield*, 2013 WL 164244, at \*4–5. If the court finds that the defenses were objectively unreasonable, in the sense that no “reasonable litigant could realistically expect” them to succeed, *Bard*, 682 F.3d at 1008 (internal quotation marks omitted), it should proceed to consider *Seagate*’s second requirement.

On that issue, we note that the objective baselessness of an infringer's defenses, assessed on the litigation record, may have a strong bearing on whether the "objectively-defined risk" of infringement "was either known or so obvious that it should have been known to the accused infringer." *Seagate*, 497 F.3d at 1371; *see Kilopass Tech., Inc. v. Sidense Corp.*, 738 F.3d 1302, 1314 (Fed. Cir. 2013) (under the then-similar approach in the fee-shifting context, "[o]bjective baselessness alone can create a sufficient inference of bad faith to establish exceptionality under § 285, unless the circumstances as a whole show a lack of recklessness on the patentee's part").

If the court determines on remand that IPC willfully infringed Aqua Shield's patent, it should reconsider its decision to deny enhanced damages and attorney's fees.

### C. The "Elegant" Model

One issue remains. Aqua Shield argues that the district court erroneously omitted one of IPC's pool-enclosure models—the "Elegant"—from the calculation of IPC's infringing sales and, thus, from the royalty award and injunction. We reject this challenge.

Aqua Shield argues that, in the summary-judgment proceedings, it asserted that the Utah Installation infringed and that it was an Elegant model that was installed. But the district court, while finding that the Utah Installation infringed, made no finding that the Utah installation was an Elegant model. *Aqua Shield*, 830 F. Supp. 2d at 1291; *Initial Damages Op.* at 6; *Aqua Shield*, 2013 WL 6410975, at \*6. And the subsequent trial involved no infringement issues, but was limited to issues concerning relief. Aqua Shield thus never obtained a finding of infringement by the Elegant model, and there was no error in the district court's refusal to include that model in its royalty calculation or injunction.

### CONCLUSION

For the foregoing reasons, we vacate the district court's royalty award, non-willfulness finding, and denial of enhanced damages and attorney's fees. We remand the case for further proceedings consistent with this opinion.

Costs are awarded to Aqua Shield.

**VACATED IN PART AND REMANDED**