No. 15-

IN THE

Supreme Court of the United States

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION,

Petitioner,

v.

CISCO SYSTEMS, INC.,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED

The Patent Act provides that a "[u]pon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement . . . ." 35 U.S.C. § 284. In contravention of this broad language, the Federal Circuit has erected a rigid set of legal rules to control the determination of damages by triers of fact. As a result, the Federal Circuit now exercises *de novo* review over inherently factual questions, resulting in routine reversals.

This Court has held with regard to another patent remedies provision that it is improper for the Federal Circuit to "superimpose[] an inflexible framework onto statutory text that is inherently flexible." *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749, 1756 (2014). And this Court is considering related questions in relation to another portion of section 284 in *Stryker Corp. v. Zimmer, Inc.*, No. 14-1520, and *Halo Electronics, Inc. v. Pulse Electronics, Inc.*, 14-1513 (argued Feb. 23, 2016).

The question presented is:

> Is the Federal Circuit's promulgation of rigid legal rules to control the weight to be given by the trier of fact to evidence of patent infringement damages proper under 35 U.S.C. § 284?

PARTIES TO THE PROCEEDING AND RULE 29.6 STATEMENT

The Petitioner, who was Plaintiff-Appellee below, is Commonwealth Scientific and Industrial Research Organisation ("CSIRO") and the respondent, who was Defendant-Appellant below is Cisco Systems, Inc. ("Cisco"). There were no parties to the proceeding other than those named in the caption of the case. CSIRO is not a publicly traded corporation, issues no stock, and has no parent corporation. There is no publicly held corporation with more than a 10% ownership stake in CSIRO.

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PETITION FOR A WRIT OF CERTIORARI

Commonwealth Scientific and Industrial Research Organisation ("CSIRO"), respectfully petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit filed on December 3, 2015.

OPINIONS AND ORDERS BELOW

The Federal Circuit's opinion (Pet. App. 1a-24a), is published at 809 F.3d 1295. The Findings of Fact and Conclusions of Law of the United States District Court for the Eastern District of Texas (Pet. App. 25a-64a) was filed on July 23, 2014 in Case No. 6:11-cv-343.

JURISDICTION

The Federal Circuit issued its opinion (Pet. App. 1a-24a) on December 3, 2015. The Federal Circuit's order denying panel rehearing and rehearing en banc (Pet. App. 65a-66a) was filed on February 25, 2016. This petition is filed within 90 days of that date pursuant to the Rules of the United States Supreme Court, Rule 13.1. This Court has jurisdiction under 28 U.S.C. § 1254(1).

STATUTORY PROVISIONS INVOLVED

Section 284 of the Patent Act, 35 U.S.C. § 284, (Pet. App. 67a) provides in pertinent part as follows:

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

> event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.
>
> When the damages are not found by a jury, the court shall assess them. . . . .
>
> The court may receive expert testimony as an aid to the determination of damages or of what royalty would be reasonable under the circumstances.

STATEMENT OF THE CASE

This petition addresses the proper allocation of authority between the trier of fact and the court of appeals to determine compensatory damages under the Patent Act. The Federal Circuit has created a body of rigid legal rules that remove discretion over these factual determinations from the factfinder, and place it in the hands of the reviewing court under a *de novo* standard. In this case, the Federal Circuit held that the district court violated a judge-made legal rule that prohibits the trier of fact from finding that the commercial success of the patented technology weighs in favor of the patentee when the technology at issue has been adopted as part of an industry standard. The Federal Circuit provided no statutory basis for this rule.

The Patent Act provides simply that the patentee is entitled to "damages adequate to compensate for the infringement . . . ." 35 U.S.C. § 284. Other than requiring that the award be "in no event less than a reasonable royalty," the statute places no limit on the factfinder's discretion to determine what weight to ascribe to particular factors. Nor does the statute say anything about standardized technology. Contrary to the statutory text, the Federal Circuit has created legal rules in this case and others that have stripped the trier of fact of discretion to determine the amount of damages. As a result, the court of appeals has converted factual questions to issues of law reviewed *de novo*.

The Federal Circuit now routinely vacates factual damages findings and remands for retrial of issues already properly decided. That court's damages framework undermines the predictability and finality of patent damages verdicts, thereby disincentivizing settlement and multiplying the already immense costs of patent litigation.

I. Facts and Proceedings Below

CSIRO is the national science agency of Australia and one of the world's premier scientific research institutions. *See generally Commonwealth Sci. & Indust. Research Organisation v. Buffalo Tech. Inc.*, 492 F. Supp. 2d 600, 601 (E.D. Tex. 2007). CSIRO has been awarded more than 1,000 U.S. patents in diverse technology areas including telecommunications, biotechnology, agriculture, mineral extraction, and energy. The CSIRO invention at issue here is a high-speed wireless local area network, commonly called Wi-Fi.

CSIRO's Wi-Fi invention is a source of national pride for the people of Australia and has been widely hailed as a singular innovation. Recognition has come through numerous awards, including the European Patent Office's prestigious Inventor's Award, and in praise from both

British Prime Minister David Cameron and Chinese President Xi Jinping, who both have lauded Australia for "invent[ing]" Wi-Fi. Such recognition has also come from the Wi-Fi products industry which (with the notable exception of Cisco) has collectively paid more than $450 million for licenses to the patent-in-suit.

In 1999, years after CSIRO obtained its U.S. patent, the Institute of Electrical and Electronics Engineers ("IEEE")—a technology standards-setting body—chose CSIRO's invention over alternative wireless LAN designs for an industry standard called 802.11a. *Buffalo*, 492 F. Supp. 2d at 602. In parallel, however, the IEEE also standardized 802.11b, which relied upon a wholly different Wi-Fi technology not covered by CSIRO's patent. *Id.* A few years later in 2003, when the IEEE adopted the next generation standard, 802.11g, it again chose CSIRO's design over alternatives as its core. *Id.* (explaining that both 802.11a and 802.11g "embod[y] CSIRO's invention"). Since then, every successive generation of Wi-Fi—802.11n in 2009 and 802.11ac in 2013—has been based on CSIRO's patented invention. Today, virtually every one of the hundreds of millions of Wi-Fi products used in the United States relies upon the breakthrough made by CSIRO scientists in the early 1990s.

Facing widespread industry refusal to take a license, CSIRO commenced litigation of its patent in 2005. Although the defendants in those cases each mounted a rigorous defense, many ultimately stipulated to infringement, and all except Cisco paid CSIRO for a license. Three separate *ex parte* reexaminations were also brought in the Patent & Trademark Office ("PTO"), but the PTO repeatedly reaffirmed the validity of CSIRO's patent.

CSIRO brought this action in 2010 against Cisco, who had in earlier years praised CSIRO's invention and invested in commercializing it. Like other defendants, Cisco initially denied infringement and asserted invalidity of the patent. Ultimately, however, Cisco stipulated to all liability questions, including infringement and validity. Pet. App. 27a. The only issue remaining for determination was the amount of CSIRO's damages, measured as a reasonable royalty. *Id.* The parties agreed to a bench trial on that issue. *Id.*

The district court judge, who at the time had been presiding over CSIRO's Wi-Fi patent litigation for nearly a decade, issued his findings of fact in a detailed 31-page decision. Pet. App. 25a-66a. The district court found that the most reliable indicator of a reasonable royalty was the actual negotiations between CSIRO and Cisco for a license years before the initiation of litigation. Pet. App. 55a. During those negotiations, CSIRO offered Cisco a license to its patent at a royalty on a sliding scale between \$1.90 and \$1.40 per product sold, with the specific rate depending on the overall sales volume. *Id.* Cisco responded that it would be willing to pay \$.90 per Cisco product, with the rate for products sold under the Linksys brand determined later. *Id.*

Using these negotiating positions as a baseline, the district court then evaluated whether any adjustment was warranted by considering the factors articulated in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970). Certain of these factors (the scope of the license, CSIRO's policies, and the parties' commercial relationship) favored a downward adjustment. Pet. App. 57a-58a. Others favored an upward adjustment.

These included the court's finding that the patent "played a significant role in the commercial success" of Cisco's products; that CSIRO's invention was technologically superior to alternative technologies; and that the IEEE repeatedly chose to re-incorporate CSIRO's technology in successive Wi-Fi standards. *Id.* at 58a-59a. Finding all of these factors offset each other, the district court concluded that the rates framed by the parties' negotiating positions needed no adjustment for Cisco products. *Id.* at 60a. The court did, however, make an adjustment for Linksys products based on those products' lower profit margin. *Id.* at 60a-61a. At the conclusion of its analysis, the Court found that Cisco would have paid a royalty equating to about $.83 per product, an amount less than what Cisco offered to pay in real life. *See* Pet. App. 36a, 63a.

On appeal, the Federal Circuit vacated and remanded. Although rejecting Cisco's argument that damages must be capped as a matter of law at the commodity price of certain microchips in the accused products (*see* Pet. App. 9a, 15a-16a), the court of appeals held that "the district court legally erred . . . because it failed to account for any extra value accruing to the '069 patent from the fact that it is essential to the 802.11 standard." *Id.* at 16a-17a. Echoing its prior holding in *Ericsson, Inc. v. D-Link Systems, Inc.*, 773 F.3d 1201 (Fed. Cir. 2014), the Federal Circuit reasoned that standardized technologies are "typically chosen from among different options" and are "not always used because [they are] the best or only option." Pet. App. 17a. The court further explained that the success of standardized technology is "not entirely indicative" of the usefulness of the innovation. *Id.* at 17a-18a. And, the court said that it "seems quite possible" that CSIRO's real-world negotiating position captured the value "resulting from the standard's adoption." *Id.* at 21a.

From its observations about what is "typically" though "not always" true of standardized technologies, and what it said "seems quite possible," the Federal Circuit fashioned a rigid legal rule for all cases. The court held that the district court erred by "failing to account for value accruing to the '069 patent from the standard's adoption." Pet. App. 21a. In particular, the Federal Circuit held that it was legal error for the district court to find as a matter of fact that Cisco's products were commercially successful because of CSIRO's invention, and that alternative technologies failed in the marketplace because they were technologically inferior. *Id.* at 19a-20a. The Federal Circuit held that these factual findings were "irrelevant or misleading" as a matter of law and therefore the district court's finding that they "weighed in favor of CSIRO" was improper. *Id.* Next, the court of appeals held that the district court also legally erred by relying upon the parties' negotiating positions without explicitly "account[ing] for the possibility" that such positions "may themselves be impacted by standardization." *Id.* at 20a. In conclusion the Federal Circuit found that "[a]s these are legal errors under *Ericsson*, we must vacate the district court's damages award and remand for a new determination of a reasonable royalty." *Id.* at 21a.[1]

1. In the third portion of its opinion, the Federal Circuit held that the district court clearly erred in some but not all of the bases it provided for declining to rely upon a commercialization agreement between CSIRO and a CSIRO spin-off company later acquired by Cisco. Pet. App. 21a-24a. Although those comments run afoul of the relevant standard of review, they are not challenged here because they do not form the basis for the Federal Circuit's holding. Instead, the court of appeals merely directed the district court to "reevaluate" the relevance of the agreement on remand. *Id.* at 24a.

A timely petition for rehearing and rehearing en banc was denied. Pet. App. 65a-66a.

This petition followed.

REASONS FOR GRANTING THE PETITION

The Federal Circuit's damages rules conflict with the statutory text, this Court's precedent, and the decisions of other circuits concerning analogous damages provisions. The statutory text states that "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. Despite this broad language—in which Congress placed a floor but no ceiling on the trier of fact's discretion—the Federal Circuit has grafted an ever-expanding set of legal limitations on damages awards, including the standardization rules applied here. Due to this thicket of legal restrictions, the Federal Circuit is now exercising *de novo* review over many of the intensely factual questions that underlie a factfinder's determination of compensatory damages. It is now the rule rather than the exception in patent cases for damages verdicts to be vacated. This Court should grant review to return discretion over damages back to the trier of fact, and to clarify that such determinations cannot be subject to *de novo* review without Congressional sanction.

The text of section 284 does not support the legal rules adopted by the Federal Circuit. The language provides only that a jury or judge sitting as finder of fact[2]

2. Section 284 provides that, "[w]hen damages are not found by a jury, the court shall assess them."

shall award compensatory damages. But it has long been settled that the trier of fact is afforded broad discretion to determine compensatory damages in tort law. *See, e.g.*, *Washington Gas-Light Co. v. Lansden*, 172 U.S. 534, 555 (1899); *Kennon v. Gilmer*, 131 U.S. 22, 29 (1889). Such determinations are not reviewed *de novo*.

The Federal Circuit's damages rules also conflict with the precedents of this Court, including the very decision that the Federal Circuit holds out as the basis for its recent damages jurisprudence. That case, *Garretson v. Clark*, 111 U.S. 120, 121 (1884), sets forth a rule for a court of equity to determine the disgorgement of the infringer's profits. Congress, however, amended the Patent Act in 1946 to eliminate disgorgement of profits as a remedy. *See Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 505 (1964) ("*Aro II*") ("By the 1946 amendment . . . the statute was changed to approximately its present form, whereby only 'damages' are recoverable. The purpose of the change was precisely to eliminate the recovery of profits as such and allow recovery of damages only."). This case—like the vast majority of contemporary patent damages verdicts—concerns the reasonable royalty measure of damages, a wholly different measure that was not available at the time of *Garretson*. Indeed, it makes no sense to apply *Garretson*'s rule for apportioning profits between infringer and patent holder to a case like this one in which the damages award was derived not from Cisco's profits but from real-world licensing evidence. *Garretson* does not control modern patent damages law. Section 284 does.

Even if *Garretson* has some continuing significance, the Federal Circuit misapplied that decision by placing the burden of apportioning between patented and unpatented features on the patentee. This Court's precedents place that burden on the infringer. *Westinghouse Elec. & Mfg. Co. v. Wagner Elec. & Mfg. Co.*, 225 U.S. 604, 614 (1912) ("Where the profits are made by the use of an article patented as an entirety, the infringer is liable for all profits unless he can show—and the burden is on him to show—that a portion of them is the result of some other thing used by him." (citation and internal punctuation omitted)); *id.* at 621-22 ("All the inconveniences of the confusion is thrown upon the party who produces it, and it is for him to distinguish his own property or lose it.").

This Court has not passed on the question of compensatory damages in utility patent cases for more than 50 years. *See Aro II*, 377 U.S. at 503. In that vacuum, the Federal Circuit's damages jurisprudence has careened away from the words of the statute. This Court recently emphasized that it was improper for the Federal Circuit to "superimpose[] an inflexible framework onto statutory text that is inherently flexible," in relation to the Patent Act's fee-shifting provision (*Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749, 1756 (2014)), and is currently considering whether the court of appeals' rigid formulation for enhancing damages suffers from the same fault (*Stryker Corp. v. Zimmer, Inc.*, No. 14-1520, and *Halo Electronics, Inc. v. Pulse Electronics, Inc.*, 14-1513 (argued Feb. 23, 2016)). This case presents the same error. This Court should grant certiorari to bring the rules for patent damages cases back in line with the statutory text.

I. The Federal Circuit's Inflexible Rules for Damages Calculation Conflict with the Plain Language of Section 284.

A. It is improper to overlay rigid judge-made rules on flexible statutory text.

This Court has repeatedly emphasized that the words of the Patent Act are controlling. It is error to create rigid legal rules where the governing statute invests discretion in the trial court. *Octane Fitness*, 134 S. Ct. at 1756 (holding that Federal Circuit's test for fee-shifting under section 285 was too rigid where statutory text granted district court substantial discretion); *Bilski v. Kappos*, 561 U.S. 593 (2010) (rejecting the "machine-or-transformation" test as the exclusive means to identify patentable subject matter under section 101); *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398 (2007) (finding that "teaching, suggestion, or motivation" test for non-obviousness was rigid, inflexible, and inconsistent with section 103 of the Patent Act); *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006) (reversing Federal Circuit's creation of a categorical rule for issuance of injunctions where section 283 vests discretion in the district courts). The Federal Circuit's legal regime controlling the weighing of facts in damages cases suffers from the same fault.

Section 284's text unambiguously vests discretion in the trier of fact to weigh the facts and render an award. Because the text of section 284 "is patently clear," the relevant "analysis begins and ends with the text" of the statute. *Octane Fitness*, 134 S. Ct. at 1755. Congress chose to place no upper limit on the amount that could be awarded, and did not dictate the specific methodology employed by the finder of fact to arrive at a damages conclusion. Instead, the only guidance provided is that the damages be "adequate to compensate for the infringement" and "in no event less than a reasonable royalty . . . ." 35 U.S.C. § 284; *see Octane Fitness*, 134 S. Ct. at 1755 (abrogating Federal Circuit's rigid legal test where the statute "imposes one and only one constraint on district courts' discretion").

The plain meaning of the word compensate is "to remunerate" or "[t]o extinguish or satisfy by compensation." Webster's New International Dictionary 545 (2d ed. 1959). Through this language, "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." *General Motors Corp. v. Devex Corp.*, 461 U.S. 648, 654-55 (1983) (citation and internal quotation marks omitted). "Congress' overriding purpose" was to "afford[] patent owners complete compensation." *Id.* The text provides no foundation at all for the inflexible formulation applied by the Federal Circuit here.

This Court has previously rejected an effort to overlay judge-made rules onto a different provision of section 284. In *General Motors*, this Court unanimously rejected the contention that section 284's provision permitting an award of "interest and costs as fixed by the court," incorporates the body of pre-1946 federal common law that circumscribed district court discretion to award prejudgment interest. 461 U.S. at 652-53. This result was dictated by the plain text of the statute: "On the face of § 284, a court's authority to award interest is not restricted to exceptional circumstances, and there is no warrant for imposing such a limitation." *Id.* Indeed, "[w]hen Congress wished to limit an element of recovery in a patent infringement action, it said so explicitly." *Id.* Section 284 therefore vests discretion in the district court, and that discretion could not be overridden without a statutory basis. *Id.* at 657.

Two terms ago, this Court (in another unanimous decision) reached the same conclusion with regard to the Patent Act's attorney fee shifting provision. *Octane Fitness*, 134 S. Ct. at 1754-55. Section 285 of the Act provides simply that "[t]he court in exceptional cases may award reasonable attorney fees to the prevailing party." This Court held that the statute's language should be interpreted according to its plain meaning, which vests broad discretion in the district court. The Federal Circuit erred by conditioning awards of attorney fees on a dual showing of "subjective bad faith" and "objective baselessness." *Id.* at 1756. These requirements had no grounding in the statutory text and created an "overly rigid" framework that eliminated much of the trial court discretion created by the statute. *Id.*

B. The Federal Circuit has created a wide-ranging legal regime to control damages fact finding.

Contrary to the teachings of *General Motors* and *Octane Fitness*, the Federal Circuit has developed a growing set of legal rules to control both the methodologies used to calculate reasonable royalty damages[3] and the weight accorded to the evidence of such damages.

3. The Federal Circuit has erected a different set of rules for so-called "lost profit" damages—a form of damages that is utilized in a relatively small minority of patent damages cases. That remedy is not presented by this appeal.

First, the Federal Circuit has deemed it legal error for a reasonable royalty award to be set in reliance upon real-world licenses that are not, according to the Federal Circuit, "sufficiently comparable." *See ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 873 (Fed. Cir. 2010) (per curiam) (holding that district court sitting as finder of fact legally erred by basing its reasonable royalty award on licenses that were, in the Federal Circuit's view, insufficiently related to the patent in suit);[4] *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1332 (Fed. Cir. 2009) (vacating and remanding jury damages award, *inter alia*, because licenses were not "sufficiently comparable").

Second, damages awards must comply with the Federal Circuit's "entire market value rule" that royalties must be calculated based upon the "smallest salable patent-practicing unit" unless the patented invention forms the basis for customer demand. *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1328 (Fed. Cir. 2014) (vacating jury damages award because of legal error in jury instructions that allegedly misapplied the "entire market value rule" by permitting the conclusion that the royalty could be based on the "smallest salable patent practicing unit"); *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 70 (Fed. Cir. 2012) (affirming district court order setting aside jury damages award because the verdict violated the "entire market value rule" and was therefore "legally unsupportable"); *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1321 (Fed.

4. *But see ResQNet.com, Inc.*, 594 F.3d at 878 (Newman, J., dissenting in part) ("My colleagues hold that it is reversible error, as a matter of law, to have considered these licenses at all. In the heavily fact-driven obligation of the district court with respect to assessment of damages, this is clearly incorrect.").

Cir. 2011) (affirming district court order setting aside jury damages award because the verdict was reached based on evidence that violated the "entire market value rule"); *Lucent Techs.*, 580 F.3d at 1337-38 (vacating and remanding jury damages award, *inter alia*, because the basis-for-customer-demand component of the "entire market value rule" was not satisfied).

Third—and most pertinent to the decision below—the Federal Circuit has held that failure of the factfinder to properly "apportion" between the value of the patent and the value created by other potential contributors to the infringing products' profits, such as the value of standardization, is a legal error requiring reversal. Pet. App. 16a-21a; *VirnetX*, 767 F.3d at 1328-29 (holding that district court erred by permitting jury to hear evidence that did not comport with legal rule of apportionment); *Ericsson*, 773 F.3d at 1233 (vacating and remanding jury damages award, *inter alia*, because the jury may not have properly apportioned between the value of the patent and the value conferred by standardization).

The text of section 284 does not support any of these rules. It does not address either directly or by implication the question of what licenses can and cannot be used to support a reasonable royalty. Nor does it create any "entire market value rule," say anything about a "smallest salable patent practicing unit," or provide guidance regarding how evidence regarding an invention's connection to the "basis for customer demand" must be treated.

Section 284's text also provides no support for the rules applied by the Federal Circuit in this case. For example, there is no basis for a legal rule that the trier of fact must, in any case involving standardized technology, deem "irrelevant or misleading" the commercial success of the infringing products. *See* Pet. App. 20a. Nor is there any basis for a rule that the negotiating positions adopted by commercially sophisticated parties in order to determine a real-life royalty must be explicitly adjusted to "account" for standardization if they are to serve as a basis for a reasonable royalty. *See id.* at 20a-21a.

The inappropriateness of fashioning legal rules to govern damages in all cases involving standardization is confirmed by the facts here. Contrary to the Federal Circuit's assumptions, the district court found as a matter of fact that CSIRO's patent (not standardization) drove the commercial success and profitability of infringing products. Pet. App. 58a, 59a. The evidence in this case and the district court's factual findings also cut directly against the Federal Circuit's assumption that after standardization the patented technology is used not because it is the best technology but "because its use is necessary to comply with the standard." *Id.* at 17a. In particular, it was largely undisputed that the non-infringing alternative technologies advanced at trial by Cisco—802.11b and PBCC—are technically and commercially inferior to CSIRO's invention. *See also id.* at 59a. The historical development of the Wi-Fi standards also rebuts the Federal Circuit's supposition that standardization always follows the same path and always has the same impact on the royalty calculation. The IEEE had multiple opportunities to choose other technologies (including those advanced as alternatives by Cisco) over CSIRO's invention as the basis for successive generations of the standards, but selected the patented solution each time. *Id.* at 58a-59a. Finally, the Federal Circuit's rule fails to account for a case like this one in which there were infringing (802.11g) and non-infringing (802.11b) standards competing head-to-head in the marketplace. The products practicing standards based on the patented technology had higher sales and higher profits, ultimately relegating the non-infringing standard to obsolescence. This too reflects that the patented technology created substantial value independent of standardization.

The Federal Circuit's unsupported commentary on what is "not always" true about standardized technology, and evidence that is "not entirely indicative" of damages in such cases (Pet. App. 17a-18a), is no basis for creating a rule to govern every case. Indeed, contrary to the rule applied here, the former chief judge of that court has commented that "the standardization decision . . . may simply reflect and validate the inherent value of the technology advance accomplished by the patent." *Apple Inc. v. Motorola*, 757 F.3d 1286, 1333 (Fed. Cir. 2014) (Rader, C.J., concurring in part and dissenting in part). It may be that a technology is selected for inclusion in a standard because it is just one of many equally viable options and a decision has to be made. Or, it may be that the technology is selected because it is technically and commercially superior to the alternatives. The evidence reflected and the district court found that the latter is true here, and that this is powerful evidence of the patent's value. It was error for the Federal Circuit to preordain the contrary factual conclusion via a wooden legal rule.

That the facts can vary widely from case to case underscores the folly in attempting to establish a strict legal framework for all cases. This Court denounced that practice long ago, remarking that "it is obvious that there cannot be any one rule of [patent] damages prescribed which will apply in all cases, even where it is conceded that the finding must be limited to actual damages." *Birdsall v. Coolidge*, 93 U.S. 64, 70 (1876). Because a statutory basis was absent, the Federal Circuit should not have set out on that dubious path.

II. The Federal Circuit's Rules Conflict with the History of Section 284 and this Court's Patent Damages Precedents.

An examination of the historical development of the patent damages statute provides further confirmation of the Federal Circuit's error. Beginning a century ago, Congress repeatedly amended the Patent Act to vest greater discretion in the trier of fact and to eliminate judicial micromanagement of damages awards.

In the late nineteenth century, monetary remedies for patent infringement were subject to strict proof requirements which, if not met, would result in an award of only nominal damages. *See generally*, *Rude v. Westcott*, 130 U.S. 152, 167 (1889) (holding that "[a]ctual damages must be calculated, not imagined" and requiring an "arithmetical calculation"); *Robert Bosch, LLC v. Pylon Mfg. Corp.*, 719 F.3d 1305, 1309-13 (Fed. Cir. 2013). During that period, the primary monetary remedy was disgorgement of the infringer's profits via an equitable accounting, in which courts applied a highly specific computation methodology governed by particular accounting principles. *Providence Rubber Co. v. Goodyear*, 76 U.S. 788, 804 (1869). Alternatively, patentees could seek damages in courts of law and (after 1870 amendments to the Patent Act) in courts of equity as well. *See Birdsall*, 93 U.S. at 68-69. Two forms of damages were recognized. First, if the infringer was a competitor, the patentee could recover its own lost profits due to diversion of sales or price erosion. *Cornely v. Marckwald*, 131 U.S. 159, 160-61 (1889). Second, a patentee could seek the income that it would have otherwise received by licensing the patent, though only if it could satisfy the strict requirements for proving an "established royalty." *Rude*, 130 U.S. at 165. A royalty was "established" only if it was collected prior to the time infringement began, if it had been paid by a large number of licensees during a short time period, and if the rates were geographically uniform. *Id.* In contrast, damages measured as a "reasonable royalty" (also called a "conjectural" royalty) were not available at the time. *Id.* at 165-66; *Robert Bosch LLC*, 719 F.3d at 1311.

Recognizing that the strict proof regime of the late 1800s was often impossible to satisfy and led to injustice, both this Court and Congress reformed the law of patent remedies after the turn of the century to take the form it has today. *See* Note, *Recovery in Patent Infringement Suits*, 60 Colum. L. Rev. 840, 848-49 & n.55 (1960). First, in *Dowagiac Manufacturing Co. v. Minnesota Moline Plow Co.*, 235 U.S. 641, 648-50 (1915), this Court relaxed the *Rude*-era proof requirements by explicitly allowing a reasonable royalty measure of damages based upon general evidence. Second, Congress codified that approach in the 1922 Patent Act amendments, providing that where "damages or profits are not susceptible of calculation and determination with reasonable certainty, the court may . . . receive opinion or expert testimony . . . and upon such evidence and all other evidence in the record . . . decree the payment . . . of a reasonable sum as profits or general damages for the infringement." Act of Feb. 21, 1922, ch.

58, 42 Stat. 392. Then, in 1946 Congress again amended the statute to eliminate the equitable accounting remedy (along with the considerable body of legal doctrines governing that process) altogether, leaving only "general damages" measured as "not less than a reasonable royalty." Act of August 1, 1946, ch. 726, 60 Stat. 778, 35 U.S.C. § 70. The language that exists in the statute today is substantively unchanged from the 1946 version. *See Aro II*, 377 U.S. at 505 n.20.

The current version of section 284 therefore reflects Congress' rejection of tight judicial control of patent damages. The statute's evolution evinces the intent to leave damages in the province of the trier of fact to determine on a case-by-case basis.

The Federal Circuit ignores this history, founding its rules not on the statutory text but instead on this Court's one-paragraph, nineteenth-century opinion in *Garretson v. Clark*, 111 U.S. 120, 121 (1884). Pat. App. 10a-11a; *see also Uniloc*, 632 F.3d at 1318 ("The entire market value rule . . . is derived from . . . *Garretson*[.]"). There, this Court held that:

> The patentee . . . must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative; or he must show, by equally reliable and satisfactory evidence, 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, 111 U.S. at 121-2 (quotation marks omitted).

Garretson does not address reasonable royalty damages, which were first sanctioned by Congress in 1922 and became the statutory floor in 1946. Instead, *Garretson* is part of the then-prevailing *Rude v. Westcott* regime of judge-made legal rules that strictly controlled the manner in which a court of equity divided the infringer's profits between the patentee and the defendant. *Garretson* is a creature of the legal landscape of its time in which both the equitable remedy of "profits" and the legal remedy of "damages" were limited—particularly for courts of equity.[5] But congressional action in 1922 and 1946 wiped away those limits. As the Congressional report to the 1946 amendments reflects: "The object of the bill is to make the basis of recovery in patent-infringement suits general damages, that is, any damages the complainant can prove, not less than a reasonable royalty[.]" H.R.Rep. No. 1587, 79th Cong., 2d Sess. (1946), adopted as the report of the Senate Committee on Patents, S.Rep. No. 1503, 79th Cong., 2d Sess. (1946), at 2; *reprinted in* U.S.

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5. Courts of law had somewhat more flexibility in assessing damages. *See Suffolk Co. v. Hayden*, 70 U.S. 315, 320 (1865). Notably, however, courts of law were generally not permitted to use the profits earned by the infringer as a measure of damage. *Burdell v. Denig*, 92 U.S. 716, 720 (1875) ("Profits are not the primary or true criterion of damages for infringement in an action at law. That rule applies eminently and mainly to cases in equity . . . a principle which it is very difficult to apply in a trial before a jury, but quite appropriate on a reference to a master . . . .").

Code Congressional Service (1946) at 1386–87. "Although the bill would not preclude the recovery of profits as an element of general damages" – *i.e.*, the form of recovery addressed in *Garretson* – the courts were explicitly "empower[ed] . . . to assess general damages irrespective of profits." *Id.*

The district court's decision here demonstrates the error of applying *Garretson* to a modern reasonable royalty assessment. The district court found that the best indicator of a reasonable royalty was the royalty rate that Cisco actually offered to pay and the rates that CSIRO actually offered to accept. Pet. App. 55a. Because the resulting damages award was not founded on the profits of the infringer, *Garretson*—a case about apportioning the infringer's profits—has no logical application.

The Federal Circuit itself has recognized that *Garretson* does not directly control modern reasonable royalty law, calling the Court's holding a "stylistic description" of the governing principle, rather than a "precise, contemporary, economic paradigm." *Lucent Techs., Inc.*, 580 F.3d at 1337. But rather than taking this to mean that *Garretson* is of limited significance, the Federal Circuit has used the decision as the justification to craft a federal common law of patent damages. That was error.

Finally, even if *Garretson* provided the legal rule for reasonable royalty damages, the Federal Circuit has misapplied it by placing on the patentee the burden of distinguishing between patented and unpatented contributors to profits. First, this Court has held that where the patent claims an entire device (as is the case with CSIRO's patent), the burden must be on the infringer to prove that unpatented factors (such as standardization here) should require a reduction in the plaintiff's award. *Westinghouse*, 225 U.S. at 614. Second, even where the patent claims less than a whole device, the burden of apportionment shifts to the infringer once it is shown that the value of what is patented cannot be separated with precision from the value of what is not. *Id.* at 620.

III. The Federal Circuit is Improperly Reviewing Factual Damages Determinations *De Novo*.

By imposing a set of legal rules on the inherently factual determination of compensatory damages, the Federal Circuit has improperly replaced clear error and substantial evidence review with *de novo* review. Absent Congressional sanction to do so—which is lacking here—the Federal Circuit cannot impose its own weighing of the facts on appeal. "[A]ppellate courts must constantly have in mind that their function is not to decide factual issues de novo." *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S.Ct. 831, 837 (2015). When the proper standard of review is applied, the trier of fact has wide discretion in both its ultimate conclusion and the method it uses to arrive there. "If the district court's account of the evidence is plausible in light of the record viewed in its entirety, the court of appeals may not reverse it even though convinced that had it been sitting as trier of fact, it would have weighed the evidence differently." *Anderson v. City of Bessemer City, N.C.*, 470 U.S. 564, 573-74 (1985). "Where there are two permissible views of the evidence, the factfinder's choice between them cannot be clearly erroneous." *Id.* at 574; *Inwood Labs., Inc. v. Ives Labs.*, Inc., 456 U.S. 844, 857-58 (1982). There are no exceptions to this rule. *Teva Pharm.*, 135 S. Ct. at 837.

Contrary to these requirements, the Federal Circuit in the decision below elevated its own observations about standardization to legal rules controlling the weight the district court ascribed to evidence of damages. In particular, the court of appeals found that it was reversible error for the district court to conclude that certain evidence "weighed in favor of CSIRO." Pet. App. 19a. The Federal Circuit also held that it was legally erroneous for the district court to rely upon the parties' actual license negotiations "without accounting for the possibility" that CSIRO's position "capture[d] at least some value resulting from the standard's adoption." *Id.* at 21a. This is not an interpretation of the law or even an application of law to facts. It is the improper substitution of the appellate court's assessment of the evidence for the factfinder's.

"Determining the weight and credibility of the evidence is the special province of the trier of fact." *Inwood Labs.*, 456 U.S. at 856. Therefore, "[a]n appellate court cannot substitute its interpretation of the evidence for that of the trial court simply because the reviewing court might give the facts another construction, resolve ambiguities differently, and find a more sinister cast to actions which the District Court apparently deemed innocent." *Id.* at 857-58 (citation omitted).

This Court has repeatedly held in patent cases that it is error to adopt a standard of review that improperly impinges on the factfinder's discretion. *Teva Pharm.*, 135 S. Ct. at 837 (holding that the clearly erroneous standard applies to a district court's subsidiary factual finding in claim construction); *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744 (2014) (holding that the court of appeals improperly reviewed some "exceptional case" determinations *de novo*, and that abuse of discretion standard should have been applied); *Dickinson v. Zurko*, 527 U.S. 150 (1999) (holding that the APA's "substantial evidence" standard of review applied to the PTO's factual determination rather than the "clearly erroneous" standard). That principle governs here.

IV. The Federal Circuit's Decision Conflicts with Other Circuits' Interpretations of Analogous Federal Statutory Tort Damages Provisions.

The Federal Circuit's damages rules run contrary to the traditional treatment of compensatory damages as a question of fact over which the jury (or judge sitting as trier of fact) exercises broad discretion. *Washington Gas-Light Co.*, 172 U.S. at 555 (noting that "the amount of . . . compensatory damages rests so largely in the discretion of a jury"); *New York Cent. & H.R.R. Co. v. Fraloff*, 100 U.S. 24, 31 (1879) ("Our authority does not extend to a re-examination of facts [concerning damages] which have been tried by the jury . . . ."). The extension of this principle to patent law is also long established. *Birdsall*, 93 U.S. at 70 (warning against creating rigid patent damages rules for "all cases"). This Court applies a strong "presumption favoring the retention of long-established and familiar principles, except when a statutory purpose to the contrary is evident." *Nken v. Holder*, 556 U.S. 418, 433 (2009) (citation and quotation marks omitted). Here, the "overriding" statutory purpose points in the other direction: towards "affording patent owners complete compensation." *General Motors*, 461 U.S. at 655.

Other federal courts interpreting similar provisions in analogous statutes have not broken with the tradition of vesting discretion over damages in the trier of fact. For example, the courts of appeal have taken the Lanham Act's damages provision, which provides for recovery of "any damages sustained by the plaintiff" (15 U.S.C. § 1117) to leave factual determinations of damages in the hands of the district courts. *See Skydive Arizona, Inc. v. Quattrocchi*, 673 F.3d 1105, 1112 (9th Cir. 2012) ("In reviewing a jury's award of actual damages for intentional infringement, we accept 'crude' measures of damages based upon reasonable inferences so long as those inferences are neither 'inexorable . . . nor fanciful.'" (citation omitted)); *La Quinta Corp. v. Heartland Properties LLC*, 603 F.3d 327, 342 (6th Cir. 2010) ("[I]n trademark cases . . . '[o]nce the existence of damages has been shown, all that an award . . . requires is substantial evidence in the record to permit a factfinder to draw reasonable inferences and make a fair and reasonable assessment of the amount of damages.'" (citation omitted)); *Holiday Inns, Inc. v. Alberding*, 683 F.2d 931, 935 (5th Cir. 1982) ("Great latitude is given the trial judge in awarding damages . . . ." (citation omitted)). A similar approach has been adopted for the Copyright Act's provision for "actual damages . . . as a result of the infringement." 17 U.S.C. § 504(b). *See, e.g., McRoberts Software, Inc. v. Media 100, Inc.*, 329 F.3d 557, 566 (7th Cir. 2003) ("[W]e are looking to see whether there is a reasonable basis in the record to support the jury's damages awards."); *see also On Davis v. The Gap, Inc.*, 246 F.3d 152, 164 (2d Cir. 2001) (explaining that "actual damages" provision of the Copyright Act "should be broadly construed to favor victims of infringement," and that "when courts are confronted with imprecision in calculating damages, they 'should err on the side of guaranteeing the plaintiff full recovery'").

As this Court has repeatedly emphasized, patent law should be no different. *See Teva Pharm.*, 135 S. Ct. at 836-

40 (holding that the standard of review of subsidiary factual findings is the same in patent law as it is in other areas); *Octane Fitness*, 134 S. Ct. at 1758 (harmonizing attorney fee award standard in patent cases with "comparable fee-shifting statutes"); *eBay*, 547 U.S. at 391 (abrogating Federal Circuit rule for injunctions in favor of "familiar principles [that] apply with equal force to disputes arising under the Patent Act" as other areas); *Dickinson v. Zurko*, 527 U.S. 150, 154 (1999) (reversing Federal Circuit's patent-specific system for reviewing PTO decisions, and emphasizing "the importance of maintaining a uniform approach to judicial review of administrative action"). In this case too, there was no basis for the Federal Circuit to deviate from the legal mainstream. The Patent Act's damages provisions are consistent with federal statutory tort damages provisions as well as long-held principles in the common law. Section 284 does not support the creation of special damages rules for patent law. Instead, the long established rule of deference to the factfinder should apply.

V. This Case Presents an Issue of Extraordinary Importance and is an Excellent Vehicle for Review.

Consistency with Congress's chosen reasonable royalty damages standard is an issue of paramount importance because that form of damages is at issue in virtually every patent case. It is also the most frequent remedy awarded to patentees who prove liability. There are three principal remedies available in patent infringement suits: injunctions, lost profit damages, and reasonable royalty damages. Injunctions for patent infringement are not frequently granted because the availability of that relief has been substantially limited since this Court's ruling in *eBay*. Of the two prime damages remedies, "[r]easonable royalties are the type of damages most frequently awarded in patent cases, more than double the frequency of lost profits awards." Chris Barry *et al.*, PricewaterhouseCoopers, 2015 Patent Litigation Study 8 (2015), https://www.pwc.com/us/en/forensic-services/publications/assets/2015-pwc-patent-litigation-study.pdf.

The Federal Circuit's body of damages rules undermines the finality and predictability of patent litigation. Under the proper legal standard it should generally be the case that factual findings on damages are affirmed on appeal. But under the legal regime adopted by the Federal Circuit it is now commonplace for that court (or district courts applying its legal rules) to vacate damages awards made by the trier of fact. *See* Pet. App. 21a; *VirnetX*, 767 F.3d at 1326 (vacating jury damages award); *Ericsson*, 773 F.3d at 1233 (vacating damages award); *LaserDynamics*, 694 F.3d at 70 (affirming district court order setting aside jury damages award as "legally unsupportable"); *Uniloc*, 632 F.3d at 1321 (affirming district court order vacating damages award); *ResQNet.com*, 594 F.3d at 868 (vacating damage award because it was "inconsistent with sound damages jurisprudence"); *Lucent Techs.*, 580 F.3d at 1337-38 (vacating jury damages award). Because any successful patent damages award faces a high likelihood of reversal, litigants have little incentive to settle other than to avoid the costs inherent in a retrial.

The absence of finality and predictability in patent judgments raises the already notoriously high expense of patent cases. High-stakes patent litigation costs a median of $3 million per party through trial, with such costs increasing to more than $7 million in more than a quarter of cases. *See* Richard Goldstein *et al.*, American Intellectual Property Law Association, Report of the

Economic Survey 2015 37, 40 (2015). This is more than seven times the cost of trademark litigation with the same amount in controversy, and quadruple the cost of comparable copyright litigation. *Id.* at 38-39. Preventing patent litigation costs from skyrocketing even further through multiple damages appeals and retrials is an issue of critical importance warranting this Court's review.

The Federal Circuit's creation of higher and higher bars for the recovery of damages in patent cases also erodes property rights. To be sure, valid concerns have been raised about the assertion of "frivolous" patent infringement allegations. *See Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1930 (2015). But recent reforms from Congress and this Court on the patentability standard and administrative review of patent validity have radically shifted the landscape against unmeritorious patent claims. The few patent owners that are able under current law to prove validity and liability should not have their patent rights undermined by judge-made damages rules. As this Court recognized long ago, "[i]t is as important to the public that competition should not be repressed by worthless patents, as that the patentee of a really valuable invention should be protected in his monopoly . . . ." *Pope Manufacturing Co. v. Gormully*, 144 U.S. 224, 234 (1892). While there is undoubtedly a "tension, ever present in patent law, between stimulating innovation by protecting inventors and impeding progress by granting patents when not justified" (*Bilski*, 561 U.S. at 609), the Federal Circuit's rules improperly place a thumb on the scale against innovators who have shown they have good patents.

This case is the ideal vehicle to resolve this issue of pressing importance. The underlying viability of the

Federal Circuit's creation of a federal common law of patent damages is directly and cleanly presented. Cisco took the unusual step of conceding both infringement and validity, leaving only the amount of CSIRO's damages measured as a reasonable royalty to be decided. The parties also agreed to a bench trial, after which the district court provided a detailed explanation of the reasoning underlying its damages conclusion. The record here is therefore the ideal platform for deciding which damages issues are for the trier of fact and which are for the court. Although the Federal Circuit has articulated its legal rules for damages in several decisions over the past seven years, none of the patentees in those cases has sought review by this Court—likely because the damages questions were not clearly presented or were intermingled with liability questions. The questions presented here are too important to continue evading review.

CONCLUSION

For all of the above reasons, petitioner respectfully requests the petition be granted.

Respectfully submitted,

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APPENDIX

APPENDIX A — OPINION OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT, FILED DECEMBER 3, 2015

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2015-1066

COMMONWEALTH SCIENTIFIC AND
INDUSTRIAL RESEARCH ORGANISATION,

Plaintiff-Appellee,

v.

CISCO SYSTEMS, INC.,

Defendant-Appellant.

Appeal from the United States District Court for the Eastern District of Texas in No. 6:11-cv-00343-LED, Chief Judge Leonard Davis.

December 3, 2015, Decided

Before PROST, Chief Judge, DYK and HUGHES, Circuit Judges.

Prost, *Chief Judge.*

Following a bench trial on damages, the district court awarded Commonwealth Scientific and Industrial Research Organisation ("CSIRO") $16,243,067 for Cisco

Systems, Inc.'s ("Cisco") infringement of CSIRO's U.S. Patent No. 5,487,069 ("'069 patent"). On appeal, Cisco challenges the district court's damages award. We conclude that the district court's methodology in this case—insofar as it relied on the parties' actual licensing discussions—is not contrary to damages law. However, we also hold that the district court erred in not accounting for the '069 patent's standard-essential status and in its reasons for discounting a relevant license agreement. We therefore vacate the district court's judgment and remand for the district court to revise its damages award.

I. Background

CSIRO is the principal research arm of the Australian federal government and conducts research in countless scientific fields. One such field is wireless communications. In the early 1990s, CSIRO, among many other organizations, set out to devise faster and more reliable wireless local area network technology. CSIRO's research resulted in the '069 patent, which was filed on November 23, 1993, and issued to CSIRO on January 23, 1996. The '069 patent discloses techniques directed to solving issues from wireless signals reflecting off objects and interfering with each other, commonly referred to as the "multipath problem."

In 1997, the Institute of Electrical and Electronics Engineers ("IEEE") released the original 802.11 wireless standard, which provides the specifications for products using the Wi-Fi brand. The first revision of 802.11, called 802.11a, was ratified in 1999, and it included the '069 patent's technology. In connection with 802.11a, CSIRO submitted a letter of assurance to the IEEE pledging to license the ‘069 patent on reasonable and non-discriminatory (“RAND”) terms. The ‘069 patent is also essential to various later iterations of 802.11 (802.11g, n, and ac). However, despite the IEEE’s repeated requests to CSIRO that it submit a letter of assurance for the ‘069 patent for these revisions of 802.11, CSIRO refused to encumber the ‘069 patent with a RAND commitment for these revisions.

When the ‘069 patent issued in 1996—the early days of 802.11—a group of individuals involved in the ‘069 patent’s research attempted to commercialize the technology. Along with David Skellern and Neil Weste, both professors at Macquarie University in Australia, Terry Percival, a CSIRO scientist and named inventor on the ‘069 patent, founded a company called Radiata, Inc. to sell wireless chips in at least the United States. Consequently, Radiata and CSIRO entered into a license agreement—the Technology License Agreement (“TLA”)—for the ‘069 patent. Under the TLA, Radiata agreed to pay CSIRO tiered royalties for each chip sold according to the following table:

Sales Volume	**Standard Chip Royalty**	**Derivative Chip Royalty**
1-100,000	5.0%	5.0%
100,001-400,000	4.0%	4.0%
400,001-1,000,000	3.0%	3.0%
1,000,001-3,000,000	2.0%	2.0%
> 3,000,001	1.0%	0.5%

Appendix A

In November 2000, Cisco publicly announced its plans to acquire Radiata. The acquisition was completed in early 2001. As part of the acquisition, Cisco, Radiata, and CSIRO amended the TLA in February 2001, largely to allow Cisco to take Radiata's place in the TLA. Cisco and CSIRO amended the TLA again in September 2003. Cisco paid royalties to CSIRO under the TLA until 2007, when Cisco ceased using Radiata-based chips in its products. Over the course of the TLA, Cisco paid CSIRO over $900,000 in royalties.

Around 2003, CSIRO decided to offer a license to the '069 patent to other Wi-Fi industry participants. Eventually, it developed a form license offer, called the "Rate Card," which it began offering to potential licensees in 2004. The Rate Card was structured as follows:

	Royalty per product sold				
Days from offer to acceptance:	< 90	< 120	< 150	< 180	> 180
Sales Volume					
0-1 million	$1.90	$2.38	$2.85	$3.33	$3.80
1-2 million	$1.80	$2.25	$2.70	$3.15	$3.60
2-5 million	$1.70	$2.13	$2.55	$2.98	$3.40
5-10 million	$1.60	$2.00	$2.40	$2.80	$3.20
10-20 million	$1.50	$1.88	$2.25	$2.63	$3.00
> 20 million	$1.40	$1.75	$2.10	$2.45	$2.80

The lowest Rate Card rates, corresponding to acceptance of CSIRO's offer within ninety days, were $1.40—$1.90 per unit. CSIRO did not execute any licenses under the Rate Card terms.

In 2004, CSIRO approached Cisco and offered Cisco a license to the '069 patent on the Rate Card rates. Cisco did not accept CSIRO's offer. However, the district court found that in subsequent discussions in 2005, Dan Lang, Cisco's Vice President of Intellectual Property, informally suggested to CSIRO that a $0.90 per unit rate may be more appropriate. *Commonwealth Sci. & Indus. Research Org. v. Cisco Sys., Inc.*, No. 6:11-CV-343, 2014 U.S. Dist. LEXIS 107612, 2014 WL 3805817, at *12 (E.D. Tex. July 23, 2014). This rate was not much lower than what Cisco was already paying CSIRO under the TLA, though over time the TLA rates declined dramatically due to rapidly decreasing chip prices. Despite both parties' apparent willingness to negotiate a license, CSIRO and Cisco failed to agree on terms.

On July 1, 2011, CSIRO filed the instant suit for infringement of the '069 patent against Cisco. Nearly two years later, the district court accepted a joint stipulation that Cisco would not contest infringement or validity, so the only issue left for trial was damages. The district court conducted a four-day bench trial commencing on February 3, 2014.

At trial, the parties' experts presented competing damages models. CSIRO contended that the benefits of 802.11 products that practice the '069 patent over

802.11 products that do not practice the '069 patent "are primarily attributable to the technology of the '069 Patent." 2014 U.S. Dist. LEXIS 107612, [WL] at *5. "Based on this claim, CSIRO contend[ed] that the difference in profit Cisco captured between accused 802.11a and 802.11g products and unaccused 802.11b products largely represents the value attributable to the '069 Patent." *Id.* Therefore, James Malackowski, CSIRO's damages expert, compared the market prices at the time of the hypothetical negotiation of 802.11 products that practice the '069 patent and 802.11 products that do not practice the '069 patent. Mr. Malackowski then attributed Cisco's profit premiums on those products to the '069 patent. These ranges were $6.12—$89.93 for Linksys-branded products, and $14.00—$224.00 for Cisco-branded products. After making various adjustments under *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970), Mr. Malackowski concluded that the outcome of the hypothetical negotiation would be a volume-tiered rate table ranging from a $1.35 to $2.25 royalty per end unit sold. Mr. Malackowski then opined that total damages were $30,182,922.

Cisco based its damages model on the TLA. Under the TLA rates, the per chip royalty ranged from $0.04—$0.37 for Linksys products and $0.03—$0.33 for Cisco products over the damages period. Cisco's damages expert, Christopher Bakewell, opined that, using this method, Cisco owed CSIRO just over $1,050,000.

The district court issued its findings of fact and conclusions of law on July 23, 2014. In its order, the district court rejected both parties' proffered damages models. The district court faulted CSIRO's model for, among other reasons, performing "arbitrary" final apportionment and having broad profit premium ranges. As to Cisco's model, the district court found that the TLA was not comparable to the license Cisco and CSIRO would negotiate in a hypothetical negotiation. Significantly, the district court determined that "the primary problem with Cisco's damages model is the fact that it bases royalties on chip prices." *Commonwealth Sci.*, 2014 U.S. Dist. LEXIS 107612, 2014 WL 3805817, at *11. According to the district court, "[t]he benefit of the patent lies in the idea, not in the small amount of silicon that happens to be where that idea is physically implemented." *Id.* The district court reasoned that "[b]asing a royalty solely on chip price is like valuing a copyrighted book based only on the costs of the binding, paper, and ink needed to actually produce the physical product. While such a calculation captures the cost of the physical product, it provides no indication of its actual value." *Id.*

Rather than adopt one of the parties' damages methodologies, the district court created its own based on CSIRO's 2004 Rate Card offer and the informal rate suggestion made in October 2005 by Cisco's Mr. Lang. The district court noted that both data points were near the hypothetical negotiation dates of May 2002 for Linksys-branded products and October 2003 for Cisco products. "Based on these data points," the district court found, "a range of $0.90 to $1.90 is a reasonable starting point for negotiations between the parties in 2002 and 2003." 2014 U.S. Dist. LEXIS 107612, [WL] at *12.

The district court then proceeded with an analysis of the *Georgia-Pacific* factors. As an initial matter, the district court held that "[a]lthough other courts have made specific adjustments to the *Georgia—Pacific* factors to take a RAND commitment into account, specific adjustments to the overall framework are not necessary here" because CSIRO was obligated to license on RAND terms for only 0.03% of the accused products. *Id.* The district court next considered all *Georgia-Pacific* factors. 2014 U.S. Dist. LEXIS 107612, [WL] at *12-13. To summarize the district court's *Georgia-Pacific* analysis, the district court found that factors 3, 4, and 5 favored a downward adjustment; factors 8, 9, and 10 favored an upward adjustment; and all other factors were neutral. The district court concluded that, "[w]ith the sum of the factors essentially in equipoise, CSIRO and Cisco would have been in substantially equal bargaining positions at the hypothetical negotiations." 2014 U.S. Dist. LEXIS 107612, [WL] at *13. "Accordingly, no overall adjustment [was] needed to the baseline rates and a range of $0.90 to $1.90 [was] the appropriate outcome of the hypothetical negotiation here." *Id.*

Finally, the district court adjusted the royalty rate range downward for Linksys-branded products, as the parties agreed that the Lang offer only pertained to Cisco products, and Linksys products had a lower profit margin. The district court found that the royalty rate range for Linksys was $0.65—$1.38.

The result of the district court's calculus was the following volume-tiered rate table:

	Royalty per unit sold	
Sales Volume	**Linksys**	**Cisco**
0-1 million	$1.38	$1.90
1-2 million	$1.23	$1.70
2-5 million	$1.09	$1.50
5-10 million	$0.94	$1.30
10-20 million	$0.80	$1.10
> 20 million	$0.65	$0.90

After some further calculations, the district court entered judgment for CSIRO in the amount of $16,243,067. Cisco appeals. This court has jurisdiction under 28 U.S.C. § 1295(a)(1).

II. Discussion

"This court reviews a district court's judgment following a bench trial for errors of law and clearly erroneous findings of fact." *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1343-44 (Fed. Cir. 2002).

Cisco alleges two separate legal bases for reversal: (1) the district court erred in not beginning its damages analysis with the wireless chip, which it found to be the smallest salable patent-practicing unit; (2) the district court did not adjust the *Georgia-Pacific* factors to account for the asserted patent being essential to the 802.11

standard. Cisco also argues that the district court clearly erred in not crediting the TLA evidence. We address each issue in turn.

A. Smallest Salable Patent-Practicing Unit

Title 35, section 284 of the United States Code provides that "[u]pon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer . . . ." Under § 284, damages awarded for patent infringement "must reflect the value attributable to the infringing features of the product, and no more." *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014). This principle—apportionment—is "the governing rule" "where multi-component products are involved." *Id.* Consequently, to be admissible, all expert damages opinions must separate the value of the allegedly infringing features from the value of all other features. *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1329 (Fed. Cir. 2014).

Apportionment is not a new rule. Indeed, it dates at least to *Garretson v. Clark*, 111 U.S. 120, 121, 4 S. Ct. 291, 28 L. Ed. 371, 1884 Dec. Comm'r Pat. 206 (1884) (quotation marks omitted), where the Supreme Court explained:

> The patentee . . . must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the

> unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative; or he must show, by equally reliable and satisfactory evidence, 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.

In *Garretson*, the Supreme Court affirmed a special master's report that the patentee had submitted no proof of its damages because it failed to apportion to the value of the patented feature. *Id.* at 121-22. Likewise today, given the great financial incentive parties have to exploit the inherent imprecision in patent valuation, courts must be proactive to ensure that the testimony presented—using whatever methodology—is sufficiently reliable to support a damages award. *See Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1296 (Fed. Cir. 2015) ("[E]stimating a reasonable royalty is not an exact science."); *VirnetX*, 767 F.3d at 1328 (explaining that a district court must exercise "its gatekeeping authority to ensure that only theories comporting with settled principles of apportionment were allowed to reach the jury"). And as we have repeatedly held, "[t]he essential requirement" for reliability under *Daubert* "is that the ultimate reasonable royalty award must be based on the incremental value that the patented invention adds to the end product." *Ericsson*, 773 F.3d at 1226. In short, apportionment.

Our law also recognizes that, under this apportionment principle, "there may be more than one reliable method for estimating a reasonable royalty." *See Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1315 (Fed. Cir. 2014), *overruled on other grounds by Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015). This adaptability is necessary because different cases present different facts. And as damages models are fact-dependent, "[a] distinct but integral part of [the admissibility] inquiry is whether the data utilized in the methodology is sufficiently tied to the facts of the case." *Summit 6*, 802 F.3d at 1296. In practice, this means that abstract recitations of royalty stacking theory, and qualitative testimony that an invention is valuable—without being anchored to a quantitative market valuation—are insufficiently reliable. *See Ericsson*, 773 F.3d at 1234 ("The district court need not instruct the jury on hold-up or stacking unless the accused infringer presents actual evidence of hold-up or stacking."); *LaserDynamics, Inc. v. Quanta Comput., Inc.*, 694 F.3d 51, 68 (Fed. Cir. 2012) ("It is not enough to merely show that the disc discrimination method is viewed as valuable, important, or even essential to the use of the laptop computer."). "[W]here the data used is not sufficiently tied to the facts of the case," *Summit 6*, 802 F.3d at 1296, a damages model cannot meet "the substantive statutory requirement of apportionment of royalty damages to the invention's value," *Ericsson*, 773 F.3d at 1226.

Recognizing that each case presents unique facts, we have developed certain principles to aid courts in determining when an expert's apportionment model is reliable. For example, the smallest salable patent-practicing unit principle provides that, where a damages model apportions from a royalty base, the model should use the smallest salable patent-practicing unit as the base. *See LaserDynamics*, 694 F.3d at 67 ("[I]t is generally required that royalties be based not on the entire product, but instead on the "'smallest salable patent-practicing unit.'").

Our cases provide two justifications for this principle. First, "[w]here small elements of multi-component products are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product." *Id.*; *see also Garretson*, 111 U.S. at 121 ("[The patentee] must separate [the patented improvement's] results distinctly from those of the other parts, so that the benefits derived from it may be distinctly seen and appreciated."). Second is the "important evidentiary principle" that "care must be taken to avoid misleading the jury by placing undue emphasis on the value of the entire product." *Ericsson*, 773 F.3d at 1226. As we stated in *Uniloc USA, Inc. v. Microsoft Corp.*, disclosure of the end product's total revenue "cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented component to this revenue." 632 F.3d 1292, 1320 (Fed. Cir. 2011).

In addition to the smallest salable patent-practicing unit principle, we have also explained that "[t]he entire market value rule is a narrow exception to this general rule" "derived from Supreme Court precedent" in

Garretson. *LaserDynamics*, 694 F.3d at 67. Under the entire market value rule, if a party can prove that the patented invention drives demand for the accused end product, it can rely on the end product's entire market value as the royalty base. *Id.*

Fundamentally, the smallest salable patent-practicing unit principle states that a damages model cannot reliably apportion from a royalty base without that base being the smallest salable patent-practicing unit. That principle is inapplicable here, however, as the district court did not apportion from a royalty base at all. Instead, the district court began with the parties' negotiations. At trial, the district court heard evidence that, around the time of the hypothetical negotiations, the parties themselves had brief discussions regarding Cisco taking a license to the '069 patent. According to the district court's factual finding—which is supported by the testimony at trial—Cisco informally suggested $0.90 per unit as a possible royalty for the '069 patent. The district court used this rate as a lower bound on a reasonable royalty. For the upper bound, the district court looked to the $1.90 per unit rate requested by CSIRO in its public Rate Card license offer. Because the parties' discussions centered on a license rate for the '069 patent, this starting point for the district court's analysis already built in apportionment. Put differently, the parties negotiated over the value of the asserted patent, "and no more." *Ericsson*, 773 F.3d at 1226. The district court still may need to adjust the negotiated royalty rates to account for other factors (see *infra* Section II.B), but the district court did not err in valuing the asserted patent with reference to end product licensing negotiations.[1]

The rule Cisco advances—which would require all damages models to begin with the smallest salable patent-practicing unit—is untenable. It conflicts with our prior approvals of a methodology that values the asserted patent based on comparable licenses. *See VirnetX*, 767 F.3d at 1331; *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1333 (Fed. Cir. 2012); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1211-12 (Fed. Cir. 2010). Such a model begins with rates from comparable licenses and then "account[s] for differences in the technologies and economic circumstances of the contracting parties." *Finjan*, 626 F.3d at 1211. Where the licenses employed are sufficiently comparable,[2] this

1. The choice of royalty base—which is often the focus of the apportionment analysis—is irrelevant to the district court's analysis. The particular rates relied on by the district court were contemplated as cents per end unit sold by Cisco, but they could equally have represented cents per wireless chip without affecting the damages calculation.

2. Note, of course, that this court has often excluded proffered licenses as insufficiently comparable. *See, e.g., LaserDynamics*, 694 F.3d at 77-78; *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 870-71 (Fed. Cir. 2010); *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1327-28 (Fed. Cir. 2009). Grounds for exclusion in our past cases have included, but are not limited to: the license being a litigation settlement agreement, *LaserDynamics*, 694 F.3d at 77 ("The propriety of using prior settlement agreements to prove the amount of a reasonable royalty is questionable."); and the patented technology's lack of a relationship to the licensed technology, ResQNet.com, 594 F.3d at 871 ("Dr. David offers little or no

method is typically reliable because the parties are constrained by the market's actual valuation of the patent. *See Georgia-Pacific*, 318 F. Supp. at 1120 (declaring the first factor relevant to damages calculations to be "[t]he royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty"). Moreover, we held in *Ericsson* that otherwise comparable licenses are not inadmissible solely because they express the royalty rate as a percentage of total revenues, rather than in terms of the smallest salable unit. *Ericsson*, 773 F.3d at 1228. Therefore, adopting Cisco's position would necessitate exclusion of comparable license valuations that—at least in some cases—may be the most effective method of estimating the asserted patent's value. Such a holding "would often make it impossible for a patentee to resort to license-based evidence." *Id.*

Accordingly, we conclude that the district court did not violate apportionment principles in employing a damages model that took account of the parties' informal negotiations with respect to the end product.

B. Standardization

Cisco also contends that the district court legally erred under *Ericsson* because it failed to account for

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evidence of a link between the re-bundling licenses and the claimed invention."); *Lucent*, 580 F.3d at 1329 ("[A] lump-sum damages award cannot stand solely on evidence which amounts to little more than a recitation of royalty numbers, one of which is arguably in the ballpark of the jury's award, particularly when it is doubtful that the technology of those license agreements is in any way similar to the technology being litigated here.").

any extra value accruing to the ‘069 patent from the fact that it is essential to the 802.11 standard. We agree. *Ericsson* identified unique considerations that apply to apportionment in the context of a standard-essential patent (“SEP”):

> When dealing with SEPs, there are two special apportionment issues that arise. First, the patented feature must be apportioned from all of the unpatented features reflected in the standard. Second, the patentee’s royalty must be premised on the value of the patented feature, not any value added by the standard’s adoption of the patented technology. These steps are necessary to ensure that the royalty award is based on the incremental value that the patented *invention* adds to the product, not any value added by the standardization of that technology.

773 F.3d at 1232. Consequently, the idea that “the patent holder should only be compensated for the approximate incremental benefit derived from his invention . . . is particularly true for SEPs.” *Id.* at 1233. *Ericsson* explains:

> When a technology is incorporated into a standard, it is typically chosen from among different options. Once incorporated and widely adopted, that technology is not always used because it is the best or the only option; it is used because its use is necessary to comply with the standard. In other words, widespread

> adoption of standard essential technology is not entirely indicative of the added usefulness of an innovation over the prior art. This is not meant to imply that SEPs never claim valuable technological contributions. We merely hold that the royalty for SEPs should reflect the approximate value of that technological contribution, not the value of its widespread adoption due to standardization.

Id. "In other words, a royalty award for a SEP must be apportioned to the value of the patented invention (or at least to the approximate value thereof), not the value of the standard as a whole." *Id.* Therefore, damages awards for SEPs must be premised on methodologies that attempt to capture the asserted patent's value resulting not from the value added by the standard's widespread adoption, but only from the technology's superiority. *Id.*

CSIRO argues that *Ericsson* applies only to SEPs encumbered with an obligation to license on RAND terms. But CSIRO's perspective is wrong for several reasons. First, the above quotes from *Ericsson* discuss SEPs, not only RAND-encumbered patents. As *Ericsson* also grapples separately with issues unique to RAND-encumbered patents, it is clear that *Ericsson* did not conflate the two terms. Indeed, *Ericsson* refers separately to RAND-encumbered patents and SEPs when explaining the need to adjust the *Georgia-Pacific* factors, but *Ericsson* explicitly holds that the adjustments to the *Georgia-Pacific* factors apply equally to RAND-encumbered patents and SEPs. *Ericsson*, 773 F.3d at 1231

("Several other *Georgia-Pacific* factors would at least need to be adjusted for RAND-encumbered patents—indeed, for SEP patents generally."). Second, a reasonable royalty calculation under § 284 attempts to measure the value of the patented invention. *Id.* at 1232. This value—the value of the technology—is distinct from any value that artificially accrues to the patent due to the standard's adoption. *Id.* Without this rule, patentees would receive all of the benefit created by standardization—benefit that would otherwise flow to consumers and businesses practicing the standard. We therefore reaffirm that reasonable royalties for SEPs generally—and not only those subject to a RAND commitment—must not include any value flowing to the patent from the standard's adoption.

The district court—which did not have the benefit of the *Ericsson* opinion at the time of its decision—erred because it did not account for standardization. In thoroughly analyzing the *Georgia-Pacific* factors, the district court increased the royalty award because the '069 patent is essential to the 802.11 standard.

This error impacted the district court's analysis on all three factors that it weighed in favor of CSIRO. With respect to factor 8—"[t]he established profitability of the product made under the patent; its commercial success; and its current popularity," *Georgia-Pacific*, 318 F. Supp. at 1120—the district court found that "[a]t the time of the hypothetical negotiations, the market for wireless products was growing rapidly, indicating increased commercial success." *Commonwealth Sci.*, 2014 U.S. Dist.

LEXIS 107612, 2014 WL 3805817, at *13. As to factors 9 and 10—which relate to the advantages of the patented invention—the district court concluded that "[a]lternative technologies in the wireless industry, such as PBCC, MBCK, and PPM, failed to achieve commercial success." *Id.* However, the district court never considered the standard's role in causing commercial success. *Ericsson* calls out factors 8, 9, and 10 as all being irrelevant or misleading in cases involving SEPs. *Ericsson*, 773 F.3d at 1231. We therefore conclude that the district court erred in failing to account for standardization when it evaluated the *Georgia-Pacific* factors.[3]

Additionally, the district court failed to account for the possibility that the $0.90 and $1.90 per unit rates that it used as a starting point may themselves be impacted by standardization.[4] The parties do not dispute that

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3. Furthermore, much of the district court's reasoning in favor of CSIRO is based on evidence that the '069 patent is central to the 802.11 standard. But it makes little sense to adjust the starting royalty rate upward for this reason. The argument that the '069 patent is more valuable than a typical patent essential to the 802.11 standard is only relevant if the court begins with a generic royalty rate for a generic 802.11 patent. But in this case the court began with rates mentioned by the parties in negotiation. Even the lowest of these rates—$0.90—is much higher than a rate derived from dividing the value of the standard by the number of patents essential to the standard. The starting rates themselves thus appear to account—at least to some extent—for the centrality of the '069 patent to the 802.11 standard.

4. Upon remand, the district court may also wish to consider how other factors, such as prospective litigation costs or the falling chip price, may have affected the parties' suggested royalty rates.

CSIRO actively refused to submit a letter of assurance to the standard-setting body for later iterations of the 802.11 standard, after the ‘069 patent was locked into the standard. It seems quite possible, then, that CSIRO’s Rate Card rates attempt to capture at least some value resulting from the standard’s adoption. CSIRO’s offer was not accepted by a single entity. On remand, the district court should consider whether the initial rates taken from the parties’ discussions should be adjusted for standardization.

In sum, the district court erred in failing to account for value accruing to the ‘069 patent from the standard’s adoption. This error manifests in at least two parts of the district court’s analysis: (1) in its discussion of the *Georgia-Pacific* factors, and (2) in its adoption of the parties’ informally offered royalty rates without accounting for the possibility that CSIRO may have been trying to capture the standard’s value in its licenses. As these are legal errors under *Ericsson*, we must vacate the district court’s damages award and remand for a new determination of a reasonable royalty.

C. TLA

Finally, Cisco argues that the district court clearly erred in basing its damages model on the parties’ negotiating positions, rather than on the TLA between CSIRO and Radiata. As the district court heard competing testimony regarding the relevance of the TLA, the Rate Card, and the Lang offer, the district court’s decision about how to weigh and credit this varying evidence is a finding of fact entitled to deference. *See Santarus, Inc. v. Par Pharm., Inc.*, 694 F.3d 1344, 1358 (Fed. Cir. 2012) ("The district court's findings of fact are entitled to deference . . . ."). However, we find clear error in at least three of the district court's reasons for rejecting the TLA, and therefore direct the court on remand to reevaluate the relevance of the TLA in its damages analysis.

In brief, the district court provided four reasons for rejecting the TLA evidence. First, the district court found that the close relationship between CSIRO and Radiata—Radiata was founded by three Australian individuals on CSIRO's campus—"belies the view that the negotiations leading to the TLA were purely disinterested business negotiations." *Commonwealth Sci.*, 2014 U.S. Dist. LEXIS 107612, 2014 WL 3805817, at *10. Second, the district court found that the TLA's development requirements meant that:

> Radiata had significant obligations to CSIRO, including disclosing its business plans concerning the patented technology, a requirement to use its best efforts to exploit the technology, and minimum performance obligations. CSIRO was also entitled to a royalty-free license to any improvements Radiata contributed to the technology and an assignment of all rights in those improvements upon termination of the TLA.

Id. Third, the district court found that "[a]nother obstacle to relying on the TLA rates is the timing of the agreement." *Id.* The TLA was signed in 1998, four and five years, respectively, before the hypothetical negotiation dates of 2002 and 2003, during which time the "[c]ommercial viability of the technology escalated sharply . . . ." *Id.* Finally, the district court found that "the primary problem with Cisco's damages model is the fact that it bases royalties on chip prices." *Id.*

The majority of these findings do not support a wholesale rejection of the TLA. Most importantly, as to reason three—timing—the district court ignored evidence that CSIRO and Cisco twice amended the TLA, once in conjunction with Cisco's purchase of Radiata in 2001, and again in September 2003. These amendments occurred at about the time the hypothetical negotiations would have taken place, and therefore bear consideration. While Commonwealth argues that the amendments are irrelevant because Commonwealth could not have renegotiated the royalty rates at the time, that is untrue. At the time of the 2001 and 2003 amendments, Commonwealth had the right to terminate the agreement or permit a sublicense. Both of these options provided a lever with which Commonwealth could have renegotiated royalty rates during the amendment process.

The amendments also refute the district court's first reason for discounting the TLA—the close relationship between Commonwealth and Radiata. By the time of the amendments, the special relationship between Commonwealth and Radiata no longer existed, and therefore does not provide reason to reject the relevance of the as-amended TLA to the hypothetical negotiation.

Finally, the district court's fourth reason—that the TLA uses chip prices as the royalty base—runs afoul of *Ericsson*'s holding that a license may not be excluded solely because of its chosen royalty base. *Ericsson*, 773 F.3d at 1228.

Because many of the district court's reasons for discounting the TLA were flawed, we direct the court on remand to reevaluate the relevance of the as-amended TLA in its damages analysis. This agreement is the only actual royalty agreement between Cisco and Commonwealth; it is contemporaneous with the hypothetical negotiation; it was reached before the 802.11g standard was adopted; and it focuses on the chip. To be sure, some other obligations running from Cisco to Commonwealth survived the amendments, e.g., the licensing of improvements. These factors, among others, should be taken into account in the district court's analysis.

III. Conclusion

For the foregoing reasons, we vacate the damages award and remand for further proceedings consistent with this opinion.

VACATED AND REMANDED

APPENDIX B — FINDINGS OF FACT AND CONCLUSIONS OF LAW OF THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS, TYLER DIVISION, FILED JULY 23, 2014

IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS TYLER DIVISION

Case No. 6:11-cv-343

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION,

Plaintiff,

v.

CISCO SYSTEMS, INC.,

Defendant.

July 23, 2014, Decided; July 23, 2014, Filed

FINDINGS OF FACT AND CONCLUSIONS OF LAW

This case involves a dispute over the appropriate damages owed by Cisco Systems, Inc. ("Cisco") to Commonwealth Scientific and Industrial Research Organisation ("CSIRO") for Cisco Systems, Inc.'s ("Cisco") alleged infringement of U.S. Patent No. 5,487,069 ("the '069 Patent"). The case was tried on the merits without a jury and was taken under submission. The Court has considered the testimony, exhibits, arguments of counsel, and supporting memoranda, and details its Findings of Fact and Conclusions of Law below pursuant to Federal Rule of Civil Procedure 52(a).[1] Also before the Court are CSIRO's Rule 52(c) Motion for Judgment on Cisco's RAND Affirmative Defense (Docket No. 308) and Cisco's Post-Trial Brief and Rule 52(c) Motion (Docket No. 318). The Court has considered the arguments advanced in each Motion. Because neither Motion seeks relief not addressed by this Order, both Motions are **DENIED AS MOOT.**

BACKGROUND

The '069 Patent has been the subject of litigation in this Court for almost a decade. CSIRO filed its first suit in this Court regarding the '069 Patent in 2005 and has consistently been a party to an action involving this patent since that time. CSIRO is the principal scientific research organization of the Australian Federal Government and conducts scientific research to benefit Australia and the public at large. The '069 Patent, filed on November 23, 1993, was issued to CSIRO on January 23, 1996. An *ex parte* reexamination certificate was issued on March 15, 2011. The '069 Patent discloses a wireless LAN incorporating forward error correction, frequency-domain interleaving, and multi-carrier modulation, among other techniques to solve challenges to indoor wireless networking known as the "multipath" problem.[2] In 1999,

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1. To the extent that any conclusion of law is deemed to be a finding of fact, it is adopted as such; likewise, any finding of fact that is deemed to be a conclusion of law is so adopted.

2. For a more detailed background on CSIRO and the '069 Patent, *see Commonwealth Scientific & Indus. Research Org. v. Buffalo Tech. Inc.*, 492 F. Supp. 2d 600, 601-02 (E.D. Tex. 2007).

the Institute of Electrical and Electronics Engineers ("IEEE") ratified the 802.11a standard, which this Court has previously held embodies the core technology of the '069 Patent. *Buffalo*, 492 F. Supp. 2d at 602. In 2003, the IEEE ratified the 802.11g standard, which also embodies the technology of the '069 Patent. *Id.*

CSIRO filed this suit against Cisco on July 1, 2011 asserting infringement of the '069 Patent. On March 19, 2013, the Court approved a joint stipulation by the parties to try this case solely as to damages, because liability would not be argued or contested. Docket No. 127 at 1-2. The parties further agreed the scope of accused products would be all products that practice any of the IEEE's 802.11a, 802.11g, 802.11 draft-n, 802.11n, 802.11 draft-ac, or 802.11ac standards, made in, used in, sold in, offered for sale in, or imported into the United States by Cisco or its subsidiaries, and that did not incorporate a "Licensed Wi-Fi Chip."[3] *Id.* at 2. Linksys products are included in the accused products because of Cisco's acquisition of Linksys in 2003. Although both parties initially demanded a jury trial, in January 2014 the parties consented to a bench trial. Docket No. 237 at 1. Beginning on February 3, 2014, the Court conducted a four-day bench trial on the issues of appropriate damages and Cisco's affirmative defense of estoppel.

3. The parties defined Licensed Wi-Fi Chips to include RM11a and Richfield chips (based on a previous settlement agreement between CSIRO and Cisco) and any chips supplied to Cisco by other parties that had entered settlement agreements with CSIRO, including Intel Corp., Broadcom Corp., Marvell International Ltd., and Qualcomm Atheros Inc. Docket No. 125 at 5.

Appendix B

APPLICABLE LAW

A patentee is entitled to damages for infringement under 35 U.S.C. § 284. The burden of proving damages falls on the patentee. *Dow Chem. Co. v. Mee Indus., Inc.*, 341 F.3d 1370, 1381 (Fed. Cir. 2003). There are two alternative categories of monetary relief: the patentee's lost profits, and the reasonable royalty the patentee would have received through arms-length bargaining. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009). To ascertain the reasonable royalty, patentees commonly consider a hypothetical negotiation, in which the asserted patent claims are assumed valid, enforceable, and infringed, and attempt to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began. *Id.* at 1324-25; *see also Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1554 n.13 (Fed. Cir. 1995) (*en banc*). Calculation of a reasonable royalty requires determination of two separate and distinct amounts: 1) the royalty base, or the revenue pool implicated by the infringement; and 2) the royalty rate, or the percentage of that pool "adequate to compensate" the plaintiff for the infringement. *Cornell Univ. v. Hewlett-Packard Co.*, 609 F. Supp. 2d 279, 286 (N.D.N.Y. 2009).

District courts frequently look to *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y.) for guidance on reasonable royalty damages assessment. *See Rite-Hite*, 56 F.3d at 1555, 1567, 1577 (approving the *Georgia-Pacific* analysis for determining reasonable royalty damages). The *Georgia-Pacific* Court established fifteen factors to be considered in determining a reasonable royalty based on a hypothetical negotiation. 318 F. Supp. at 1120. The factors are: (1) "[t]he royalties received by the patentee for licensing of the patent-in-suit"; (2) royalties paid for other patents comparable to the asserted patents; (3) "[t]he nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold; (4) [t]he licensor's established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly; (5) [t]he commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter; (6) [t]he effect of selling the patented specialty in promoting sales of other products of the licensee; the existing value of the invention to the licensor as a generator of sales of his nonpatented items; and the extent of such derivative or convoyed sales; (7) [t]he duration of the patent and the term of the license; (8) [t]he established profitability of the product made under the patent; its commercial success; and its current popularity; (9) [t]he utility and advantages of the [patented invention] over the old modes or devices, if many, that had been used for working out similar results; (10) [t]he nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention"; (11) the extent of the licensee's use of the patented invention "and any evidence probative of the value of that use; (12) [t]he portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions; (13) [t]he portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer; (14) [t]he opinion testimony of qualified experts; and (15) [t]he amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license." *Id.* Despite these guiding principles, a reasonable royalty analysis "necessarily involves an element of approximation and uncertainty." *Unisplay, S.A. v. Am. Elec. Sign Co.*, 69 F.3d 512, 517 (Fed. Cir. 1995). Nevertheless, the trier of fact's conclusion must be supported by substantial evidence. *Lucent Techs.*, 580 F.3d at 1335.

ANALYSIS

Cisco's Estoppel Affirmative Defenses

Although the parties stipulated to try this case as to damages only, Cisco raised the affirmative defenses of legal and equitable estoppel, which could impact the damages determination. To establish a defense of equitable estoppel, Cisco must demonstrate that: (1) CSIRO communicated something in a misleading way by words, conduct, or silence; (2) Cisco relied upon that communication; and (3) Cisco would be materially harmed if CSIRO is allowed to assert any claim inconsistent with its earlier communication. *See A.C. Aukerman Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1041 (Fed. Cir. 1992) (*en banc*). Legal estoppel requires that CSIRO granted Cisco certain rights, received consideration for those rights, and then sought to derogate from the rights granted. *See Wang Labs, Inc. v. Mitsubishi Elecs. Am., Inc.*, 103 F.3d 1571, 1581 (Fed. Cir. 1997).

Cisco argues that CSIRO made a commitment to the IEEE to license the '069 Patent on reasonable and non-discriminatory ("RAND") terms if that patent was essential to practice the IEEE 802.11 standard. Docket No. 48 at 7-8. According to Cisco, CSIRO's RAND commitment estops CSIRO from seeking damages at a royalty rate above the rate set forth in the Technology License Agreement ("TLA") between CSIRO and Radiata Communications PTY, Ltd. ("Radiata") entered on February 23, 1998. *Id.* at 4.

CSIRO's RAND Commitment Regarding 802.11a

CSIRO's RAND commitment to the IEEE and its members with regard to the 802.11a standard is largely undisputed. In October 1998, prior to the ratification of the 802.11a standard, the IEEE requested a letter of assurance from CSIRO concerning the '069 Patent. DTX-54 at 1. On December 4, 1998, CSIRO assured the IEEE that if the '069 Patent was essential to practicing 802.11a, upon written request, CSIRO would grant any party a nonexclusive license to the '069 Patent on reasonable terms and at then-current royalty rates. DTX-55. Based on the bylaws of the IEEE, letters of assurance to the organization constitute binding contractual commitments to the IEEE and its members. *See, e.g., Apple, Inc. v. Motorola Mobility, Inc.*, 886 F. Supp. 2d 1061, 1083 (W.D. Wis. 2012); *Microsoft Corp. v. Motorola, Inc.*, 854 F. Supp. 2d 993, 999 (W.D. Wash. 2012). Neither party contests this.

CSIRO argues its 802.11a RAND commitment does not extend to Cisco because Cisco never made a written request for such a license, as required by CSIRO's letter of assurance to the IEEE. 02/06/2014 Trial Tr. at 52:25-53:7; 60:2-6. Cisco contends that due to its existing course of business with CSIRO, a formal written request was unnecessary and that Cisco's existing payments to CSIRO under the TLA and ongoing discussions between the parties met or obviated any such requirement.[4] 02/05/2014 AM Trial Tr. at 19:9-21.

As this Court has previously held and as was demonstrated in this case, products that comply with the 802.11a standard practice the technology disclosed by the '069 Patent. *Buffalo*, 492 F. Supp. 2d at 602; 02/03/2014 PM Trial Tr. at 77:23-78:16. Accordingly, the '069 Patent

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4. As discussed later, Cisco acquired Radiata in 2001 and became a party to the TLA agreement. *See infra* at 17.

is essential to practice the 802.11a standard. Further, due to the existing relationship and course of dealings between Cisco and CSIRO around the time of the hypothetical negotiations, Cisco met the requirement for a written request to invoke CSIRO's RAND obligation. Due to Cisco's 2001 acquisition of Radiata, Cisco was already paying CSIRO royalties under the TLA. 02/05/2014 AM Trial Tr. at 19:13. At the relevant time period, the two companies were already engaged in discussions concerning licensing the '069 Patent. *Id.* at 11-21. Additionally, CSIRO sent letters to several wireless industry companies, including Linksys, offering to license the '069 Patent on RAND terms, based on its commitment to the IEEE, essentially waiving any written request requirement. DTX-108; DTX-109; DTX-117. Therefore, at the time of the hypothetical negotiation, CSIRO was bound to offer Cisco a license on RAND terms for 802.11a products. Each party would have been aware of this obligation and it would have been a factor in the hypothetical negotiation.[5]

CSIRO's RAND Obligation Regarding Later 802.11 Revisions

CSIRO's RAND obligation regarding later amendments to the IEEE 802.11 standard, namely 802.11g, 802.11n, and 802.11ac is contested. CSIRO argues it never made a RAND commitment regarding the 802.11g or 802.11n amendments. 02/03/2014 AM Trial Tr. at 31:2-4. The IEEE requested letters of assurance from CSIRO

5. The effect of this factor is discussed later in this Opinion. *See infra* at 24-25.

concerning the ’069 Patent before adopting and ratifying the 802.11g and 802.11n amendments, however, CSIRO declined to grant such letters. 02/04/2014 PM Trial Tr. at 53:8-22; PTX-201; PTX-022 at 20136.

Cisco claims that based on letters sent to wireless industry participants in April and September of 2003, including Linksys, CSIRO agreed to license the ’069 Patent on RAND terms as to 802.11g products. *See* DTX-109. Such letters stated: “The CSIRO patents cover products and methods for wireless networks which comply with at least IEEE Standards 802.11(a) and 802.11(g). The IEEE is aware of our patents, and we have agreed with the IEEE that we will grant licenses under the patents on a reasonable non-discriminatory basis.” *Id.* Cisco contends these letters to industry participants indicate CSIRO believed it had a RAND commitment regarding all 802.11 standards and intended to offer licenses on RAND terms for 802.11 products infringing the ’069 Patent. 02/03/201 AM Trial Tr. at 49:22-50:12. Based on this perceived commitment, Cisco now argues that it is entitled to a RAND rate for all 802.11g, 802.11n, and 802.11ac products.

The evidence shows that CSIRO made no RAND commitment to the IEEE or its members regarding 802.11g or later revisions to the 802.11 standard. 02/04/2014 PM Trial Tr. at 53:8-22; PTX-201; PTX-022 at 20136. Therefore, while CSIRO was free to offer licenses on RAND terms as to products practicing these revisions, it was not contractually obligated to do so. CSIRO’s letters indicate its willingness to license on RAND terms and even a contractual offer to do so. However, it is a fundamental tenant of contract law that acceptance of an offer is required to create a contract. 2 Williston on Contracts § 6:1. Prior to litigation, no participant in the wireless industry sought a license from CSIRO, effectively rejecting the offer. Further, after its initial letters offering to license 802.11g products on RAND terms, CSIRO later clarified to recipients that it did not have any RAND obligation to those products. 02/03/2014 PM Trial Tr. at 55:4-56:16; PTX-140; PTX-245. Because CSIRO provided no letter of assurance creating a binding RAND obligation, and because any voluntary offer by CSIRO to license the '069 Patent technology on RAND terms was rejected, was withdrawn, or lapsed, CSIRO has no RAND obligation to Cisco as to 802.11g, 802.11n, or 802.11ac products. Regardless of CSIRO's RAND commitment, at the hypothetical negotiations the parties would have sought a royalty that each believed accurately valued the '069 Patent.

Reasonable Royalty

Infringement and validity having been stipulated here, the Court must determine the proper damages to be awarded. The parties agree on many factors concerning the appropriate damages model in this case. The damages period for which Cisco is liable runs from July 1, 2005, six years before suit was filed, until November 22, 2013, the date the '069 Patent expired.[6] 35 U.S.C. § 286. They

6. CSIRO asserted that the damages period should be extended 97 days—to begin March 27, 2005—due to a previous agreement between the parties. The date to begin the damages period was

agree that a reasonable royalty is the best approach to determine damages here. The scope of accused products was agreed upon when the parties stipulated to a damages trial. Docket No. 125 at 4-6; *see supra* note 3. Additionally, although the parties disagree on whether end products or wireless LAN chips are the appropriate royalty base, they essentially agree that the total number of accused products is approximately 18,073,797 Linksys products and 1,471,319 Cisco products.[7] PTX-133-1. The parties also agree that a hypothetical negotiation would have occurred in May 2002 between Linksys and CSIRO and in October 2003 between Cisco and CSIRO. 02/04/2014 AM Trial Tr. at 29:4-10 (CSIRO's expert, James Malackowski); 02/06/2014 Trial Tr. at 9:12-10:3 (Cisco's expert, Christopher Bakewell). Further, both parties agree that at the hypothetical negotiation, the parties would have negotiated a reasonable royalty based on a tiered structure, with the royalty decreasing as sales volume increased. *See* 02/06/2014 Trial Tr. at 12:18-20.

CSIRO's Damages Model

CSIRO proposes a reasonable royalty of $30,182,922, calculated by applying a flat fee to each end product

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subject to a motion *in limine* and the Court ruled that the damages period was not extended by the agreement. 01/23/2014 Pretrial Tr. at 62:4-67:4 (Docket No. 295).

7. Cisco bases its damages model on the total number of wireless LAN chips sold. Because some of the accused products contain more than one wireless chip, its total royalty base is higher: 24,775,816 wireless chips sold by Linksys and 1,471,308 for Cisco. DTX-179, Exs. 3.3, 4.3.

unit sold. CSIRO argues that Cisco and Linksys end products—that is, wireless network interface cards ("NICs"), routers, access points, and other wireless network devices—are the smallest saleable patent practicing unit ("SSPPU") because the end product is the only marketable unit which includes a baseband, radio chip, and antenna, all of which are required to practice the asserted claims. 02/04/2014 AM Trial Tr. at 9:17-11:1; *see also* 02/03/2014 PM Trial Tr. at 98:22-99:1. Based on this view, CSIRO calculates damages by attempting to determine the value added to these end products by the technology embodied in the '069 Patent. CSIRO relies on the report and testimony of its expert, Mr. James Malackowski, to perform this calculation and establish what CSIRO asserts is a reasonable royalty.

Central to CSIRO's model is its contention that the improved benefits of 802.11a and 802.11g over 802.11b products are primarily attributable to the technology of the '069 Patent. 02/03/2014 PM Trial Tr. at 100:2-6. CSIRO argues that functions of wireless devices not attributable to the '069 Patent, such as the MAC layer functionality, the network setup and configuration layer, and security features, are basically the same between the accused 802.11a, 802.11g, 802.11ab, and 802.11ag products and 802.11b products, which are not accused. *Id.* at 99:14-23. Based on this claim, CSIRO contends that the difference in profit Cisco captured between accused 802.11a and 802.11g products and unaccused 802.11b products largely represents the value attributable to the '069 Patent. 02/04/2014 AM Trial Tr. at 33:2-20.

To determine this value, Mr. Malackowski began his economic analysis by considering the historical prices of 802.11b, 802.11a, 802.11g, 802.11ab, and 802.11ag products around the time of the hypothetical negotiations. 02/04/2014 AM Trial Tr. at 32:11-15. He compared the profitability of accused 802.11a, 802.11g, 802.11ab, and 802.11ag products, such as wireless NICs and access points, to similar 802.11b products at a similar point in time. *Id.* at 33:2-8. Because the products had the same brand, manufacturing risks, packaging, security, and warranty, Mr. Malackowski argued, the only meaningful difference between the products he compared was the fact that one implemented the unaccused 802.11b standard and the other implemented either the accused 802.11a or 802.11g standard—the primary benefits of which are attributable to the '069 Patent. *Id.* at 33:9-20. Mr. Malackowski conducted his profit premium analysis separately for Linksys and Cisco products. *Id.* at 33:21-23. For each brand he separately compared accused 802.11a, 802.11g, 802.11ab, and 802.11ag end products to equivalent 802.11b products. *Id.* at 34:15-22. For Linksys products, Mr. Malackowski determined that the profit premium ranged from \$6.12 to \$89.93. *Id.* For Cisco products, the range was \$14.00 to \$224.00. *Id.* at 23-25.

Having conducted this first apportionment focused on *Georgia-Pacific* factors 9, 10, and 11, Mr. Malackowski then claims to have performed a second apportionment based on *Georgia-Pacific* factors 8, 12, 13, and a portion of factor 1. *Id.* at 37:16-38:2. For this apportionment, he looked for comparable license agreements and found none. *Id.* at 38:19-39:6. He then considered the commercial success and popularity of the accused products and determined that demand for 802.11g products quickly outstripped demand for 802.11b products, which virtually disappeared from the marketplace shortly after 802.11g products were introduced. *Id.* at 39:11- 40:3. Under *Georgia-Pacific* factor 13, Mr. Malackowski focused on royalty stacking and argued that at the time of the hypothetical negotiation Cisco believed the '069 Patent was the only significant patent it needed to consider with regard to royalties, therefore minimizing any risk of royalty stacking. *Id.* at 40:18-42:20.

Mr. Malackowski then turned to the remaining *Georgia-Pacific* factors: 2, 3, 4, 5, 6, 7, 14, and the balance of factor 1, which he testified were qualitative rather than based on hard data. *Id.* at 45:17-21. He argued factors 4 and 5 favored Cisco and Linksys, indicating a lower royalty, and that factors 8, 9, 10, and 11 would favor CSIRO, suggesting a higher royalty. *Id.* at 45:22-46:3. Factors 1, 2, 3, 6, 7, 12, 13, and 14 were neutral according to Mr. Malackowski, having no effect on the royalty. *Id.* at 46:3-6. Based on all the factors and the analysis he conducted, Mr. Malackowski then relied on his professional experience to determine the final royalty rates, which he concludes would be a volume-tiered rate table ranging from $1.35 to $2.25 per end product sold:

Total Units Sold	**Per Unit Royalty**
0 - 1 million units	$2.25
1 - 2 million units	$2.07
2 - 5 million units	$1.89
5 - 10 million units	$1.71
10 - 20 million units	$1.53
> 20 million units	$1.35

Id. at 46:17-47:5; PTX-133, Ex. 2. To determine actual damages, Mr. Malackowski multiplied the total number of Linksys products and Cisco products sold by the appropriate per unit royalty based on sales volume and determined that total damages are $27,974,493 for Linksys products and $2,208,429 for Cisco products, for a total of $30,182,922. PTX-133, Ex. 2.

Unfortunately, while some portions of Mr. Malackowski's report are informative, it suffers from several fatal flaws that greatly limit its utility to the Court in determining the appropriate damages in this case. The problems with Mr. Malackowski's report extend to both his methodology and analysis.

First, Mr. Malackowski utilizes an inadequate sample size to perform his profit premium analysis. For Linksys products, Mr. Malackowski concludes that the initial profit premium range is from $6.12 to $89.93. *See* PTX-133. To arrive at this conclusion, he compares Linksys's profit on 802.11a, 802.11g, 802.11ab, and 802.11ag products against 802.11b products. The first step in calculating Linksys's profit for each type of product is examining the retail price of the products and then discounting that by retailer gross profit margins. PTX-133, Ex. 7. The problem here is that, according to Mr. Malackowski's report, he considered only a single product from each category of products compared, from a single retailer, at a single point in time. PTX-225. The exhibits included with Mr. Malackowski's report indicate that he used the "Wayback Machine" Internet archive website to research the prices of the various 802.11 products he used in his analysis on the CompUSA website in August 2003. *Id.* In order to draw reliable conclusions concerning the prices of 802.11 products based on a statistical sample, the sample size must be large enough to support those conclusions. Here, a single price point, from a single retailer, at a single point in time is insufficient to support the profit premium outcomes Mr. Malackowski uses as the basis for his analysis. Further, since CSIRO's argument for its proposed royalty is based largely on consumer demand for the improvements provided to 802.11 products by the '069 Patent, price is a critical component of CSIRO's model, and one not adequately evaluated in the evidence CSIRO has presented.[8]

An additional problem arises with Mr. Malackowski's use of retailers' gross profit margins. PTX-133, Ex. 7. To determine Linksys's price premium, he discounts the retail price by the retailer's gross profit margin. *Id.* As discussed above, Mr. Malackowski considered the retail price of products on the CompUSA website in August 2003. However, in determining the retailer gross profit margin he averages the 2001-2003 average gross margins of Amazon, Office Depot, Circuit City, Staples, and Best Buy. PTX-133, Ex. 7.5. Since Mr. Malackowski used CompUSA's prices in his analysis, it stands to reason that CompUSA's profit margin would be the most relevant; however, it is not even considered in his analysis.

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8. For example, one exhibit submitted indicates that CompUSA was offering a $10.00 mail-in rebate in August 2003. PTX-225-F. Although the price considered by Mr. Malackowksi is the pre-rebate price of $79.99, the end price for a savvy consumer was only $69.99 after redeeming the rebate. *Id.*

A more fundamental problem with Mr. Malackowski's methodology becomes obvious simply by considering the initial profit premiums. For Linksys products, Mr. Malackowski's initial profit premium for accused products versus unaccused products ranges from $6.12 to $89.93, a range of over $83. PTX-133, Ex. 8. For Cisco products, the disparity is even greater, with a range of $14.27 to $224.25, or almost $210. *Id.* Although these ranges are only Mr. Malackowski's starting point, the broad disparities indicate the inherent unreliability of this method. With such broad ranges, it is impossible to reliably determine where the value of the patented technology lies.

Significantly compounding these problems is the arbitrary nature of the final apportionment. As Mr. Malackowski testified, with no hard data to consider for *Georgia-Pacific* factors 1, 2, 3, 4, 5, 6, 7, and 14, he can consider these factors only qualitatively. 02/04/2014 AM Trial Tr. at 45:17-21. To arrive at his final royalty rates, Mr. Malackowski "leverages [his] experience in teaching licensing courses and conducting licensing negotiations and having evaluated damages hundreds of times" to reduce his initial ranges of $6.12 to $89.93 for Linksys products and $14.27 to $224.25 for Cisco products to a final royalty range of $1.35 and $2.25. *Id.* at 46:17-47:5. A reliable expert opinion must "carefully tie proof of damages to the claimed invention's footprint in the market place." *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1317 (Fed. Cir. 2011). Although Mr. Malackowski purports to do this, his drastic final apportionment is arbitrary, capricious, and supported by no sound economic methodology.

The lack of economic rigor in Mr. Malackowski's second apportionment is evident in his failure to quantify and fully consider differences not attributable to the '069 Patent when comparing 802.11a, 802.11g, 802.11ab, and 802.11ag products to 802.11b products. For example, 802.11g is backwards compatible with 802.11b, a feature not specifically attributable to the '069 Patent, but which adds value to the consumer. 02/04/2014 PM Trial Tr. at 20:1-4. Products practicing 802.11a operate on a 5 GHz frequency while 802.11b products operate at 2.4 GHz, a factor which decreases range, but allows for less interference. *Id.* at 21:11-22:6. Security and encryption, the MAC layer, and radio functionality all improved over time as newer revisions of the 802.11 standard were implemented. *Id.* at 8:24-9:5. When pressed about how he accounted for these changes—none of which are attributable to the '069 Patent—Mr. Malackowski was unable to cite any quantitative analysis from his report. *Id.* at 9:9-12:23. As Mr. Malackowski testified, "I didn't make . . . specific percentage calculations. That isn't part of my analysis as a math exercise." *Id.* at 11:25-12:3. While Mr. Malackowski explained that these factors were accounted for in his analysis qualitatively, he was unable to cite any objective data in his report that apportions these non-patented features. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 69 (Fed. Cir. 2012) (rejecting expert's apportionment factor that appeared to have been "plucked out of thin air based on vague qualitative notions of the relative importance" of the patented technology).

Finally, the fact that Mr. Malackowski's final rates are higher than rates offered to the wireless industry by

CSIRO shortly after the hypothetical negotiation dates in this case further undermine the reliability of his report. By at least June 2004, CSIRO had developed its Voluntary Licensing Program, through which it offered licenses to the '069 Patent to wireless industry companies. PTX-206. In June 2004, CSIRO contacted Cisco with an offer to license the patent on the terms it had developed as part of this program. PTX-143. The royalty proposed under that license was a flat-fee royalty, charged per end product unit sold, with discounts based on the cumulative volume of units sold. *Id.*, Ex. A. CSIRO also offered discounts based on how quickly Cisco accepted the offer, with the largest discount available if it was accepted within 90 days of the offer, decreasing to a very little discount if it was accepted later than 180 days after the offer. *Id.* This was CSIRO's proposed royalty structure at that time:

	Royalty per product sold				
Days from offer to acceptance:	< 90	< 120	< 150	< 180	> 180
Sales Volume					
0 - 1 million	$1.90	$2.38	$2.85	$3.33	$3.80
1 - 2 million	$1.80	$2.25	$2.70	$3.15	$3.60
2 - 5 million	$1.70	$2.13	$2.55	$2.98	$3.40
5 - 10 million	$1.60	$2.00	$2.40	$2.80	$3.20
10 - 20 million	$1.50	$1.88	$2.25	$2.63	$3.00
> 20 million	$1.40	$1.75	$2.10	$2.45	$2.80

Id. at ex. A. Including the discount for early acceptance, the rates CSIRO offered ranged from $1.40 to $1.90 per end unit.[9] *Id.* CSIRO's Voluntary Licensing Program

9. It is reasonable to infer that if Cisco had begun good faith negotiations with CSIRO within 90 days of the offer, CSIRO would have continued to offer the lowest rates past this deadline due to

indicates that CSIRO would have readily accepted rates in that range for a license to the '069 Patent very shortly after the hypothetical negotiation dates here. Yet, Mr. Malackowski proposes that at the time of the hypothetical negotiations the parties would have agreed to rates ranging from $1.35 to $2.25 per unit. PTX-133, Ex. 2. Illogically, Mr. Malackowksi proposes that at the hypothetical negotiations CSIRO and Cisco would have agreed to prices higher than CSIRO's asking price.

The numerous shortfalls in Mr. Malackowski's report render CSIRO's damages model unreliable for purposes of calculating damages here. There are methodological problems with the profit premium analysis that form the basis of the report, including inadequate sample size and vast initial ranges. Compounding these methodological errors are analytical problems, most especially the failure to adequately apportion, in a quantifiable manner, differences between the accused and unaccused products based on factors not attributable to the '069 Patent. Accordingly, the Court attributes little weight to the damages model proposed by CSIRO in this case.

Cisco's Damages Model

Cisco proposes a damages model with a royalty based on a percentage of wireless LAN chip prices for each chip sold, with the percentage rates capped at the royalty rates included in the Technology License Agreement

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Cisco's market position and the ongoing relationship between CSIRO and Cisco.

("TLA") entered by CSIRO and Radiata on February 23, 1998. 02/06/2014 Trial Tr. at 14:1-8; *see also* PTX-10. Essentially adopting the rates of the TLA, Cisco proposes total damages of no more than $1,100,000, based on the total chips sold in accused Linksys and Cisco products. 02/06/2014 Trial Tr., Sealed Portion 11, at 18:20-22; *see also* Docket No. 250-1, Bakewell Second Supplemental Report, Exs. 3.3, 4.3.

The 1998 TLA included a license to the '069 Patent and established royalty rates Radiata paid CSIRO based on a percentage of the chip price for each chip that Radiata sold. PTX-10 at 12. The rates included a tiered volume discount which decreased the royalty percentage as the volume of chips sold increased. *Id.* The TLA rates for "Derivative Chips"—*i.e.*, chips not based on pre-existing designs provided to Radiata by CSIRO—were:

Sales Volume	**Percentage of Chip Price**
1 — 100,000	5.00%
100,001 — 400,000	4.00%
400,001 — 1,000,000	3.00%
1,000,001 — 3,000,000	1.00%
> 3,000,001	0.50%

Id. In 2001, Cisco acquired Radiata and began making royalty payments to CSIRO under the terms of that agreement.[10] Cisco argues that the TLA is an actual, real-world license, negotiated at arm's length, not clouded by litigation, and occurring prior to inclusion of the '069

10. It is not contested that any Linksys or Cisco products containing chips licensed under the TLA are not accused in this case, since a royalty has already been paid on them.

Patent in any 802.11 standard and prior to the hypothetical negotiations. 02/03/2014 AM Trial Tr. at 42:9-43:19; *see also* 02/06/2014 Trial Tr. at 15:16-16:3. According to Cisco, these factors isolate the value of the patented technology. 02/06/2014 Trial Tr. at 16:4-7.

Cisco further contends that the royalty rates established by the TLA were reaffirmed in the period leading up to the hypothetical negotiation, and therefore the TLA is the best evidence of what CSIRO and Cisco would have agreed to at their hypothetical negotiations. 02/06/2014 Trial Tr. at 14:3-6. In February 2001, the TLA was amended to make Cisco a party to the agreement after Cisco acquired Radiata. *Id.* at 22:17-23:2. Cisco emphasizes that despite the renegotiation that occurred during these amendments, the use of the chip as the royalty base, the royalty structure, and the royalty rates did not change. *Id.* at 23:1-6. The agreement was amended again in 2003 when Cisco sublicensed the manufacturing of chips under the TLA to Marvell. PTX-50 at 3. Because neither CSIRO nor Cisco suggested changing the TLA royalty structure or rates in these amendments, Cisco argues both parties must have agreed that the rates were appropriate and properly compensated CSIRO for a license to the '069 Patent. Also, Cisco contends that because the inventive aspects of the '069 Patent are solely executed by the physical, or PHY, layer of a baseband wireless chip, the chip is the unit most closely tied to the invention and thus chip price is the most appropriate royalty base. *E.g.*, 02/03/2014 AM Trial Tr. 40:20-41:9; 02/05/2014 PM Trial Tr. at 107:10-109:3; 02/06/2014 Trial Tr. 33:15-21.

Cisco's expert on damages, Christopher Bakewell, used the TLA royalty rates and volume discount tiers as the basis for his proposed royalty. Docket No. 250-1 at 176, 182, Bakewell Second Supplemental Exs. 3.5, 4.5. Mr. Bakewell first calculated the weighted average chip cost for both Linksys and Cisco products during the damages period. *Id.* at 190-91, 200, Exs. 5.3, 6.3. He did this by multiplying the number of each specific type of chip sold in Linksys and Cisco products during the relevant time period by the price per chip. *Id.* Mr. Bakewell then multiplied the weighted average chip cost plus antenna cost by the royalty rates from the TLA.[11] *Id.* at 176, 182, Exs. 3.5, 4.5. This provided Mr. Bakewell's royalty for each volume discount tier based on the weighted average chip cost. For Linksys, the royalty rates ranged from \$0.04 to \$0.37 per chip. *Id.* The rates for Cisco ranged from \$0.03 - \$0.33 per chip. *Id.* These effective royalty rates were then multiplied by the total chip sales over the damages period at the applicable volume discount rates. *Id.* at 174, 180, Exs. 3.3, 4.3.

Using this method, Mr. Bakewell proposed a maximum royalty of just over \$900,000 for Linksys products and just over \$150,000 for Cisco products. *Id.* Cisco argues these figures represent the highest royalty it could owe, and further contends there are strong justifications to discount these values. *See, e.g.*, Sealed Portion No. 11, Trial Tr. at 16:1-5 (Mr. Bakewell testifying that he included the cost of

11. Mr. Bakewell included antenna cost in his analysis because the claims technically require an "antenna means" and a chip alone would not technically infringe the asserted claims. *See* 02/03/2014 PM Trial Tr. at 75:16-23; Sealed Portion 11, Trial Tr. at 15:32-16:18.

an antenna in his royalty despite the fact that the inventive aspects of the ’069 Patent reside in the chip); 02/06/2014 Trial Tr. at 31:6-22 (Mr. Bakewell explaining that CSIRO agreed to pay Macquarie University 25% of the royalties from the TLA because only 75% of the royalties were attributable to the ’069 Patent).

Unfortunately, as with Mr. Malackowski’s report and CSIRO’s damages model, Mr. Bakewell’s report and Cisco’s model is informative, but ultimately of limited use to the Court in determining the appropriate damages here. Cisco’s model essentially adopts the royalty rates established in the TLA entered by CSIRO and Radiata in 1998, however Cisco’s reliance on the TLA as a reasonable rate that CSIRO and Cisco would have negotiated in 2002 and 2003 is misplaced.

Although CSIRO and Cisco were both eventually parties to the TLA, the TLA is simply not comparable to the license CSIRO and Cisco would have negotiated for the bulk of Cisco’s products. Radiata was specifically formed by Macquarie University professors David Skellern and David Weste, along with CSIRO scientist and ’069 Patent inventor Terry Percival, to commercialize the technology of the ’069 Patent. 02/03/2014 AM Trial Tr. at 89:14-90:1. During its life, various other CSIRO researchers and at least one other named inventor of the ’069 Patent worked for Radiata. 02/03/2014 PM Trial Tr. at 7:8-12. CSIRO and Radiata had an ongoing relationship that included intellectual property rights, research and development contracts, and even Radiata’s use of office and laboratory space at CSIRO. *Id.* at 10:12-11:3. CSIRO had an interest in commercializing the wireless LAN technology of the '069 Patent. *Id.* at 7:13-20. Radiata needed rights to CSIRO's intellectual property to help CSIRO accomplish that goal. *Id.* at 7:3-5. The connection between CSIRO and Radiata created a special relationship that belies the view that the negotiations leading to the TLA were purely disinterested business negotiations.

The terms of the TLA further indicate that the royalty it established was only one small part of the relationship created by the agreement. The TLA was a development contract and includes provisions dedicated to that purpose. For example, CSIRO did not merely grant Radiata a license to the '069 Patent, but provided Radiata with circuit diagrams, HDL code, and test suites for their chip design. PTX-10 at 12. Radiata was also entitled to a license to the technology of another wireless project CSIRO and Macquarie University were engaged in. *Id.*; 02/03/2014 PM Trial Tr. at 7:21-8:5. In addition to the royalty payments, Radiata had significant obligations to CSIRO, including disclosing its business plans concerning the patented technology, a requirement to use its best efforts to exploit the technology, and minimum performance obligations. PTX-10 at 4. CSIRO was also entitled to a royalty-free license to any improvements Radiata contributed to the technology and an assignment of all rights in those improvements upon termination of the TLA. *Id.* at 6.

Another obstacle to relying on the TLA rates is the timing of the agreement. The TLA was executed in 1998. PTX-10 at 2. The hypothetical negotiations in this case took place in 2002 and 2003. Drastic changes took place in the wireless marketplace during that time period. Commercial viability of the technology escalated sharply as the 802.11a revision was adopted in September 1999, over eighteen months after the TLA was signed, and received a greater boost when the 802.11g revision was ratified in June 2003.[12] The first commercially successful consumer wireless LAN access points and NICs were introduced in this interim. CSIRO and Cisco hypothetically negotiated in a very different wireless landscape than existed when the TLA was adopted in 1998.

Finally, the primary problem with Cisco's damages model is the fact that it bases royalties on chip prices. CSIRO did not invent a wireless chip. Although it is largely undisputed that the inventive aspect of the '069 Patent is carried out in the PHY layer of the wireless chip, the chip itself is not the invention. The '069 Patent is a combination of techniques that largely solved the multipath problem for indoor wireless data communication. The benefit of the patent lies in the idea, not in the small amount of silicon that happens to be where that idea is physically implemented. Compounding this problem is the depression of chip prices in the damages period resulting from rampant infringement which occurred in the wireless industry. 02/04/2014 AM Trial Tr. at 26:3-18. Prior to 2008, outside of the Radiata TLA, no company in the industry sought a license from CSIRO to the '069 Patent and CSIRO received no royalties whatsoever for

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12. This is not an indication that the value of the '069 Patent increased solely because it was included in the standard. Rather, the wireless marketplace as a whole benefited from the adoption of standards.

that technology. 02/03/2014 PM Trial Tr. at 38:21-24; 02/03/2014 AM Trial Tr. at 46:14-21. It is simply illogical to attempt to value the contributions of the '069 Patent based on wireless chip prices that were artificially deflated because of pervasive infringement. Basing a royalty solely on chip price is like valuing a copyrighted book based only on the costs of the binding, paper, and ink needed to actually produce the physical product. While such a calculation captures the cost of the physical product, it provides no indication of its actual value.

Cisco's overreliance on the TLA discredits its entire damages model. Cisco and Radiata presented very different situations for CSIRO and there is no evidence that CSIRO would have entered an agreement similar to the TLA to cover all Cisco products. As with CSIRO's own model, the deficiencies in Cisco's damages model renders it unreliable for the purpose of calculating damages here.

Later CSIRO Licenses

Much of the testimony at trial concerned later license agreements between CSIRO and other parties. Both experts contended that because none of these license agreements were entered before 2008, they were not relevant to what the parties would have negotiated in 2002 and 2003. 02/06/2014 Trial Tr. at 62:15-63:4. The Court agrees. These licenses came much later in time. Most of them arose in the context of settling litigation. While some of these licenses were with end product manufacturers, others were with chip makers. Although here only U.S. sales are at issue, almost all of these later licenses were worldwide in scope and also included licenses to CSIRO intellectual property other than the '069 Patent. Finally, the volume of sales for each license varied widely, from 321 units to over 3 billion units. *See* DTX-192, DTX-193, DTX-194. In accordance with Federal Circuit precedent and due to a lack of any reasonable comparability to the hypothetical negotiation CSIRO and Cisco would have entered, the Court places no weight on these licenses for determining or validating a reasonable royalty.[13] *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 77-78 (Fed. Cir. 2012) (sharply questioning reliance on settlement agreements in establishing reasonably royalties, especially those entered several years after the hypothetical negotiation date).

Hypothetical Negotiation

Left with little guidance from the parties, the Court must evaluate the evidence to determine a viable damages calculation. The parties agree that the hypothetical negotiation would have taken place in May 2002 for Linksys and in October 2003 for Cisco. The Court adopts those dates. A hypothetical negotiation assumes the asserted patent claims are valid and infringed. *Lucent*

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13. The parties and their experts purported to use these licenses as a "reasonableness check." 02/04/2014 AM Trial Tr. Sealed Portion 5 at 3:9-11; 02/06/2014 Trial Tr. Sealed Portion 11 at 23:8-12. The vast difference in the conclusions each party's expert drew from the exact same license agreements belies their use even for that purpose. As shown by each expert's calculations, these license agreements can be manipulated to support almost any preconceived notion.

Techs., 580 F.3d at 1325. Accordingly, the Court need not "discount" the hypothetical rate due to uncertainty regarding validity or infringement.

In a hypothetical negotiation between CSIRO and Cisco, the parties almost certainly would have based a royalty on the sales volume of end products. As previously discussed, shortly after the hypothetical negotiation dates, CSIRO developed its Voluntary Licensing Program. PTX-206. Thus, by June 2004, at the time of the hypothetical negotiations, CSIRO undoubtedly had already adopted many of the concepts behind this program. *Id.* Under the program, CSIRO's goal was to negotiate licenses to the '069 Patent based on finished 802.11 products, such as access points, NICs, and consumer electronics. *Id.* at 8. CSIRO did not believe that components, such as chips, directly infringed and it preferred not to deal with variable suppliers, such as chipset manufacturers. *Id.* at 8-9. Further, since 2009 CSIRO has entered into a number of license agreements for the '069 Patent. *See* DTX-235; DTX-236; DTX-237. While some of these licenses include a flat-rate royalty on end products, there is not a single example that explicitly requires a royalty on the number of chips sold or based on a percentage of chip price. *E.g.*, DTX-237(i); DTX-237(j); 237(k); 237(*l*) (each applying a flat fee royalty payment per end product unit sold). Although these licenses were entered post-hypothetical negotiation, they are indicative of how CSIRO prefers to license its intellectual property. *See Lucent Techs.*, 580 F.3d at 1333-34 (recognizing that courts may consider the "book of wisdom"—post-infringement evidence that may be probative under certain circumstances). Accordingly, a flat rate on each Linksys and Cisco end product sold is the most appropriate royalty and will be applied here.

Lacking reliable external market data, the most reasonable starting points for the royalty rates are based on data points from the parties as close to the hypothetical negotiation dates as possible. *Id.* CSIRO's Voluntary Licensing Program offered willing licensees rates of $1.40 to $1.90 based on sales volume. PTX-206. Although this program was developed after the hypothetical negotiation dates, the rates were based on a valuation study CSIRO commissioned in 2003 and are indicative of the rates CSIRO would have asked for in 2002 and 2003. *See id.* In fact, CSIRO actually offered these exact rates to Cisco in June 2004. PTX-143. Similarly, in October 2005, Dan Lang of Cisco suggested to Denis Redfern of CSIRO—without making a formal offer—the possibility of Cisco paying CSIRO $0.90 in royalties per Cisco enterprise product. 02/04/2014 PM Trial Tr. 48:10-50:2; PTX-79. During this discussion, Mr. Lang mentioned that royalty rates on Linksys products would be discussed later. *Id.* Although not a formal offer, and again, occurring after the hypothetical negotiation dates, Mr. Lang's suggestion is the best evidence available of how Cisco valued the contribution of the '069 Patent near the relevant time period and is the best indicator of Cisco's possible bid price at the time of the hypothetical negotiations. *See id.* Based on these data points, a range of $0.90 to $1.90 is a reasonable starting point for negotiations between the parties in 2002 and 2003.

With these starting points in mind, the *Georgia-Pacific* factors determine what adjustments to these initial rates are appropriate. This is the most common approach applied by courts to determine a reasonable royalty and was used by both parties in developing their own damages models here. As previously discussed, CSIRO had a binding obligation to license the ’069 Patent on RAND terms with regard to 802.11a products. *See supra* at 4-7. Although other courts have made specific adjustments to the *Georgia-Pacific* factors to take a RAND commitment into account, specific adjustments to the overall framework are not necessary here. *See, e.g., In re Innovatio IP Ventures, LLC Patent Litigation*, No. 11-C-9308, 2013 U.S. Dist. LEXIS 144061, 2013 WL 5593609, at *5-8 (N.D. Ill. Oct. 3, 2013); *Microsoft Corp. v. Motorola, Inc.*, No. C10-1823, 2013 U.S. Dist. LEXIS 60233, 2013 WL 2111217, at *18-20 (W.D. Wash. Apr. 25, 2013). In this case, 802.11a products make up an incredibly small percentage of the total products at issue. *See* Docket No. 250-1 (Bakewell Second Supplemental Report) at Exs. 5.1, 6.1 (listing sales of end products in the damages period and indicating that under 0.03% consisted of products practicing only 802.11a). Accordingly, a modified analysis as to only those products would have a *de minimis* impact on the overall royalty. Nonetheless, the parties would have been cognizant of CSIRO’s RAND commitment regarding 802.11a at the time of the hypothetical negotiations. *See* 02/03/2014 PM Trial Tr. at 41:8-11. Therefore, the RAND commitment will be considered where appropriate throughout the analysis.

In this case, several of the factors are neutral and warrant little discussion. Both CSIRO's expert, Mr. Malackowski, and Cisco's expert, Mr. Bakewell, agree that Factors 1, 2, 6, 7, 12, and 13 are neutral. Docket No. 250-3 (Bakewell Expert Report) at 166, 167, 172-73, 173, 198, 205, 213; Docket No. 250-2 (Malackowski Expert Report) at 108, 111, 115, 116, 216, 230. Based on the evidence, the Court agrees these factors are neutral and no adjustment to the baseline royalty rate needs to be made in light of these factors.

Factor 3 considers the nature and scope of the license. Although not explicit, it is reasonable to infer that both Cisco's suggested royalty rate and CSIRO's Voluntary Licensing Program assumed a worldwide license. *See* PTX-79; PTX-206 at 4. Since the Court is considering damages only for infringing sales in the United States, this factor favors adjusting the baseline rates downward.

Factor 4 looks at the licensor's established policies and marketing programs. Here, CSIRO was very willing to license the patented technology, sending offer letters to many wireless industry firms. 02/03/2014 PM Trial Tr. at 25:1-26:3. Further, under its RAND obligation, CSIRO had a binding commitment to license the '069 Patent with regard to 802.11a products. The Court agrees with both experts that this factor favors a downward adjustment of the baseline rates.

Factor 5 focuses on the commercial relationship existing between CSIRO and Cisco. In this case, the parties are not competitors. CSIRO is a government organization focused on research and development.

Cisco and Linksys engage in the marketing and sale of information technology products. CSIRO needed to license the ’069 Patent in order to commercialize and monetize it. Accordingly, this factor favors a downward adjustment of the rates.

Factor 8 considers the profitability of the product practicing the patent, its commercial success, and its current popularity. At the time of the hypothetical negotiations, the market for wireless products was growing rapidly, indicating increased commercial success. Docket No. 250-2 at 114. The technology of the ’069 Patent allowed for wireless data transmission at higher speeds and greater distances compared to existing technology. Although this was not the only factor contributing to the growth of 802.11g products, it was an important one. Further, the IEEE continued to rely on the methods espoused by the ’069 Patent in later 802.11 revisions, despite the fact that CSIRO declined to issue letters of assurance and in the face of ongoing litigation involving the patent. The ’069 Patent therefore played a significant role in the commercial success of 802.11 products. Accordingly, this factor favors an upward adjustment of the royalty rates.

Factors 9 and 10 are often considered together and take into account the utility and advantages of the patented product over older modes and devices and the nature of the patented intellectual property, the character of the commercial embodiment of the patent, and the benefits to those who have used the invention. In the ’069 Patent, CSIRO combined several existing techniques and ideas in a novel way to solve the multipath problem of indoor wireless data transmission. 02/03/2014 AM Trial Tr. at 75:15-77:3; 02/03/2014 PM Trial Tr. at 68:4-11. This solution offered significant improvements to the state of the art, including higher speeds, increased capacity, lower power consumption, and improved scalability. 02/03/2014 PM Trial Tr. at 83:6-24. Alternative technologies in the wireless industry, such as PBCC, MBCK, and PPM, failed to achieve commercial success. *Id.* at 93:5-95:23. As previously discussed, despite several revisions to the 802.11 standard over a period of more than a decade, the core technology of the '069 Patent has remained integral to the standard. Based on the clear benefits the patent has provided to the industry, this factor favors an upward adjustment of the baseline royalty rate.

Factor 11 examines the extent to which the infringer has made use of the invention and evidence probative of the value of the use. The patented technology here has been incorporated into every non-802.11b wireless product sold by Cisco. However, the evidence supporting the value of the use is largely accounted for in the baseline rates. The rate Cisco proposed indicated the value it attributed to the patented technology. Similarly, CSIRO's asking price would have necessarily included the value it placed on the patent. Accordingly, this factor is neutral.

Factor 13 considers the portion of profit realizable that is creditable to the invention. Here, the '069 Patent played a significant role in the profitability of wireless products, as has been discussed. However, Cisco's role in that profitability should not be diminished. Cisco assumed the business risk associated with developing, testing, manufacturing, marketing, selling, and supporting the accused products. Further, all of the accused products contain many features and functions that are in no way attributable to the '069 Patent. Therefore, the Court agrees with both experts that this factor is neutral. Docket No. 250-1 at 213; Docket No. 250-2 at 230.

Factor 14 looks to the opinion testimony of qualified experts. In this case, each party provided a qualified expert witness. Those experts examined the same set of evidence and came to vastly different conclusions. Due to flaws in each expert's analysis, the Court gives very little weight to either expert's conclusion. Accordingly, this factor is neutral.

Factor 15 is the outcome of the hypothetical negotiation. Here, factors 1, 2, 6, 7, 11, 12, and 13 are neutral. Factors 3 and 4 favor a downward adjustment, while factors 8, 9, and 10 favor an upward adjustment. With the sum of the factors essentially in equipoise, CSIRO and Cisco would have been in substantially equal bargaining positions at the hypothetical negotiations. Accordingly, no overall adjustment is needed to the baseline rates and a range of $0.90 to $1.90 is the appropriate outcome of the hypothetical negotiation here.

An additional adjustment is necessary for Linksys products. As previously discussed, Cisco's Dan Lang proposed a rate of $0.90 for Cisco products, with a rate for Linksys products to be discussed later. Because Linksys consumer products have a lower profit margin than Cisco enterprise products, it is reasonable to infer that Cisco would very likely have sought a lower royalty rate for Linksys products. The Wireless Network Business Unit of Cisco had a gross profit margin of 43.1% for fiscal year 2003. Docket No. 250-2, Ex. 14.1. Linksys's gross profit margin in 2002 was 31.1%. *Id.* at Ex. 14.2. A reduction in the royalty rates equal to the proportional difference in profit margin is appropriate. In light of Linksys's 27.4% lower profit margin, the appropriate range for Linksys products is therefore the Cisco range discounted by 27.4%, resulting in a range of $0.65 to $1.38.

CSIRO proposed discounts equally distributed across six volume-based tiers. *See supra* at 12. The Radiata TLA included a similar volume-discount structure, though at much lower volume levels. *See supra* at 17. Although Cisco proposed adopting the TLA volume tiers here, due to Cisco's vastly different role in the wireless market than Radiata, the TLA volume tiers are not appropriate for Cisco. Combined Linksys and Cisco sales easily reached the TLA's highest volume discount tier of 3 million units by 2004, very shortly after the hypothetical negotiations and long before the expiration of the patent. *See* Docket No. 250-1 at Ex. 2.1; *see also* 02/04/2014 PM Trial Tr. at 28:5-29:18. Based on Cisco's much higher expected sales volume compared to Radiata, CSIRO's proposed volume discount tiers from its Voluntary Licensing Program are much more appropriate.

Using the tiers from CSIRO's Voluntary Licensing Program and applying the discount proportionally across the ranges adopted here, $0.65 to $1.38 for Linksys products and $0.90 to $1.90 for Cisco products, the following rate table results:

Appendix B

	Royalty per unit sold	
Sales Volume	**Linksys**	**Cisco**
0 — 1 million:	$1.38	$1.90
1 — 2 million:	$1.23	$1.70
2 — 5 million:	$1.09	$1.50
5 — 10 million:	$0.94	$1.30
10 — 20 million:	$0.80	$1.10
> 20 million:	$0.65	$0.90

Sales volume is not disputed and the volume discounts apply beginning at the time of the hypothetical negotiations. Therefore, the royalty calculations begin in 2004. Appendix A shows the total sales for Linksys and Cisco products beginning in 2004, split across the volume discount tiers of the royalty rate table.[14] By multiplying the appropriate royalty rate by the number of products sold in each volume tier, the total royalties Cisco would have paid from 2004 until patent expiration in 2013 equal $19,516,438 for Linksys products and $2,466,817 for Cisco products. *See* Appendix A. However, the statutory damages period began on July 1, 2005, six years prior to the filing of this suit. 35 U.S.C. § 286; *see supra* at 8-9, n.5. Accordingly, damages owed on sales prior to July 1, 2005 must be subtracted from the total royalty amount to determine the proper damages. Royalties attributable to sales prior to July 1, 2005 equal $4,844,388 for Linksys products and $895,798 for Cisco products. Subtracting these pre-damage period royalties from the total royalties leaves damages owed of $14,672,050 for Linksys products

14. Following Mr. Malackowski's suggestion, Linksys and Cisco product sales are totaled for purposes of the volume sales tiers. 02/04/2014 AM Trial Tr. at 49:21-23.

and $1,571,019 for Cisco products. Total damages owed to CSIRO by Cisco are therefore $16,243,069.

CONCLUSION

Having considered all the evidence and for the reasons stated herein, a reasonable royalty based on hypothetical negotiations between CSIRO and Cisco would have resulted in a flat rate assessed per infringing end product unit sold with an increasing discount based on total volume of products sold. Applying this to the undisputed royalty base, the Court awards damages to CSIRO for Cisco's stipulated infringement of the '069 Patent in the amount of $16,243,067. Although CSIRO does have a RAND obligation to Cisco regarding 802.11a products, that obligation does not change the calculation of the damages awarded. Cisco is entitled to no further relief based on its affirmative defenses.

CSIRO is also entitled to prejudgment interest. The parties are **ORDERED** to meet and confer in good faith to determine the appropriate interest rate and amount within thirty days of this Order. If the parties reach agreement, they **SHALL** file notice with the Court within forty-five days of this Order. If no agreement is reached, the parties **SHALL** file a joint statement of up to fifteen pages outlining each party's position within forty-five days of this Order.

Also, after considering the parties' Rule 52(c) Motions, all relief requested in those Motions has been addressed herein. Accordingly, both Motions are **DENIED AS MOOT.**

So ORDERED and SIGNED this 23rd day of July, 2014.

/s/

LEONARD DAVIS
UNITED STATES DISTRICT JUDGE

APPENDIX C — ORDER OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT ON PANEL REHEARING AND REHEARING *EN BANC*, FILED FEBRUARY 25, 2016

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

2015-1066

COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION,

Plaintiff-Appellee,

v.

CISCO SYSTEMS, INC.,

Defendant-Appellant.

Appeal from the United States District Court for the Eastern District of Texas in No. 6:11-cv-00343-LED, Chief Judge Leonard Davis.

ON PETITION FOR PANEL REHEARING AND REHEARING *EN BANC*

Before Prost, *Chief Judge*, Newman, Lourie, Dyk, Moore, O'Malley, Reyna, Wallach, Taranto, Chen, Hughes, and Stoll, *Circuit Judges*.

Per Curiam.

ORDER

Appellee Commonwealth Scientific and Industrial Research Organisation filed a combined petition for panel rehearing and rehearing *en banc*. A response to the petition was invited by the court and filed by appellant Cisco Systems, Inc. The petition was referred to the panel that heard the appeal, and thereafter the petition for rehearing *en banc* was referred to the circuit judges who are in regular active service.

Upon consideration thereof,

IT IS ORDERED THAT:

The petition for panel rehearing is denied.

The petition for rehearing *en banc* is denied.

The mandate of the court will issue on March 3, 2016.

FOR THE COURT

February 25, 2016	/s/ Daniel E. O'Toole
Date	Daniel E. O'Toole
	Clerk of Court

APPENDIX D — 35 U.S.C. § 284

TITLE 35 - PATENTS

§ 284. Damages

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

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

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