United States Court of Appeals for the Federal Circuit

VERSATA SOFTWARE, INC. (formerly known as Trilogy Software, Inc.), VERSATA DEVELOPMENT GROUP, INC. (formerly known as Trilogy Development Group, Inc.), AND VERSATA COMPUTER INDUSTRY SOLUTIONS, INC. (formerly known as Trilogy Computer Industry Solutions, Inc.),
Plaintiffs-Cross Appellants,

v.

SAP AMERICA, INC. AND SAP AG,
Defendants-Appellants.

2012-1029, -1049

Appeals from the United States District Court for the Eastern District of Texas in No. 07-CV-0153, Magistrate Judge Charles Everingham.

Decided: May 1, 2013

MIKE MCKOOL, McKool Smith, P.C., of Dallas, Texas, argued for plaintiffs-cross appellants. With him on the brief were DOUGLAS A. CAWLEY; SCOTT L. COLE and JOEL L. THOLLANDER, of Austin, Texas.

J. MICHAEL JAKES, Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., of Washington, DC, argued for defendants-appellants. With him on the brief were MICHAEL A. MORIN, JOHN M. WILLIAMSON and JENNIFER K. ROBINSON. Of counsel on the brief were JAMES R. BATCHELDER and LAUREN N. ROBINSON, Robert & Gray L.L.P., of Palo Alto, California; DAVID J. BALL, JR., Paul, Weiss, Rifkind, Wharton & Garrison L.L.P, of Washington, DC; KATHERINE K. LUTTON, Fish & Richardson, P.C., of Redwood City, California; JOHN W. THORNBURGH, JUSTIN M. BARNES and CRAIG E. COUNTRYMAN, Fish & Richardson, P.C., of San Diego, California; KEVIN R. HAMEL, SAP America, Inc., of Newtown Square, Pennsylvania. Of counsel was KENNETH A. GALLO, Paul, Weiss, Rifkind, Wharton & Garrison L.L.P, of Washington, DC.

Before RADER, *Chief Judge*, PROST and MOORE, *Circuit Judges.*

RADER, *Chief Judge.*

After a jury verdict of infringement with an award of damages in favor of Versata Software, Inc., Versata Development Group, Inc., and Versata Computer Industry Solutions, Inc. (collectively "Versata"), SAP America, Inc. and SAP AG (collectively "SAP") appeal. Ultimately, the trial court found no infringement of the U.S. Patent No. 5,878,400. The jury found infringement of three claims of U.S. Patent No. 6,553,350. Subsequently, the trial court denied SAP's motions for judgment as a matter of law (JMOL) or a new trial, awarded prejudgment interest, and entered a permanent injunction. Although affirming the jury's infringement verdict and damages award, this court vacates as overbroad the permanent injunction and remands for the district court to enter an order that conforms to this opinion.

I.

This invention relates to "the field of computer-based pricing of products." '350 Patent, col. 1, l. 10. In the competitive commercial marketplace, sales representatives often strive to provide particularized pricing for customers in a timely fashion. Yet, precise product pricing depends on a variety of factors including type of product (e.g., a single product versus a bundle or customized product); the size of the customer; the type of customer (e.g., a wholesaler versus a distributor); and the customer's geographic location. *Id.* at col. 1, ll. 45–52.

In the early 1990s, a different pricing table stored each pricing factor. Applying these factors to a single transaction required accessing and applying large amounts of data stored in a large central database. *Id.* at col. 1, ll. 25–26. Assuming each product is sold at a price particularized for each purchaser, a selling organization with ten thousand products and ten thousand purchasers would need pricing tables with one hundred million entries.

In the prior art computerized pricing engines, each pricing factor usually required separate database queries. The numerous tables were stored on a mainframe computer, the customer order was entered into a central billing system, and the mainframe would perform the pricing calculation by separately accessing each applicable data set. *Id.* at col. 2, ll. 21–27, 56–63. Thus, determining a final price was highly inefficient. Sifting through this data meant that customers would often wait several days to get an accurate price. *Id.* at col. 1, ll. 29–36. The delay often caused lost sales. *Id.*

The claimed invention leverages hierarchical product and data structures to organize pricing information. Hierarchical pricing involves a "WHO" (the purchasing organization or customer) and a "WHAT" (the product). *Id.* at col. 3, ll. 24–27. The WHO is defined by "creating

an organizational hierarchy of organizational groups" such as "Customer Type," "Customer Size," and "Geography." *Id.* at Fig. 4A; col. 3, ll. 25–32. One or more customers may be members of each organizational group, and each customer may be a member of more than one organizational group. *Id.* Thus, when a customer is selected, the system identifies all the groups to which the customer belongs as well as all corresponding price adjustments. Similar hierarchies are constructed for products. This hierarchical pricing engine used less data than the prior art systems and offered dramatic improvements in performance.

In 1995 and 1996, Versata both commercialized its hierarchical pricing engine and filed a patent application covering the invention. The commercial embodiment was a software called "Pricer," and it received praise as a "breakthrough" that was "very innovative." J.A. 1304. The '400 Patent issued in 1999. The '350 Patent, a continuation of the application which led to the '400 Patent, issued in 2003.

The praise for Pricer was borne out in its sales. Between 1995 and 1998, Pricer customers included many large companies—called "Tier 1" companies at trial—such as IBM, Lucent, Motorola, and Hewlett-Packard. Pricer Tier 1 customers generated an average of $5 million in revenue and $3 million in profit for Versata. Versata sold Pricer either as a package with other Versata software or as a bolt-on addition to enterprise systems offered by companies like SAP.

SAP provides software solutions for thousands of companies, governments, and nonprofits around the globe. SAP's Enterprise Resource Planning ("ERP") and Customer Relationship Management ("CRM") software runs most processes needed by these institutions, including financials, accounting, materials management, procurement, supply-chain planning, human resources, and

pricing. While Versata's patent application was pending, SAP designed and released a new version of its enterprise software that contained hierarchical pricing capability.

Before SAP launched its new software, it stated the planned software would be like Versata's Pricer. When SAP ultimately released its software in October 1998, it bundled the hierarchical pricing capability into its full enterprise software to discourage the use of bolt-on products like Pricer. J.A. 8479.

Following the announcement and launch of SAP's new hierarchical pricing engine, Pricer sales faltered. Versata's win-rate on sales offerings of Pricer dropped from 35 percent to 2 percent. While Versata retained many of its previously-won Pricer customers, Versata decided to discontinue heavy investment in marketing because SAP had destroyed its market. Versata maintained Pricer as a product offering, but made no new sales as SAP's bundled software took hold.

In 2007, Versata sued SAP for infringement of both the '400 Patent and the '350 Patent. With respect to the '400 Patent, Versata asserted infringement of independent claim 31 and dependent claims 35 and 36. Each claim requires "computer readable program code configured to cause a computer to" perform a set of claimed operations, including accessing customer and product hierarchies in order to determine a price. '400 Patent, col. 23, ll. 10–52, 62–67.

With respect to the '350 Patent, Versata asserted infringement of independent claim 29 and dependent claims 26 and 28. Claims 26 and 28 require "computer instructions to implement" the claimed operations. '350 Patent, col. 21, ll. 61–62. Claim 29 requires "computer program instructions capable of" retrieving "pricing information" from both customer and product hierarchies. '350 Patent, col. 22, ll. 21–35.

This suit resulted in two jury trials. During the first trial, Versata's expert presented evidence that SAP's software used hierarchical pricing. One method he used was a demonstrative data setup. Using and configuring the inherent functions of SAP's software, the expert performed hierarchical access on customer and product hierarchies.

The jury found that SAP directly infringed the asserted claims of the '400 and '350 Patents, SAP induced and contributed to infringement of claim 29 of the '350 Patent, and the asserted claims were not invalid. The jury awarded $138,641,000 in damages. SAP moved for judgment as a matter of law of noninfringement of both patents and for a new trial on damages.

For the '400 Patent, the trial court reasoned that the claim language "configured to cause" required that the SAP products, "as made and sold, contain computer code or program instructions sufficient to perform the operations recited in the claims without additional modification or configuration, or the addition of further program instructions." J.A. 155. It found that Versata's infringement case emphasized SAP's product as configured by Versata's expert, not how the software was made or sold. *Id.* Thus, the trial court granted JMOL of noninfringement of the '400 Patent. However, the trial court denied SAP's JMOL of noninfringement of the '350 Patent, finding that substantial evidence supported the jury's determination. Lastly, the court granted a motion for new trial on damages based on a change in governing law.

Before the second trial began, SAP attempted to eliminate any basis for future infringement. Specifically, SAP modified its products with a software patch. The modification essentially prevented users from saving data into certain fields relating to hierarchical access.

The second trial focused on damages. Because SAP's software patch was designed to eliminate infringement in

products after May 2010, the jury was required to determine the effectiveness of the patch in avoiding infringement as part of damages. The jury concluded that, even with the software patch, the accused products still infringed.

The jury also evaluated two damages theories: lost profits and reasonable royalties. For lost profits, Versata focused on Pricer sales it lost to Tier 1 SAP customers. Versata claimed this consisted of 93 lost sales, and it put forward evidence regarding demand, the absence of noninfringing alternatives, and the capacity to sell Pricer in this market. Defendants did not put on evidence of a competing lost profits model and instead offered expert testimony critiquing Versata's model. Versata's evidence persuaded the jury which awarded $260 million in lost-profits damages.

With respect to reasonable royalties, the district court precluded Versata from putting forward its damages model. SAP, however, put forward a reasonable royalty model which included comparable software called Khimetrics. The jury heard evidence that Khimetrics had an average per customer royalty of $133,200. The jury awarded reasonable royalties of $85 million.

Following the second trial, SAP again moved for JMOL, claiming Versata failed to prove it was entitled to lost profits and that the reasonable royalty verdict lacked evidentiary foundation. The trial court denied the motion and granted Versata's motion for a permanent injunction. This cross-appeal followed. The court has jurisdiction under 28 U.S.C. § 1295(a).

II.

SAP's appeal focuses on three issues: (1) whether the district court erred after the first trial in refusing to grant a JMOL of noninfringement of the '350 Patent; (2) whether the district court erred after the second trial in refusing

to overturn the lost profits and reasonable royalties award; and (3), whether the district court erred by granting an overbroad permanent injunction. Versata, on the other hand, claims the district court erred by granting JMOL of noninfringement of the '400 Patent and by excluding the reasonable-royalty testimony of Versata's expert.

The infringement and damages issues raised by both sides concern motions for JMOL, and are reviewed under regional circuit law. *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1323 (Fed. Cir. 2008). The Fifth Circuit applies an "especially deferential" standard of review "with respect to the jury verdict." *Brown v. Bryan Cnty.*, 219 F.3d 450, 456 (5th Cir. 2000). The jury may only be reversed if there is no substantial evidence supporting the verdict. Thus, a JMOL may only be granted when, "viewing the evidence in the light most favorable to the verdict, the evidence points so strongly and overwhelmingly in favor of one party that the court believes that reasonable jurors could not arrive at any contrary conclusion." *Dresser-Rand Co. v. Virtual Automation, Inc.*, 361 F.3d 831, 838 (5th Cir. 2004); *Brown*, 219 F.3d at 456. The evidentiary and injunction rulings are reviewed for abuse of discretion. *See Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1379 (Fed. Cir. 2008) (addressing permanent injunctions); *Vargas v. Lee*, 317 F.3d 498, 500 (5th Cir. 2003) (addressing *Daubert* challenges).

III.

SAP claims the trial court's failure to grant a JMOL of noninfringement of the '350 Patent was two-fold error. First, it argues that its software cannot infringe because the software is not capable of performing customer and product hierarchies without added computer instructions. Second, it claims the software does not use "denormalized numbers" in its pricing tables.

Based on the parties' stipulated construction, claims 26 and 28 require "computer instructions causing a computer to implement" the claimed operations. J.A. 10006. Claim 29 requires "computer instructions capable of" performing those same operations. '350 Patent, col. 22, l. 21. Portions of the record clearly support the jury's conclusion that SAP's accused products infringe the asserted claims without modification or additional computer instructions.

Versata's expert explained SAP's source code to the jury. He testified that SAP's programmers left notes in source code explaining how the code works, and he showed these notes to the jury. These notes or comments explained "the implementation of customer hierarchies" as well as how to display product hierarchies. J.A. 1445; 1450. Other comments stated that hierarchical access was the default for condition records. Condition records are how the software stores data relating to customers or products. The jury also saw SAP documents explaining that the accused hierarchical access feature was designed "[e]specially for hierarchical data such as that representing a product hierarchy or a customer hierarchy." J.A. 2100. Versata's expert concluded that the code was written by SAP engineers "so that it could perform the [claimed] functions . . . . [The] writing of that code means that the code has been configured to implement these particular functions or to be able to cause the computer to do these things." J.A. 1504.

The most telling evidence was the expert's demonstrative data setup. The expert used the inherent functionality of SAP's software to conduct hierarchical pricing based on customer and product hierarchies. Specifically, the expert used the SAP interface to set up four pricing elements: a pricing calculation function; a pricing procedure; a condition table; and an access sequence. The expert testified that this data setup did not require any modification to SAP's source code, and that SAP's accused

products all included the code to accomplish his demonstration. In essence, the expert confirmed his theories that the accused software was capable of performing the claimed functionality by making the software perform the function without modifying the software.

SAP does not dispute that its software, as set up by Versata's expert, performed the claimed functionality. Instead, it claims that Versata did not prove that SAP's software, as shipped to the customer, infringed the '350 Patent. It argues that the claim language "computer instructions capable of" and "computer instructions causing a computer to implement" are not directed to source code. Rather, the language requires that the software, as shipped, contain computer instructions to perform the claimed functionality. In its view, the expert's data setup added new computer instructions to SAP's software, thereby changing and modifying a noninfringing product into an infringing product.

SAP misinterprets the claim language. The only claim construction affecting these terms was the stipulated construction of "computer instructions to implement" which the parties agreed means "computer instructions causing a computer to implement." It does not appear that SAP requested any claim construction of the term "computer instructions," much less a construction that limits the phrase to exclude source code or require that the patented function be "existing as shipped" in the computer instructions. SAP cannot now collaterally attack the claim construction it has agreed to. *Function Media L.L.C. v. Google Inc.*, 708 F.3d 1310, 1321–22 (Fed. Cir. 2013) (noting a party may not object to a claim construction it proposed or agreed to); *Lazare Kaplan Int'l, Inc. v. Photoscribe Techs., Inc.*, 628 F.3d 1359, 1376 (Fed. Cir. 2010) ("As we have repeatedly explained, litigants waive their right to present new claim construction disputes if they are raised for the first time after trial.") (internal quotation omitted).

Whether "computer instructions" can include source code thus becomes a pure factual issue. Versata's expert testified that the source code is a computer instruction. He then presented evidence that the code, without modification, was designed to provide the claimed functionality. SAP cross-examined the expert, but the jury ultimately chose to credit the expert's testimony and documentary evidence. SAP has not met the high standard needed to disregard the jury's fact-finding function on this issue. *See Bagby Elevator Co. v. Schindler Elevator Corp.*, 609 F.3d 768, 773 (5th Cir. 2010) (giving great deference to the jury's findings and verdict); *Agrizap, Inc. v. Woodstream Corp.*, 520 F.3d 1337, 1342–43 (Fed. Cir. 2008) (stating that this court owes the jury great deference in its role as the factfinder).

SAP also misinterprets the expert's data setup. As this court has previously explained, when "a user must activate the functions programmed into a piece of software by selecting those options, the user is only activating the means that are already present in the underlying software." *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1205 (Fed. Cir. 2010); (quoting *Fantasy Sports Props. v. Sportsline.com, Inc.*, 287 F.3d 1108, 1118 (Fed. Cir. 2002). While "a device does not infringe simply because it is possible to alter it in a way that would satisfy all the limitations of a patent claim," *High Tech Med. Instrumentation v. New Image Indus., Inc.*, 49 F.3d 1551, 1555 (Fed. Cir. 1995), an accused product "may be found to infringe if it is reasonably capable of satisfying the claim limitation," *Finjan*, 626 F.3d at 1204 (quoting *Hilgraeve Corp. v. Symentec Corp.*, 265 F.3d 1336, 1343 (Fed. Cir. 2001)).

Versata's expert did not alter or modify SAP's code in order to achieve the claimed functionality. Rather, he followed SAP's own directions on how to implement pricing functionality in its software and activated functions already present in the software: data structures,

access sequences, pricing procedures, and condition types. SAP's own expert admitted that each alleged alteration was part of the software's capability, that it was not unusual for customers to perform the same actions, and that it was "expected that SAP's customers who use the pricing functionality" will use it with a similar data setup. J.A. 2509. Furthermore, he testified that SAP expects its customers to set up access sequences, specific pricing procedures, and specific condition types. This record clearly supports the jury's finding of infringement of the '350 Patent. The trial court correctly refused JMOL on this ground.

SAP's second argument regarding infringement relates to denormalized numbers. The term "denormalized numbers" is not in the asserted claims. However, the trial court construed the term "pricing adjustment" as meaning "a denormalized number that may affect the determined price." J.A. 263. The parties stipulated that "denormalized number" means: "a number, used as a price adjustment, that does not have fixed units and may assume a different meaning and different units depending on the pricing operation that is being performed." The application of the number occurs during "run time," i.e., while the software is calculating the price and not during data entry.

SAP argues the record does not show that the accused software used denormalized numbers during run-time. Instead, Versata showed that a user can (1) first enter a number and the later select a meaning for that number or (2) edit numbers after they have been entered but before run-time. These theories all relate to data entry—not software interpretation of the denormalized numbers during run-time.

Again, sufficient evidence supports the jury's verdict. Versata's expert testified that SAP's software contains numbers without "fixed units." The numbers can assume

a different meaning depending on which pricing operation is being performed by the software.

The expert also compared SAP's software to the prior art which did not use denormalized numbers. The prior art used fixed units in the pricing tables, for example 10 dollars or 10 percent, so the computer "already knows, without looking at any other information, that that's going to be dollars . . . [or] a percent." J.A. 1414. SAP's new software on the other hand did not use fixed numbers and "the computer can't know [the units or] what the operation is without looking at" other information. J.A. 1427–29. The computer considers the other necessary information during run time. Lastly, SAP's expert admitted on cross-examination that both the association between units and numbers, and the application of those numbers, occurs during run-time.

This court carefully considered the remainder of SAP's arguments on infringement and finds no reversible error. Sufficient evidence supports the jury's verdict of infringement of the '350 Patent, and the trial court correctly denied SAP's motion for JMOL of noninfringement of the '350 Patent.

IV.

SAP also challenges the jury's award of lost profits. Lost-profits damages are appropriate whenever there is a "reasonable probability that, 'but for' the infringement, [the patentee] would have made the sales that were made by the infringer." *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (Fed. Cir. 1995) (en banc). A showing under the four-factor *Panduit* test establishes the required causation. *Rite-Hite*, 56 F.3d at 1545. These factors include: "(1) demand for the patented product, (2) absence of acceptable noninfringing alternatives, (3) [capacity] to exploit the demand, and (4) the amount of profit [the patentee] would have made." *Panduit Corp v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir.

1978). Causation of lost profits "is a classical jury question." *Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555, 1578 (Fed. Cir. 1992).

According to SAP, the jury's lost profits award should be set aside for four reasons. The first two reasons relate to the methodology used by Versata's expert. SAP avers that Versata's "but for" model is "inconsistent with sound economic principles," and thus "[the expert's] opinion should have been excluded from evidence." Appellant's Br. 46. Similarly, SAP claims Versata's expert did not adhere to the *Panduit* framework because he used multiple markets thereby rendering his analysis "legally defective." *Id*. at 50.

The court rejects these two arguments as improperly raised. Under the guise of sufficiency of the evidence, SAP questions the admissibility of Versata's expert testimony and whether his damages model is properly tied to the facts of the case. Such questions should be resolved under the framework of the Federal Rules of Evidence and through a challenge under *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993). *See ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 515, 522–23 (2012) (affirming a trial court's decision to exclude expert testimony under *Daubert* because it was analytically flawed and unreliable); *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1314–16 (Fed. Cir. 2011) (noting that to carry its burden under Federal Rule of Evidence 702, the patentee must sufficiently "tie the expert testimony on damages to the facts of the case").

SAP's briefs and statements at oral argument confirm that its arguments should have been resolved under the framework of *Daubert* and the Federal Rules of Evidence. In its briefs, SAP argues that the expert's testimony should have been excluded from evidence, the jury "should have never heard any lost profits theory," that "the district court should not have permitted Versata's expert to

present his lost profits theory," and that his analysis is "legally defective." Appellant's Br. 46–47, 50. At oral argument, SAP's counsel stated that the expert's testimony "should not have been admitted," and that "it should have been excluded." Oral Argument at 14:00–15:00, *Versata Software v. SAP America*, (Fed. Cir. 2013) (No. 2012-1029, -1049), *available at* http://www.cafc.uscourts.gov/oral-argument-recordings/search/audio.html.

Whether evidence is inadmissible is a question clearly within the scope of the rules of evidence and *Daubert*. However, SAP has not appealed a *Daubert* ruling. Instead, it argues that the jury could have not had sufficient evidence to award lost profits because the expert's testimony was fatally flawed and should not have been admitted. This is the improper context for deciding questions that, by SAP's own admissions, boil down to the admissibility of evidence.

SAP's other challenges to the lost profits award clearly relate to the sufficiency of evidence under *Panduit* and are thus properly before the court. SAP claims there is no evidence to show demand for the patented product (*Panduit* factor 1). Specifically, SAP argues that Versata could not present evidence of demand during the damages period (which started in 2003) because Versata did not sell Pricer to anyone, even non-SAP customers, after 2001.

Patentees may prove lost profits through presenting a hypothetical, "but for" world where infringement has been "factored out of the economic picture." *Grain Processing Corp. v. Am. Maize-Prods. Co.*, 185 F.3d 1341, 1350 (Fed. Cir. 1999). While the hypothetical, but-for-world must be supported with sound economic proof, "[t]his court has affirmed lost profit awards based on a wide variety of reconstruction theories." *Crystal Semiconductor Corp. v. TriTech Microelectronics Int'l, Inc.*, 246 F.3d 1336, 1355 (Fed. Cir. 2001). Here, the record supports the jury's

finding of demand for the patented functionality in a "but for" world.

Versata showed there was demand for hierarchical pricing before SAP entered the market. Between 1995 and 1998, Versata made at least 61 sales of Pricer. At least 21 sales were "Pricer-isolated," meaning Pricer was the only product purchased from Versata. Versata's average win rate before SAP entered the market was 35 percent. Even SAP's expert admitted there was demand for Pricer during this period. This evidence of demand is especially probative since it is a picture of a world in which Versata enjoyed market exclusivity similar to that which it would have had in a hypothetical world absent SAP's infringement.

When SAP entered the market by bundling hierarchical pricing into its enterprise software, the market for Pricer disappeared. Versata made no sales of Pricer during the damages period of 2003 to 2011. However, Versata showed that demand for the patented functionality remained. In 2007, SAP internal documents stated there was "customer need[]" for hierarchical access, and "having that capability is key" to SAP's business. J.A. 3480. During litigation, Versata sent written discovery questions to several SAP customers. Forty customers responded, and many use both customer and product hierarchies.

SAP argues Versata cannot show demand because it made no sales of Pricer during the damages period. Usually, "the patentee needs to have been selling some item, the profits of which have been lost due to infringing sales." *Poly-America, L.P. v. GSE Lining Tech., Inc.*, 383 F.3d 1303, 1311 (Fed. Cir. 2004). However, the act of "selling" an item does not necessarily mean the item must be "sold." Here, Versata was selling Pricer during the damages period. Versata need not have actually sold Pricer during the damages period to show demand for the

patented functionality, particularly given the economic reality that SAP had eroded the market for Pricer through bundling hierarchical access into its own software.

The *Panduit* factors do not require showing demand for a particular embodiment of the patented functionality, here Versata's Pricer software. *See Presidio Components, Inc. v. Am. Technical Ceramics Corp.*, 702 F.3d 1351, 1360 (Fed. Cir. 2012). Nor does it require any allocation of consumer demand among the various limitations recited in a patent claim. *DePuy Spine Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1330 (Fed. Cir. 2009). In other words, the *Panduit* factors place no qualitative requirement on the level of demand necessary to show lost profits. Versata showed demand for its product before SAP entered the market, and it showed continued demand for the patented feature during the damages period. SAP had the ability to cross-examine and rebut this evidence. SAP's expert even prepared an alternative lost profit model but SAP chose not to present this evidence to the jury. The court finds sufficient evidence of demand in this record and declines to disturb the jury's determination.

SAP also argues Versata did not prove the quantum of its lost profits with reasonable probability (*Panduit* factor 4). Specifically, it argues Versata's but-for world makes assumptions about demand and price elasticity that are inconsistent with the real world, and that Versata did not account for market forces other than infringement that might have caused its alleged losses.

Versata's expert calculated lost profits using the following method. First, he identified a pool of potential customers: Tier 1 customers who had purchased SAP's software. The record showed that Tier 1 customers were "larger companies" and "more likely to benefit from Pricer's unique value propositions." J.A. 44. In the Tier 1

market, SAP made 480 sales of infringing products during the damages period of 2003 to 2011. Versata's expert then removed from this pool the 45 SAP customers who had previously licensed Pricer, and thus were not lost to SAP. The initial pool was therefore 435 customers.

Next, the expert determined how many of those 435 customers Versata would have won but for SAP's infringement. The expert used Versata's historic win-rate of 35 percent as a starting point, meaning Versata usually converted about a third of customers it targeted for Pricer into actual clients. The expert applied this percentage to the pool of customers and concluded that Versata would have been able to sell Pricer to 152 of the 435 SAP customers.

Had the expert stopped at this point, SAP's challenge might have more weight. A direct application of Versata's historic win-rate would not necessarily reflect the differences in economic conditions between 1996 and 2003. It also assumes Versata would have immediately resumed selling Pricer at the 1996–98 rates.

However, Versata's expert did account for some market pressures. He recognized that Versata would not likely resume making sales in 2003 at the same pace it had achieved in 1998. He concluded that Versata "could have ramped up and made these additional sales beginning in roughly, April 2003 at the same pace at which it ramped up and made actual sales when it had an exclusive beginning in 1996." J.A. 3725. The expert then further discounted the pool of lost customers and concluded Versata lost 93 sales to SAP during the 8-year damages period. This is an average 21 percent win-rate over the whole damages period.

Next, the expert calculated the value of each lost sale. To isolate Pricer's value in relation to Versata's other software offerings, the expert differentiated between "Pricer-isolated sales" and general sales of Pricer. Pricer-

isolated sales were those where Versata only sold Pricer, and they provide evidence of the value attributable to Pricer alone. The expert concluded that the base value of each lost sale was approximately $1.8 million. He then accounted for the additional revenue streams that would follow on a sale through maintenance and consulting agreements. The final conclusion was that Versata would have made approximately $3 million in profit per sale lost to SAP. Multiplying the pool of lost sales by the amount lost per sale would have resulted in an award of $285 million. The jury awarded $260 million.

SAP's protestations that the award does not reflect market or economic variables are belied by the record. As noted above, the expert discounted the win rate to account for time Versata would need to ramp-up its sales. The expert also discounted his sales value calculations to account for the costs associated with making those sales. He accounted for "the direct costs of making those sales, plus costs associated with research and development efforts, plus costs associated with . . . selling, general and administrative expenses." J.A. 3726. He also accounted for price elasticity when calculating the number of lost sales. The expert testified that if he had used a lower price (or even a declining price scale) when valuing the lost sales, the lower price would have been offset by additional lost sales: a lower price results in greater demand.

As the trial court noted, "the final number . . . was not the product of speculation, but was based on sound economic proof confirmed by the historical record." J.A. 46. As such, Versata made a *prima facie* showing of lost profits and the burden shifted to SAP to prove that a different rate would have been more reasonable. *Rite-Hite*, 56 F.3d at 1545. SAP did not make such a showing. Therefore, this court affirms the jury's award of lost profits.

V.

In addition to lost profits, the jury awarded $85 million in royalties. A reasonable royalty is the statutory floor for damages in an infringement case. *See* 35 U.S.C. § 284. Because the district court precluded Versata's expert from presenting a reasonable royalty analysis, the only evidence for a royalty award came from SAP's expert.

A reasonable royalty may be calculated using one of two baselines: "an established royalty, if there is one, or if not, upon the supposed result of hypothetical negotiations between the plaintiff and defendant." *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1357 (Fed. Cir. 2012) (quoting *Rite–Hite*, 56 F.3d at 1554). "The hypothetical negotiation seeks to determine the terms of the license agreement the parties would have reached had they negotiated at arm's length when infringement began." *Id.*

SAP's expert conducted a full hypothetical negotiation analysis using the factors in *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970). The expert stated that a software called Khimetrics was comparable to Pricer for the purposes of valuing the hypothetical license. The expert noted that 12 customers had agreed to pay SAP for this add-on functionality. He concluded that the reasonable royalty rate should be around $2 million in a lump sum payment.

On cross-examination, SAP's expert confirmed that Khimetrics was a proper comparable bolt-on product, that SAP had sold Khimetrics to 12 customers, and that the average sales price per customer for Khimetrics was $333,000. He also stated that an appropriate royalty rate would have been 40 percent of the $333,000 per customer, yielding a royalty of $133,200 per customer. The expert also agreed that, after subtracting the number of lost sales covered under the lost profits award, SAP had made roughly 1300 infringing sales. The expert then stated

that if his proposed per customer royalty rate was applied to every infringing sale, the damages should be $170 million. Versata's counsel confirmed this calculation with the following question:

> Q. So, if the jury believed that your per-customer royalty rate [of $133,200] should be applied to every infringing sale instead of just twelve [sales], then the number is not $2 million but $170 million.
>
> A. That would be the correct math.

J.A. 4227.

In spite of this testimony from its own expert, SAP now questions the royalty award. It claims the $2 million royalty estimate "already compensated Versata for the full scope of infringement," and thus it was improper to extrapolate a per customer royalty from the royalty estimate. Appellant's Br. 58. SAP also claims the award violates the entire market value rule. Neither argument has merit.

SAP's expert did not equivocate when he stated that the revenue generated by his proffered comparable license was $333,000 per Khimetrics customer. The expert did not dispute that he proposed a 40 percent royalty. He did not contradict or question the number of SAP's infringing sales. Thus, SAP's assertion that the expert intended his calculation to be a lump sum covering all of SAP's infringing sales is belied by his own testimony.

Furthermore, the award cannot violate the entire market value rule. The entire market value rule is a narrow exception to the general rule that royalties are awarded based on the smallest salable patent-practicing unit. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 67 (Fed. Cir. 2012). "A patentee may assess damages based on the entire market value of the accused product only where the patented feature creates the basis

for customer demand or substantially creates the value of the component parts." *SynQor, Inc. v. Artesyn Technologies, Inc.*, --- F.3d ----, 2013 WL 950743, *13 (Fed. Cir. 2013) (quoting *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011))..

Here, the expert did not apply his 40 percent royalty rate to the entire value of SAP's infringing products. The royalty rate was applied to the value of Khimetrics' sales. Rather, the expert merely accounted for all infringing sales. Thus, the entire market value exception was never triggered, and Versata was not required to show that demand for hierarchical pricing drove demand for SAP's product as whole. *See LaserDynamics, Inc.*, 94 F.3d at 67.

The trial court, in denying SAP's motion for JMOL, correctly noted that SAP "cannot legitimately challenge the comparability of its own comparable." J.A. 51. The jury used common sense and merely applied SAP's proposed royalty to a larger number of infringing sales than SAP desired. *See Huffman v. Union Pac. R.R.*, 675 F.3d 412, 421 (5th Cir. 2012) (noting the jury is free to "draw inference on the basis of common sense, common understanding and fair beliefs, grounded on evidence consisting of direct statement by witnesses or proof of circumstances from which inferences can fairly be drawn") (internal quotations omitted). While the jury awarded less than the $170 million calculated by SAP's expert, the jury is not bound to accept the maximum proffered award and may choose an intermediate rate. *Powell v. Home Depot U.S.A., Inc.*, 663 F.3d 1221, 1241 (Fed. Cir. 2011). The question is whether the award is not "so outrageously high . . . as to be unsupportable as an estimation of a reasonable royalty," *Rite*-Hite, 56 F.3d at 1554, and is "within the range encompassed by the record as a whole," *Powell*, 663 F.3d at 1241 (quoting *Unisplay, S.A. v. Am. Elec. Sign Co.*, 69 F.3d 512, 519 (Fed. Cir. 1995)). This court concludes that award satisfies these standards and is supported by substantial evidence.

VI.

Following the resolution of post-trial motions, the trial court entered a permanent injunction. SAP argues the injunction is overbroad because it prohibits SAP from offering maintenance and additional seats for SAP's current customers. "Additional seats" refers to increasing the number of users covered under a specific license. SAP does not challenge the portion of the injunction that prohibits it from offering the accused functionality in new sales of its software.

The injunction uses two key terms: the "Infringing Products" and "the Enjoined Capability." J.A. 4–5. The enjoined capability is the capability to execute a pricing procedure using hierarchical access of customer and product data. As repeatedly noted in the briefs and in the record, the enjoined capability represents only a fraction of the features contained in the infringing products. SAP's bundling is one of the reasons cited by Versata for the destruction of Pricer's market.

Yet, the injunction states that SAP "shall not (a) charge to or accept payment of software maintenance from that customer with respect to any of the *Infringing Products* in the United States; or (b) license or sell any new 'seats' or otherwise charge to or accept license revenue from that customer in connection with any of the *Infringing Products* in the United States." J.A. 5 (emphasis added). While this court does not agree entirely with SAP's arguments against the injunction, it appears the trial court erred by placing emphasis on SAP's product as a whole. SAP should be able to provide maintenance or additional seats for prior customers of its infringing products, so long as the maintenance or the additional seat does not involve, or allow access to, the enjoined capability. Therefore, this court vacates the above language from the permanent injunction and remands for the

trial court to modify its order in accordance with this opinion.

VII.

This court has considered the remainder of SAP's arguments and finds no reversible error. Additionally, by Versata's own admission, there is no need to address any of the issues raised in its cross-appeal. *See* Cross-Appellant Br. 69–70. Based on the reasons above, this court affirms the jury's infringement decision and concomitant damages awards. However, the court vacates part of the trial court's permanent injunction and remands for further proceedings consistent with this opinion.

AFFIRMED-IN-PART, VACATED-AND-REMANDED-IN-PART

Costs to Versata.