United States Court of Appeals for the Federal Circuit

CYNTEC COMPANY, LTD.,
Plaintiff-Appellee

v.

CHILISIN ELECTRONICS CORP., CHILISIN AMERICA LTD.,
Defendants-Appellants

2022-1873

Appeal from the United States District Court for the Northern District of California in No. 4:18-cv-00939-PJH, Judge Phyllis J. Hamilton.

Decided: October 16, 2023

STEFFEN NATHANAEL JOHNSON, Wilson, Sonsini, Goodrich & Rosati, PC, Washington, DC, argued for plaintiff-appellee. Also represented by PAUL HAROLD, JENNIFER LIU; CHRISTOPHER D. MAYS, JAMES C. YOON, Palo Alto, CA; LUCY YEN, New York, NY; GEORGE E. POWELL, III, Wilmer Cutler Pickering Hale and Dorr LLP, Washington, DC.

JONATHAN J. LAMBERSON, White & Case LLP, Palo Alto, CA, argued for defendants-appellants. Also represented by HENRY HUANG; HALLIE ELIZABETH KIERNAN, New York, NY.

Before MOORE, *Chief Judge*, STOLL and CUNNINGHAM, *Circuit Judges*.

STOLL, *Circuit Judge*.

This patent infringement case raises issues of obviousness, infringement, and damages. Cyntec Company, Ltd. sued Chilisin Electronics Corp., alleging infringement of certain claims of Cyntec's U.S. Patent Nos. 8,922,312 (the '312 patent) and 9,481,037 (the '037 patent). Before closing arguments, the district court granted judgment as a matter of law (JMOL) that the asserted claims were not invalid as obvious. The jury then found that Chilisin infringed the asserted claims and awarded the full amount of damages requested by Cyntec. Chilisin now appeals the district court's grant of JMOL of nonobviousness, the district court's denial of Chilisin's motion for JMOL regarding noninfringement and damages, and the district court's denial of Chilisin's motion to exclude Cyntec's damages expert testimony as speculative. For the reasons explained below, we affirm in part, reverse in part, vacate in part, and remand.

BACKGROUND

I

The '312 patent is directed to molded chokes and the '037 patent is directed to a method of manufacturing molded chokes. A choke is a type of inductor used to eliminate undesirable signals in a circuit. Chokes are found in most modern electronics that use batteries or a power supply. Molded chokes are formed by placing coiled conducting wire inside a mold, filling that mold with magnetic powder(s) and a binding adhesive, compressing the mold, and heating the mold to solidify the adhesive.

The '312 and '037 patents teach that mixing magnetic powders generally requires effective annealing—a heating

process to reduce a choke's core loss, reduce strain, and increase permeability. The patents disclose that the high temperatures required by effective annealing have caused problems such as melting wire insulation, oxidizing components, and risking short circuits.[1] '312 patent col. 13 ll. 46–52; J.A. 9781 (Trial Tr. 399:2–15). The patents purport to solve these problems by improving core loss without high-temperature annealing by using a first magnetic powder and a second magnetic powder, with the particles of the first magnetic powder being larger and harder than those of the second magnetic powder. '312 patent col. 1 ll. 59–67; *see* J.A. 9494–95 (Trial Tr. 187:12–188:6). The specification explains that this combination of powders causes the strain to be transferred to the smaller, softer powder, which allows formation of the integral magnetic body "at the temperature lower than the melting point of the insulating encapsulant of the conducting wire." '312 patent col. 2 ll. 14–37; J.A. 9787 (Trial Tr. 405:5–13).

Claim 1 of the '312 patent is representative and recites:

> 1. An electronic device, comprising:
>
> a first magnetic powder;
>
> a second magnetic powder, wherein the mean particle diameter of the first magnetic powder is larger than the mean particle diameter of the second magnetic powder, the Vicker's Hardness of the first magnetic powder is greater than the Vicker's Hardness of the second magnetic powder by a first hardness difference, and the first magnetic powder mixes with the second magnetic powder; and

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[1] The '312 and '037 patents share a common ancestor, but their specifications differ. Consistent with the parties' briefing, we cite primarily to the '312 patent.

> a conducting wire buried in the mixture of the first magnetic powder and the second magnetic powder, wherein the conducting wire comprises an insulating encapsulant and a conducting metal encapsulated by the insulating encapsulant;
>
> wherein *by means of the first hardness difference of the first magnetic powder and the second magnetic powder, the mixture of the first magnetic powder and the second magnetic powder and the conducting wire buried therein are combined to form an integral magnetic body at a temperature lower than the melting point of the insulating encapsulant*.

'312 patent col. 14 ll. 5–26 (emphasis added to the disputed claim limitation ("by means of" limitation)).

II

Cyntec sued Chilisin for patent infringement, alleging that Chilisin willfully manufactured and sold infringing chokes. J.A. 110–12.

The district court initially construed the "by means of" limitation consistent with its "plain meaning, which does not require construction." *Cyntec Co. v. Chilisin Elecs. Corp.*, No. 18-cv-00939-PJH, 2019 WL 2548191, at *9 (N.D. Cal. June 20, 2019). At summary judgment, Chilisin argued that the "by means of" limitation required that the formation temperature must be "due to the fact that there is a hardness difference between the two magnetic powders." J.A. 2764 (emphasis omitted). The district court determined Chilisin's argument "add[ed] a limitation to the plain and ordinary meaning of [the 'by means of' limitation] that does not find support in light of the specification." *Cyntec Co. v. Chilisin Elecs. Corp.*, No. 18-cv-00939-PJH, 2020 WL 5366319, at *8 (N.D. Cal. Sept. 8, 2020) (*Pretrial Motions Order*). In addition, the district court instructed the jury to "apply the ordinary meaning of [the 'by means of' limitation] with the understanding that the hardness

difference has an impact on the temperature, but is not the only potential cause of the lower temperature." J.A. 9439 (Trial Tr. 132:9–18).

Prior to trial, Chilisin moved to exclude the testimony of Cyntec's damages expert, Bryan Van Uden, alleging that his proposed importation calculations were speculative and unreliable. The district court denied Chilisin's motion because "[Mr.] Van Uden's opinions rely on data sources that are sufficiently reliable that a jury can determine whether the assumptions made in his calculations were valid." *Pretrial Motions Order*, 2020 WL 5366319, at *20.

At trial, Chilisin presented evidence to the jury on invalidity, arguing that the asserted claims would have been obvious in view of Shafer[2] as modified by Nakamura.[3] After Cyntec's rebuttal testimony, but before Chilisin could cross-examine Cyntec's technical expert, the district court heard initial motions for JMOL. Cyntec moved for JMOL of nonobviousness, arguing that Shafer and Nakamura were missing claim elements, J.A. 10628 (Trial Tr. 1151:15–17), and that Chilisin "cannot meet [the] clear and convincing evidence standard as to why [Shafer and Nakamura] would be combined," *id.* (Trial Tr. 1151:17–19). The district court granted Cyntec's motion. *See* J.A. 10636 (Trial Tr. 1159:11–23).

To prove damages, Cyntec presented a market-share lost profits theory. J.A. 9942 (Trial Tr. 560:18–23). Cyntec asserted that 27 companies purchased Chilisin's accused chokes outside the United States and then placed them into devices that were then imported into the United States. *See* Appellant's Br. 55 (citing J.A. 9926–28 (Trial Tr. 544:25–546:20); and J.A. 15819). Cyntec's expert

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[2] U.S. Patent No. 6,460,244.

[3] Japanese Unexamined Patent Application No. 2005-294458.

opined that Cyntec was entitled to a total damages award of $1,872,956, with $1,552,493 in lost profits and $320,463 in reasonable royalties.[4] J.A. 9997 (Trial Tr. 604:15–23). The jury returned a verdict in favor of Cyntec, awarded the full amount requested by Cyntec, and found that Chilisin willfully infringed the claims. J.A. 10780–81, 10783; *see Cyntec Co. v. Chilisin Elecs. Corp.*, No. 18-cv-00939-PJH, 2022 WL 1443232, at *15 (N.D. Cal. May 6, 2022) (*Post-Trial Order*).

Following the verdict, Chilisin moved for JMOL and a new trial on the issues of invalidity, infringement, and damages, but the district court denied these motions. *See generally Post-Trial Order*, 2022 WL 1443232, at *1–11. The district court granted Cyntec's motion for enhanced damages, "result[ing] in a total lost profits damages award of $4,602,671 and a total reasonable royalties award of $950,573, for a total damages award of $5,553,244." *Id.* at *16.

Chilisin appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

We review a district court's grant or denial of JMOL under the standard of the regional circuit, here the Ninth Circuit. *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1040 (Fed. Cir. 2016) (en banc). The Ninth Circuit reviews JMOL rulings de novo, applying the same standard for JMOL as the district court. *Dees v. County of San Diego*, 960 F.3d 1145, 1151 (9th Cir. 2020). Like the standard for summary judgment, JMOL requires that we "view the evidence in the light most favorable to the nonmoving party . . . and draw all reasonable inferences in that party's

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[4] The reasonable royalties award is not at issue on appeal.

favor." *Id.* (quoting *EEOC v. Go Daddy Software, Inc.*, 581 F.3d 951, 961 (9th Cir. 2009)).

I

Chilisin contends that the district court erred in granting JMOL that the asserted claims are not invalid as obvious because of factual disputes that should have been given to the jury. We agree.

Obviousness presents an ultimate legal question with numerous underlying factual findings. *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1167 (Fed. Cir. 2015) (citing *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17 (1966)). These underlying findings of fact set the foundation for the ultimate determination of obviousness. *Graham*, 383 U.S. at 17–18. These factual questions include: "(1) the scope and content of the prior art, (2) differences between the prior art and the claims at issue, (3) the level of ordinary skill in the pertinent art, and (4) the presence of objective indicia of nonobviousness such as commercial success, long felt but unsolved needs, failure of others, and unexpected results." *Elbit Sys. of Am., LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1357 (Fed. Cir. 2018). "[I]t is error to reach a conclusion of obviousness until all th[e *Graham*] factors are considered." *Apple Inc.*, 839 F.3d at 1048. Whether a skilled artisan would have been motivated to combine references is also a fact question that would ordinarily be reserved for a jury. *See id.* at 1051.

We hold that the district court erred in granting JMOL to Cyntec on the issue of nonobviousness. Chilisin presented the jury with evidence that would have allowed it to reasonably find the asserted claims obvious in view of Shafer and Nakamura. For example, the jury heard expert testimony that Nakamura discloses embodiments of electronic devices having two magnetic powders in which the mean particle diameter of the first magnetic powder is larger than the mean particle diameter of the second

magnetic powder, and the hardness of the first magnetic powder is harder than that of the second magnetic powder. *See* J.A. 10491 (Trial Tr. 1018:10–18); *see also* J.A. 11353 ¶ 32. The jury also heard expert testimony that a skilled artisan would have been motivated to "improve the performance" of Shafer—a prior art reference that discloses an inductor with a wound coil buried in a mixture of "a first powdered iron" and "a second powdered iron"—by using a larger and harder magnetic powder with a smaller and softer magnetic powder as taught by Nakamura because when smaller objects are placed between larger objects in the same space, the overall density increases, which would "improve the performance of the device." J.A. 10493 (Trial Tr. 1020:19–22); *see* J.A. 11411–13. The expert further explained that "[b]y mixing and pressure-molding comparatively soft and extremely hard powders," a skilled artisan can achieve "better permeability and core losses," as well as improvement in "anti-drop characteristics." J.A. 10496–97 (Trial Tr. 1023:23–1024:20). Taken together and drawing all reasonable inferences in Chilisin's favor, this evidence is enough for a reasonable jury to have found that the asserted claims would have been obvious.

The district court reasoned that JMOL was appropriate because (1) "Shafer . . . doesn't disclose the hardness or the size" of the claimed magnetic powders, J.A. 10636 (Trial Tr. 1159:11–16); and (2) "even [Shafer] in combination with Nakamura" does not render the patent obvious because Chilisin's evidence was "neither clear nor convincing," *id.* (Trial Tr. 1159:17–23). But these conclusions are either insufficient to support JMOL or unsupported by the record. First, Chilisin did not rely on Shafer to teach the hardness or size limitations. Rather, as explained above, the jury heard testimony that while Shafer did not disclose the hardness and size limitations, a person of ordinary skill in the art would look to Nakamura for guidance on desired characteristics of the first and second powders to improve performance, including embodiments in which the mean

particle diameter of the first magnetic powder is larger than the mean particle diameter of the second magnetic powder and the hardness of the first magnetic powder is harder than that of the second magnetic powder.

Second, even under a clear and convincing evidence standard, we are not convinced that Chilisin's evidence was so meritless as to warrant judgment as a matter of law. Indeed, we conclude that, given the evidence identified above, a reasonable jury could have found the asserted claims obvious in view of Shafer as modified by Nakamura. Therefore, we reverse the district court's JMOL of nonobviousness and remand.

II

We next turn to the issue of infringement. Chilisin challenges the jury verdict, alleging that it rests on an erroneous construction of the "by means of" limitation. Alternatively, Chilisin asserts that, even under the district court's claim construction, the jury's finding of infringement is not supported by substantial evidence. We address each argument in turn.

A

Chilisin challenges the district court's construction of the "by means of" limitation and its jury instruction regarding that limitation. Chilisin specifically argues that a proper construction requires that hardness is the primary—or "but for"—cause of the claimed reduced formation temperature. Appellant's Br. 28–32. The district court rejected this narrow construction, instructing the jury that the claim only requires that the hardness difference "have an impact on" the reduced formation temperature. J.A. 9439 (Trial Tr. 132:9–18). The "by means of" limitation recites:

> wherein by means of the first hardness difference of the first magnetic powder and the second magnetic powder, the mixture of the first magnetic

> powder and the second magnetic powder and the conducting wire buried therein are combined to form an integral magnetic body at a temperature lower than the melting point of the insulating encapsulant.

'312 patent col. 14 ll. 20–26.

Claim construction based on the intrinsic evidence—e.g., the claim language and the specification—"is a question of law that this court reviews de novo." *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 973 (Fed. Cir. 2021). Based on our review of the claim language and specification, we conclude that the district court did not err in construing the "by means of" claim term.

First, the plain language of the claim recites only that two magnetic powders and a conducting wire are "combined to form an integral magnetic body at a temperature lower than the melting point of the insulating encapsulant" "by means of the first hardness difference of the first magnetic powder and the second magnetic powder." The key phrase "by means of" is certainly broad enough to include but for causation. But the phrase is also broad enough to capture mere contribution. Had the patent drafter intended to limit the claims to but for causation, narrower language could have been used in the claim. For example, instead of "by means of," the patent drafter could have recited "by exclusive (or primary) means of" or wherein the hardness difference is the "sole" or "primary" means of lowering the formation temperature.

Second, nothing in the specification requires that the hardness difference have the primary or "but for" impact on the formation temperature. We acknowledge that the specification discloses a preferred embodiment where "the hardness difference of the first magnetic powder and the second magnetic powder can determine the smaller core loss of the electronic device; in other words, the ratio of the hardness of the first magnetic powder to the hardness of

the second magnetic powder has a higher priority than the ratio of the mean particle diameter of the first magnetic powder to the mean particle diameter of the second magnetic powder." '312 patent col. 2 ll. 21–28. The specification also describes an objective "to lower the temperature for annealing more than two mixed magnetic powders of different sizes to form an integral magnetic body by using the hardness differences between the magnetic powders." *Id.* at col. 1 ll. 54–58. The specification, however, does not require that the hardness differences be the primary or only cause of the reduced formation temperature. Rather, the specification's statements show that both hardness differences and size differences contribute to influence the formation temperature. *See, e.g.*, *id.* at col. 2 ll. 13–21 ("Specifically, optimization of the ratio of the hardness of the first magnetic powder to the hardness of the second magnetic powder *and* the ratio of the mean particle diameter of the first magnetic powder to the mean particle diameter of the second magnetic powder largely reduces the strains of the mixture . . . , and thus the core loss of the electronic device is reduced." (emphasis added)). Furthermore, Chilisin conceded in its renewed motion for JMOL that the "testimony at trial confirmed that both size *and* hardness differences may impact formation temperature." J.A. 10852; *see* J.A. 9776 (Trial Tr. 394:5–8), J.A. 9786–87 (Trial Tr. 404:14–17, 405:5–13).

Accordingly, we agree with the district court that the plain language of the claims, read in view of the specification, requires only that "the hardness difference has an impact on the [formation] temperature but is not the only potential cause of a lower [formation] temperature." *Pretrial Motions Order*, 2020 WL 5366319, at *7. We similarly find no reversible error in the district court's jury instruction, as it was consistent with its construction.

B

Having adopted the district court's construction, we turn to Chilisin's challenge to the jury's infringement finding under that construction. Whether an accused device reads on a properly construed claim presents a question of fact that we review for substantial evidence. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1309 (Fed. Cir. 2009). "We presume the jury resolved all underlying factual disputes in favor of the verdict." *Apple Inc.*, 839 F.3d at 1040 (citing *SSL Servs., LLC v. Citrix Sys., Inc.*, 769 F.3d 1073, 1082 (Fed. Cir. 2014)).

Chilisin argues that there is not substantial evidence to support the jury's finding of infringement. Chilisin specifically contends that the proffered evidence did not answer the question of whether particle size or hardness differences of the magnetic powders in the accused products impacted the formation temperature.

We conclude that there is substantial evidence to support the jury's finding of infringement. For example, Cyntec's expert Dr. Paul Kohl, citing experimental data, explained how the differences in hardness impacted the accused chokes' formation temperature. Specifically, Dr. Kohl testified that the hardness difference between the alloy and iron powder in the accused chokes has a "direct impact" on the manufacturing temperature of the Chilisin molded chokes. J.A. 9787 (Trial Tr. 405:5–8). He explained to the jury that the hardness difference made it so "the strain was not induced in the large particle," and "[t]hey did not have to go to a high temperature, above the melting point of the insulator on the wires." *Id.* (Trial Tr. 405:8–11). He further explained that "[i]t was directly because of this hardness difference [that] they could avoid that high-temperature step." *Id.* (Trial Tr. 405:11–13); *see also* J.A. 9792–93 (Trial Tr. 410:8–411:18); J.A. 10623–25 (Trial Tr. 1146:8–1148:1); J.A. 9578–82 (Trial Tr. 253:17–254:9, 255:9–257:23). The jury also heard testimony from

Cyntec's vice-president that, from a business perspective, "mixing different powders of different sizes and hardnesses [was] important" and that high-temperature annealing reduces reliability. J.A. 9493–95 (Trial Tr. 186:25–188:6). Given the proffered evidence and the jury instructions, the jury was entitled to reasonably reach its factual finding. *See Bayer Healthcare*, 989 F.3d at 980 (explaining that "the jury was in the best position to determine" the persuasiveness of expert testimony). Therefore, the district court did not err in denying Chilisin's motion for JMOL of noninfringement.

III

We now turn to the damages issue. Chilisin argues that the district court erred in denying its *Daubert* motion to exclude testimony from Cyntec's expert, Mr. Van Uden. Appellant's Br. 49–54. Because we find that the district court abused its discretion in denying Chilisin's *Daubert* motion, we reverse the district court's denial and vacate the damages award.[5]

"When reviewing damages in patent cases, we apply regional circuit law to procedural issues and Federal Circuit law to substantive and procedural issues pertaining to patent law." *MLC Intell. Prop., LLC v. Micron Tech., Inc.*, 10 F.4th 1358, 1367 (Fed. Cir. 2021) (quoting *Whitserve, LLC v. Comput. Packages, Inc.*, 694 F.3d 10, 26 (Fed. Cir. 2012)). The Ninth Circuit reviews evidentiary rulings, such as decisions on *Daubert* motions, "for abuse of discretion and reverse[s] if the exercise of discretion is both erroneous and prejudicial." *Wagner v. County of Maricopa*, 747 F.3d 1048, 1052 (9th Cir. 2013).

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[5] Chilisin also challenges the district court's denial of its motion for JMOL regarding lost profits. Appellant's Br. 54–61. Because we vacate the damages award, we need not reach this issue.

The district court serves as a gatekeeper to "ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 589 (1993). Indeed, the Federal Rules of Evidence "leave in place the 'gatekeeper' role of the trial judge in screening such evidence." *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 142 (1997).

A review of our precedent regarding exclusion of unreliable damages expert testimony is instructive. In *Power Integrations v. Fairchild Semiconductor International, Inc.*, the patentee accused Fairchild of infringing claims directed to power supplies in electronic devices. 711 F.3d 1348, 1357 (Fed. Cir. 2013). At trial, the patentee's damages expert used "worldwide sales data for Samsung's mobile phones to estimate sales of the accused power circuits, which Samsung incorporated into its mobile phone chargers." *Id.* at 1372. In vacating the damages award, we held that the district court abused its discretion in admitting the damages expert's testimony because it was unreliable. We explained that the damages expert "made two speculative leaps." *Id.* at 1373. First, he had relied on documents pertaining to worldwide shipments of mobile phones, but the infringing power circuits were found in chargers, not the phones themselves. Thus, the damages expert "assumed that each . . . phone[] shipped with a charger," an assumption not supported by the evidence. *Id.* Second, in relying on these documents, the damages expert assumed "not only that each . . . shipment[] included a charger, but that each of these chargers incorporated an infringing power circuit." *Id.* at 1374. The panel explained that the relied-upon documents gave no "indicia from which [the damages expert] could reasonably infer that chargers assumed to be included incorporated Fairchild's infringing power circuits." *Id.*

More recently, in *Niazi Licensing Corporation v. St. Jude Medical S.C., Inc.*, the patentee Niazi accused St. Jude of infringing an apparatus claim for a double catheter

and a method claim of placing an electrical lead in a specific vein using a double catheter. 30 F.4th 1339, 1343–44 (Fed. Cir. 2022). Niazi's damages expert calculated a damages estimate that included the sales of four components used to practice the claimed method because these components were purportedly "the smallest saleable component[s]." *Id.* at 1357. The district court found that the expert improperly "included in his damages calculations sales of *all* of St. Jude's outer catheters, inner catheters, guide wires, and leads, even though it was undisputed that *not all of those sold devices had been used to practice the claimed method*." *Id.* (emphases added). We agreed that the damages expert's "failure to account for noninfringing uses of the sold devices was legally improper" and affirmed the district court's exclusion of the expert's opinion. *Id.* at 1357–58.

In the present case, Cyntec's damages expert, Mr. Van Uden, estimated the amount of Chilisin's sales of accused products imported into the United States ("importation calculations") using U.S. Securities and Exchange Commission (SEC) filings or annual reports of customers who purchased or acquired any of the alleged infringing products, as well as third-party data from Gartner Research. J.A. 3963 ¶ 111; J.A. 9927–29 (Trial Tr. 545:2–7, 546:8–14, 546:21–547:9) (using Apple as an example to "estimate what portion of Apple's sales are actually made to the U.S."). Mr. Van Uden determined each customer's importation rate by dividing the customer's U.S. revenue by its total worldwide revenue. J.A. 3963 ¶ 112; *see* Appellee's Br. 53 ("Comparing sales made to the United States with sales made elsewhere, [Mr. Van Uden] was able to determine a U.S. importation rate for each company."). By "[m]ultiplying Chilisin's accused revenues made outside of the U.S. by the U.S. importation rates for each identified customer," Mr. Van Uden estimated the "infringement revenue subject to . . . damages." J.A. 3963 ¶ 113. Mr. Van Uden determined that Chilisin's indirect sales to the

United States was approximately $ 9.8 million. J.A. 9931–32 (Trial Tr. 549:24–550:7). Mr. Van Uden also estimated that Cyntec's market share ranged from 31.2 percent to 39.4 percent. J.A. 9970 (Trial Tr. 577:21–25). Then, "us[ing] this market share number, [he] applied it to the sales subject to damages, [yielding an estimate of] Cyntec's lost sales of approximately $3.8 million." J.A. 9971 (Trial Tr. 578:16–18).

The district court denied Chilisin's motion to exclude Mr. Van Uden's importation calculations, finding that Mr. Van Uden's "opinions rel[ied] on data sources that are sufficiently reliable that a jury can determine whether the assumptions made in his calculations were valid." *Pretrial Motions Order*, 2020 WL 5366319, at *20.

This was error. The revenue reported in the customers' annual reports cited by Mr. Van Uden included sales of irrelevant products and services, and he failed to account for these irrelevant products and services. For example, Mr. Van Uden's importation calculations for Apple Inc. use the reported revenue for 2016–2019 from Apple's Form 10-K. *See* J.A. 4091; J.A. 11099–100. But Apple's 10-K reported revenue includes revenue received from services and products that do not even contain chokes. *See* J.A. 11045–46 (Apple's 2020 Form 10-K, defining its "Services" as advertising, warranty services, cloud services, digital content, and payment services); Apple Inc., Annual Rep. (Form 10-K), at 21 (Oct. 29, 2020) (stating that the "total net sales" consisted of sales of iPhones, Macs, iPads, Wearables, Home and Accessories, and Services).[6]

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[6] As the parties did not include all relevant pages in the appendix, we take judicial notice of Apple's 2020 Form 10-K. An appellate court "may take judicial notice of court filings and other matters of public record." *Reyn's Pasta Bella, LLC v. Visa USA, Inc.*, 442 F.3d 741, 746 n.6

Mr. Van Uden's use of the reported revenue did not differentiate between what products would or would not incorporate the accused chokes. Mr. Van Uden therefore assumed all of Apple's products imported into the United States contained the accused chokes, a mistake he repeated for other customers. J.A. 10021–25 (Trial Tr. 628:19–632:21); J.A. 10370–71 (Trial Tr. 897:4–898:4).

Cyntec argues Mr. Van Uden "did not . . . assume that every [third party] product contained an accused choke," and argues that he instead "estimated the portion of accused chokes that are imported by starting with Chilisin's actual sales data, and then applying reliable data showing importation rates for products sold by Chilisin's customers incorporating the infringing chokes." Appellee's Br. 57–58. But as we explained above, this data for calculating importation rates contains the sales of products and services that cannot or do not contain the accused chokes. Like the erroneous assumptions in *Power Integrations* and *Niazi*, Mr. Van Uden assumed that (1) the sales revenue reported in the customers' Form 10-K reflected sales of products with molded chokes; and (2) each third-party product shipped into the United States contained an infringing choke. Further, Mr. Van Uden's importation calculations assumed that all 310 third-party products across all 27 customers infringed. J.A. 10028 (Trial Tr. 635:11–21); J.A. 10370–71 (Trial Tr. 897:4–898:4); *see also* J.A. 15385–404 (Chilisin products application guide). Yet no party knew whether the third-party products contained the accused chokes or how many accused chokes were in these products. *See* J.A. 10022–24 (Trial Tr. 629:4–630:17, 631:3–13). Indeed, no third-party discovery or testing from a technical expert was performed to see if the third-party products contained the accused chokes. Oral Arg.

(9th Cir. 2006). Apple's 2020 Form 10-K is readily verifiable and thus the proper subject of judicial notice.

at 23:40–24:12, https://oralarguments.cafc.uscourts.gov/default.aspx?fl=22-1873_06062023.mp3; J.A. 10025 (Trial. Tr. 32:12–21); *see also* Appellant's Br. 22.

We are not persuaded by Cyntec's argument that "corroboration" with third party data saves Mr. Van Uden's importation calculations. He applied the Gartner Research data to corroborate only six of the 27 customers. Oral Arg. at 21:58–22:28; *see also* Appellee's Br. 14; J.A. 4090. Nor are we persuaded by Cyntec's attempts to distinguish the current case from *Power Integrations*. *See* Appellee's Br. 57–58. Indeed, Mr. Van Uden's testimony is similar to the testimony we found improper in *Power Integrations*. Accordingly, "[i]n the end, we are left with an expert opinion derived from unreliable data and built on speculation." *Power Integrations*, 711 F.3d at 1374.

For the reasons articulated above, we find that the district court abused its discretion in admitting Mr. Van Uden's importation calculations, which are both unreliable and speculative. Because Mr. Van Uden's lost profits calculation stemmed from his importation calculations, we vacate the jury's damages award for lost profits.

CONCLUSION

We have considered the parties' other arguments, but we do not find them persuasive. For the foregoing reasons, we affirm the judgment of infringement. In addition, we reverse the district court's judgment as a matter of law for nonobviousness and the district court's denial of Chilisin's motion to exclude Mr. Van Uden's damages expert testimony. Accordingly, we vacate the lost profits award and remand for proceedings consistent with this opinion.

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

COSTS

No costs.