

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

REMBRANDT WIRELESS TECHNOLOGIES, LP,
Plaintiff-Appellee

v.

**SAMSUNG ELECTRONICS CO., LTD., SAMSUNG
ELECTRONICS AMERICA, INC., SAMSUNG
TELECOMMUNICATIONS AMERICA, LLC,**
Defendants-Appellants

**SAMSUNG AUSTIN SEMICONDUCTOR, L.L.C.,
RESEARCH IN MOTION CORPORATION,
RESEARCH IN MOTION LTD.,**
Defendants

2016-1729

Appeal from the United States District Court for the
Eastern District of Texas in No. 2:13-cv-00213-JRG,
Judge J. Rodney Gilstrap.

Decided: April 17, 2017

MICHAEL F. HEIM, Heim, Payne & Chorush, LLP,
Houston, TX, argued for plaintiff-appellee. Also repre-
sented by ERIC J. ENGER, MIRANDA Y. JONES; DEMETRIOS
ANAIPAKOS, AMIR H. ALAVI, JAMIE ALAN AYCOCK, ALISA A.

LIPSKI, Ahmad, Zavitsanos, Anaipakos, Alavi & Mensing PC, Houston, TX.

JESSE J. JENNER, Ropes & Gray LLP, New York, NY, argued for defendants-appellants. Also represented by DOUGLAS HALLWARD-DRIEMEIER, Washington, DC; GABRIELLE E. HIGGINS, East Palo Alto, CA; BRIAN P. BIDDINGER, Quinn Emanuel Urquhart & Sullivan, LLP, New York, NY.

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

STOLL, *Circuit Judge*.

A jury found that Samsung infringed Rembrandt's asserted patents, which the jury also found not invalid over prior art cited by Samsung. The jury awarded Rembrandt \$15.7 million in damages. After trial, Samsung moved for judgment as a matter of law on obviousness and damages, which the district court denied. Samsung appeals the district court's denial of JMOL, as well as the district court's claim construction order and an order denying Samsung's motion to limit Rembrandt's damages for alleged failure to mark patented articles.

Because we agree with the district court's challenged claim construction and its denial of Samsung's JMOL motions, we affirm those decisions. We disagree, however, with the district court's denial of Samsung's motion based on the marking statute, and we vacate that decision and remand for proceedings consistent with this opinion.

BACKGROUND

Rembrandt Wireless Technologies, LP, sued Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., and Samsung Telecommunications America, LLC in the United States District Court for Eastern District of Texas on March 15, 2013 for infringement of two patents that

share a specification: U.S. Patent No. 8,023,580 and a continuation patent, U.S. Patent No. 8,457,228. These patents claim priority to a provisional application filed on December 5, 1997, and relate to “a system and method of communication in which multiple modulation methods are used to facilitate communication among a plurality of modems in a network, which have heretofore been incompatible.” ’580 patent col. 2 ll. 17–20. The patents explain that in the prior art “a transmitter and receiver modem pair can successfully communicate only when the modems are compatible at the physical layer.” *Id.* at col. 1 ll. 27–29. As a result, “communication between modems is generally unsuccessful unless a common modulation method is used.” *Id.* at col. 1 ll. 45–47. Particularly with modems communicating via master/slave protocol, the patents explain that “[i]f one or more of the trib modems [slaves] are not compatible with the modulation method used by the master, those tribs will be unable to receive communications from the master.” *Id.* at col. 1 ll. 58–61. To overcome the challenges described in the prior art, the patents propose using the first section of a transmitted message (the message “header”) to indicate the modulation method being used for the substance of the message (the message “payload”).

Claim 2 of the ’580 patent, which is dependent upon claim 1, is representative:

1. A communication device capable of communicating according to a master/slave relationship in which a slave communication from a slave to a master occurs in response to a master communication from the master to the slave, the device comprising:

a transceiver, in the role of the master according to the master/slave relationship, for sending at least transmissions modulated using at least *two types of modula-*

tion methods, wherein the at least two types of modulation methods comprise a first modulation method and a second modulation method, wherein the second modulation method is of a different type than the first modulation method, wherein each transmission comprises a group of transmission sequences, wherein each group of transmission sequences is structured with at least a first portion and a payload portion wherein first information in the first portion indicates at least which of the first modulation method and the second modulation method is used for modulating second information in the payload portion, wherein at least one group of transmission sequences is addressed for an intended destination of the payload portion, and wherein for the at least one group of transmission sequences:

the first information for said at least one group of transmission sequences comprises a first sequence, in the first portion and modulated according to the first modulation method, wherein the first sequence indicates an impending change from the first modulation method to the second modulation method, and

the second information for said at least one group of transmission sequences comprises a second sequence that is modulated according to the second modulation method, wherein the second sequence is transmitted after the first sequence.

2. The device of claim 1, wherein the transceiver is configured to transmit a third sequence after

the second sequence, wherein the third sequence is transmitted in the first modulation method and indicates that communication from the master to the slave has reverted to the first modulation method.

Id. at col. 7 l. 53 – col. 8 l. 24 (emphasis added to show dispute). Relevant here, the district court construed “modulation method [] of a different type” as “different families of modulation techniques, such as the FSK family of modulation methods and the QAM family of modulation methods.” *Rembrandt Wireless Techs., LP v. Samsung Elecs. Co.*, No. 2:13-CV-213-JRG-RSP, 2014 WL 3385125, at *15 (E.D. Tex. July 10, 2014) (*Claim Construction Order*).

Rembrandt alleged at trial that Samsung devices incorporating the Bluetooth enhanced data rate (“EDR”) standard infringed its patents. After a five-day trial, the jury found that Samsung infringed Rembrandt’s patents, and that the patents were valid over the prior art Samsung presented. The jury awarded Rembrandt \$15.7 million in damages. The district court denied Samsung’s post-trial motions for judgment as a matter of law—on both liability and on damages—and entered final judgment.

Samsung appeals, and we have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

Samsung appeals several issues: (1) the district court’s construction of the “different types” limitation; (2) the district court’s denial of JMOL of obviousness; (3) the district court’s denial of Samsung’s *Daubert* motion, motions for a new trial, and motion for JMOL on damages; and (4) the district court’s denial of Samsung’s motion to limit damages based on Rembrandt’s purported failure to mark products embodying the ’580 patent. Samsung

does not appeal the jury’s finding of infringement. We address each issue in turn.

I. Claim Construction

Samsung disputes the district court’s construction of “modulation method [] of a different type.” The district court construed this limitation as “different families of modulation techniques, such as the FSK [frequency-shift keying] family of modulation methods and the QAM [quadrature amplitude modulation] family of modulation methods.” *Claim Construction Order*, 2014 WL 3385125, at *15. We review claim constructions based solely on the intrinsic record, as here, de novo. *Shire Dev., LLC v. Watson Pharm., Inc.*, 787 F.3d 1359, 1364 (Fed. Cir. 2015) (quoting *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 840–42 (2015)).

The district court arrived at its construction relying on the applicant’s characterization of the “different types” term in the prosecution history. During prosecution of the ’580 parent patent, the applicant inserted the “different types” limitation into its claims after the examiner had already issued a notice of allowance. In the applicant’s contemporaneous remarks to the examiner, he indicated that he inserted the limitation into the independent claims to “more precisely claim the subject-matter.” J.A. 2234. The applicant explained:

Applicant has further amended [its] claims . . . with additional recitations to more precisely claim the subject matter. For example, the language of independent claim 1 has been clarified to refer to two *types* of modulation methods, i.e., different families of modulation techniques, such as the FSK family of modulation methods and the QAM family of modulation methods.

Id.

Samsung disputes the court's construction, arguing that it improperly affords dispositive weight to a single self-serving statement in the prosecution history made after the examiner had allowed certain claims. Samsung contends that the plain claim language requires only that the different types of modulation methods be "incompatible" with one another. According to Samsung, the claims cover devices that modulate signals using the same family of modulation methods (for example, FSK modulation), but operating with different amplitudes between modems. Samsung asserts that, because modulating using different amplitudes makes the devices incompatible, this arrangement embodies "different types" of modulation.

We disagree with Samsung and adopt the construction entered by the district court. While the specification is the principal source of the meaning of a disputed term, the prosecution history may also be relevant. *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Here, the clearest statement in the intrinsic record regarding the meaning of the "different types" limitation is the descriptive statement the applicant made to the examiner when he inserted the limitation into the claims. Samsung's arguments to the contrary do not diminish this unambiguous statement in the prosecution history.

For example, Samsung avers that we should not give the prosecution history statement definitional weight because it uses the phrase "i.e.," which Samsung argues introduces an exemplary item in a set. A patentee's use of "i.e.," in the intrinsic record, however, is often definitional. *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009) ("[U]se of 'i.e.' signals an intent to define the word to which it refers."); see also *Abbott Labs. v. Novopharm Ltd.*, 323 F.3d 1324, 1330 (Fed. Cir. 2003) (holding that a patentee "explicitly defined" a term by using "i.e." followed by an explanatory phrase). Indeed, the term "i.e." is Latin for *id est*, which means "that is."

On a related note in the context of disavowal, we have explained that “[w]hether a statement to the PTO that includes ‘i.e.’ constitutes a clear and unmistakable disavowal of claim scope depends on the context.” *Braintree Labs., Inc. v. Novel Labs., Inc.*, 749 F.3d 1349, 1355 (Fed. Cir. 2014). The context here strongly supports the conclusion that Rembrandt used “i.e.” to define the “different types” limitation because Rembrandt used it to describe to the examiner a new limitation it had inserted to further limit its claims.

Samsung directs us to cases where we have held that “i.e.” was not used to define, particularly in instances where interpreting “i.e.” as definitional would be internally inconsistent, *see Pfizer, Inc. v. Teva Pharm., USA, Inc.*, 429 F.3d 1364, 1373 (Fed. Cir. 2005), or where it would read out preferred embodiments, *see Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1326 (Fed. Cir. 2012). Samsung argues that interpreting the “i.e.” statement as definitional here would create an internal inconsistency with claim 43, which recites that “at least one of said modulation methods implements phase modulation.” Samsung asserts that because claim 43 refers to “at least one” of the methods using phase modulation, more than one of them could use phase modulation, even though under the district court’s construction that would mean they are not in different families.

We are not convinced that there would necessarily be a conflict with claim 43 under the adopted construction. As Rembrandt points out, claim 26—from which claim 43 depends—also uses the “at least” language to describe “at least two different types of modulation methods,” which cuts against Samsung’s inference. In any event, we do not find that this parsing of the claims overcomes the definitional statement the applicant provided in the prosecution history. *See ERBE Elektromedizin GmbH v. Canady Tech. LLC*, 629 F.3d 1278, 1286–87 (Fed. Cir. 2010) (rejecting patent owner’s claim differenti-

ation argument based on disclaimer in the prosecution history). Nor do we find that the specification is at odds with the prosecution history definition. The specification repeatedly refers to different types of modulation methods, but it does not provide examples of what would constitute different methods or otherwise define this limitation.

Samsung also mentions that in related IPR proceedings, the Patent Trial and Appeal Board adopted the broader construction Samsung argues for here. As Samsung admits, however, this construction does not bind our court. And the Board in IPR proceedings operates under a broader claim construction standard than the federal courts. *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142, 2146 (2016). We also note that even after adopting Samsung’s construction, the Board refused to deem Rembrandt’s patents unpatentable over the prior art, which is ultimately what Samsung seeks under its proposed construction.

We therefore agree with the construction entered by the district court that the term “modulation method [] of a different type” means “different families of modulation techniques, such as the FSK family of modulation methods and the QAM family of modulation methods.” *Claim Construction Order*, 2014 WL 3385125, at *15.

II. Obviousness

Samsung argues that even under the district court’s construction of “different types,” it proved by clear and convincing evidence that Rembrandt’s patents are invalid for obviousness under 35 U.S.C. § 103 and that the jury verdict of nonobviousness must be overturned as a matter of law.¹

¹ Given the effective filing dates of the ’580 and ’228 patents’ claims, the version of 35 U.S.C. § 103 that applies

We review the district court’s post-trial denial of judgment as a matter of law under the law of the regional circuit, here the Fifth Circuit. *Finisar Corp. v. DirectTV Grp., Inc.*, 523 F.3d 1323, 1328 (Fed. Cir. 2008). Fifth Circuit law has us review the denial of JMOL de novo, asking, as the district court did, whether a “reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue.” *Cambridge Toxicology Grp. v. Exnicios*, 495 F.3d 169, 179 (5th Cir. 2007) (quoting Fed. R. Civ. P. 50(a)(1)). When a jury returns a general verdict regarding obviousness, a legal question with factual underpinnings, “[w]e first presume that the jury resolved the underlying factual disputes in favor of the verdict winner and leave those presumed findings undisturbed if they are supported by substantial evidence. Then we examine the legal conclusion de novo to see whether it is correct in light of the presumed jury fact findings.” *Circuit Check Inc. v. QXQ Inc.*, 795 F.3d 1331, 1334 (Fed. Cir. 2015) (quoting *Jurgens v. McKasy*, 927 F.2d 1552, 1557 (Fed. Cir. 1991)).

To allege obviousness, Samsung presented at trial a prior art combination consisting of U.S. Patent No. 5,706,428 (“Boer”) as the primary reference and an article by Bhargav P. Upender and Philip J. Koopman, Jr. (“Upender”) as a secondary reference. According to Samsung, the DBPSK and PPM/DQPSK modulation methods discussed in Boer are in “different families,” and are therefore different types of modulation methods under the district court’s construction. Samsung’s expert, Dr. Goodman, testified that, much like the QAM and PSK modulation methods that the district court specifically noted were in different families, Boer’s cited modulation

here is the one in force preceding the changes made by the America Invents Act. *See* Leahy–Smith America Invents Act, Pub. L. No. 112-29, § 3(n), 125 Stat. 284, 293 (2011).

methods alter different sets of characteristics: PPM/DQPSK alters phase and position, but DBPSK alters only phase.

On the other hand, Rembrandt's infringement expert,² Dr. Morrow, testified that, in his experience, modulation methods are in different families if they have "no overlapping characteristics." J.A. 1083, 18:13–24. Rembrandt therefore argued that PPM/DQPSK and DBPSK were not in different families because they both altered phase.

The jury was, of course, free to credit Dr. Morrow's testimony and reject Dr. Goodman's. *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1168 (Fed. Cir.) ("[W]hen there is conflicting testimony at trial, and the evidence overall does not make only one finding on the point reasonable, the jury is permitted to make credibility determinations and believe the witness it considers more trustworthy."), *cert. denied*, 136 S. Ct. 270 (2015). Samsung argues, however, that Dr. Morrow's testimony, and Rembrandt's argument based on it, constitute an improper reinterpretation of the court's "different types" construction. Samsung urges that modulation methods can have some overlapping characteristics and still be in different families, as required by the court's construction. Samsung couches this argument as a claim construction

² Rembrandt did not present a validity expert, and Samsung suggests it was improper for Rembrandt to rely on its infringement expert's testimony for issues of validity. We disagree. Dr. Morrow's testimony regarding whether two modulation techniques are in the same or different families is equally applicable to the infringement and validity issues. Samsung does not argue that the testimony was improperly admitted into evidence or that the testimony was admitted only for limited purposes not including use for validity.

issue. We disagree. As the district court correctly noted, any dispute regarding whether particular modulation techniques are in different families is a factual one. “[A] sound claim construction need not always purge every shred of ambiguity,” including potential ambiguity arising from “the words a court uses to construe a claim term.” *Eon Corp. IP Holdings v. Silver Spring Networks*, 815 F.3d 1314, 1318 (Fed. Cir. 2016) (citation omitted), *cert. denied*, 137 S. Ct. 640 (2017). “Such an endeavor could proceed ad infinitum.” *Id.*

Contrary to the way Samsung has cast the issue, whether Boer meets the “different types” limitation under the court’s construction is a factual question. Particularly with regard to obviousness, it is a factual question going to the scope and content of the prior art. *See Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17 (1966). We review such factual questions underlying obviousness for substantial evidence. *Circuit Check*, 795 F.3d at 1334. Taken with Dr. Morrow’s testimony, the fact that Boer’s DBPSK and PPM/DQPSK modulation methods both alter phase is substantial evidence to support the jury’s presumed fact finding that Boer did not teach the “different types” limitation.

Substantial evidence likewise supports the jury’s presumed finding that there was no motivation to combine Boer with Uponder, as Rembrandt had argued. The ’580 and ’228 patents claim a master/slave communication protocol, whereas Boer discloses devices communicating under the CSMA/CA protocol.³ Samsung had argued that combining Boer with Uponder—which discusses and compares several communication protocols, including

³ Uponder defines CSMA/CA as Carrier Sense Multiple Access with Collision Avoidance.

master/slave⁴—would render Rembrandt’s patents obvious. Rembrandt countered that one of skill in the art would not have been motivated to combine the references because Upender teaches away from substituting Boer’s CSMA/CA approach with master/slave. Specifically, Upender analyzes the tradeoffs between different communication protocols based on various attributes, such as efficiency, robustness, and cost. Upender concludes that CSMA/CA is at least as good—and most often, better—than master/slave in every respect. We conclude that this disclosure provides substantial evidence to support the jury’s presumed finding that one of ordinary skill in the art would not have been motivated to replace the CSMA/CA protocol already in place in Boer with a master/slave arrangement as taught by Upender.

Samsung misses the mark by arguing that we must find a motivation to combine if we agree with it that there is not substantial evidence to support a finding that Upender teaches away from substituting CSMA/CA with master/slave. Whether a reference teaches away is doctrinally distinct from whether there is no motivation to combine prior art references. *See Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1051 n.15 (Fed. Cir. 2016) (en banc) (identifying motivation to combine and teaching away as “two discrete bases” supporting district court’s denial of JMOL); *see also Star Sci., Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1374–75 (Fed. Cir. 2011). Surely a showing that a prior art reference teaches away from a given combination is evidence that one of skill in the art would not have been motivated to make that combination to arrive at the claimed invention. But the absence of a formal teaching away in one reference does

⁴ Upender refers to master/slave as the “polling” protocol, but both parties agree that the two are synonymous for the purposes of this case.

not automatically establish a motivation to combine it with another reference in the same field.

As such, the jury did not need to find that Upender taught away from using master/slave in order to find that there would be no motivation to replace CSMA/CA in Boer with master/slave. Even if Upender “does not teach away, its statements regarding users[] prefer[ences] . . . are relevant to a finding regarding whether a skilled artisan would be motivated to combine” Upender with Boer. *Apple*, 839 F.3d at 1051 n.15. Therefore, because Upender strongly suggests that master/slave is inferior to CSMA/CA, substantial evidence supports the jury’s presumed factual finding that one of skill in the art would not have been motivated to combine Boer with Upender’s teaching of master/slave.

The jury’s presumed findings that Boer does not teach the “different types” limitation and that one of skill in the art would not have been motivated to combine Boer with Upender undermine Samsung’s obviousness challenge against all of the infringed independent claims. Because substantial evidence supports both of these findings, we need not address Samsung’s additional obviousness arguments for the infringed dependent claims. *See In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) (“Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.”). We therefore affirm the district court’s denial of JMOL that the infringed claims are invalid as obvious.

III. Damages

On appeal, Samsung also challenges the jury’s royalty award of \$15.7 million. Samsung first asserts that the district court erred in resolving certain damages-related evidentiary disputes. Applying Fifth Circuit law, we review these rulings for an abuse of discretion. *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 852

(Fed. Cir. 2010) (applying Fifth Circuit law), *aff'd*, 564 U.S. 91 (2011).

First, Samsung argues that the district court should have excluded the testimony of Rembrandt's damages expert, Mr. Weinstein, based on the allegedly flawed methodology he used to calculate his proposed reasonable royalty rate. In an effort to determine the incremental value associated with implementing the infringing EDR functionality, Mr. Weinstein compared the prices of two Bluetooth chips Samsung purchased from Texas Instruments—one with EDR functionality and the other without. After calculating the price premium Samsung had paid to procure the EDR chips as compared to the non-EDR chips, Mr. Weinstein concluded that the reasonable royalty rate would be between 5 and 11 cents per infringing unit, resulting in a total damages range of \$14.5–\$31.9 million.

We see no reversible error in the district court's denial of Samsung's motion to exclude Mr. Weinstein's testimony. Samsung complains that the time periods that Mr. Weinstein chose to compare the two sets of chips were ones where Samsung purchased many more non-EDR chips than EDR chips, making the relative cost of EDR chips artificially high due to mismatched economies of scale. Rembrandt responds that Mr. Weinstein testified in his deposition that the seller of the chips, Texas Instruments, suggested to him that the data from these time periods were most suitable for his purposes. Rembrandt also explains that Mr. Weinstein aptly focused on the earliest periods where significant sales of infringing chips were made because the added value of technology fades with time. We find these explanations plausible, as they show that Mr. Weinstein's royalty calculations were properly "based on the incremental value that the patented invention adds to the end product." *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014). We also note that while Mr. Weinstein compared the chips for

a time period when the non-EDR and EDR chip price differential was on the high end of the spectrum, Samsung was free to cross-examine Mr. Weinstein on this issue and the jury's award of \$15.7 million fell within the low end of Mr. Weinstein's \$14.5–\$31.9 million suggested damages range.

Samsung also takes issue with Mr. Weinstein's attribution of the chips' cost differential solely to the addition of the EDR functionality, which it asserts was not the only technological difference between the two sets of chips. Rembrandt responds that all of the technical expert testimony in the case shows that the major difference between the chips was the incorporation of EDR and that Samsung could have cross-examined Rembrandt's damages expert on this point, but did not. Regardless, Samsung's criticism of Mr. Weinstein's selected benchmark "goes to evidentiary weight, not [its] admissibility." *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1319 (Fed. Cir. 2014), *overruled on other grounds by Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015) (en banc). Ultimately, we do not find that the district court abused its discretion in permitting Mr. Weinstein to use the methodology he adopted.

Mr. Weinstein used a settlement agreement Rembrandt entered into with BlackBerry, which was a defendant in this suit before settling, and a licensing agreement Rembrandt entered into with Zhong Technologies, Inc., to confirm his proposed royalty rate. On appeal, Samsung argues that it was improper for Mr. Weinstein to consider the BlackBerry agreement at all because it is not representative of an arms-length agreement between the parties and, therefore, is inappropriate for use in determining the reasonable royalty rate. We hold that the district court did not abuse its discretion in allowing Mr. Weinstein to discuss the BlackBerry agreement, as our cases allow relevant settlement agreements to be considered in determining a reasonable royalty rate.

Summit 6, LLC v. Samsung Elecs. Co., 802 F.3d 1283, 1299–1300 (Fed. Cir. 2015). The BlackBerry settlement agreement was relevant here because it contained a license of the very patents Samsung was found to infringe. We are also not convinced by Samsung’s argument that Mr. Weinstein should not have cited the agreement at all because BlackBerry would not agree to a particular per-sale allocation clause Rembrandt wanted to include in the agreement. Even though BlackBerry did not agree to that express term, Mr. Weinstein explained his understanding of the agreement to be that BlackBerry effectively paid Rembrandt a per-sale amount consistent with his proposed royalty rate, he was cross-examined on that point, and the jury was free to consider that testimony.

Samsung also avers that the district court improperly redacted pertinent information from the BlackBerry settlement agreement and the Zhone licensing agreement that would have been necessary for the jury to understand the context of those agreements. Particularly, Samsung asserts that by redacting the agreements, the jury was unable to see how Mr. Weinstein allocated payments made by BlackBerry and Zhone to arrive at his proposed royalty rate. We disagree. It was within the district court’s discretion to redact information from these agreements to prevent exposing confidential business information and to avoid jury confusion, and we will not disrupt that decision as an abuse of discretion.

Finally, Samsung argues that substantial evidence does not support the jury’s damages award of \$15.7 million. Because we have rejected Samsung’s challenges to Mr. Weinstein’s expert presentation on damages, and because the jury’s award fell within the \$14.5–\$31.9 million range he suggested, we hold that substantial evidence supports the jury’s damages award as it relates to all of Samsung’s infringing sales. As will be discussed in the next section, however, we remand this case for the district court to consider in the first instance whether

Samsung is liable for pre-notice damages due to Rembrandt's purported failure to mark certain licensed products. If the district court determines that Samsung is not liable for pre-notice damages, the jury's damages award should be adjusted to strip out the royalties from pre-notice sales. The parties agreed at oral argument that this adjustment involves a pure accounting function that the district court could perform based on the sales data already in the record and without holding a new damages trial. *See* Oral Arg. at 21:11–22:41 (Samsung), 45:56–46:46 (Rembrandt), <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2016-1729.mp3>.

IV. Marking

Samsung argues that the district court erred in refusing to bar Rembrandt's recovery of pre-notice damages based on Rembrandt's failure to mark products covered by a claim Rembrandt later disclaimed.⁵ We agree with Samsung that Rembrandt cannot use disclaimer to avoid the marking requirement in 35 U.S.C. § 287, and vacate the judgment of the district court as it relates to marking.

A.

Before trial, Samsung moved to limit Rembrandt's potential damages award based on its failure to mark products covered by previously-asserted claim 40 of the '580

⁵ Rembrandt argues as a threshold matter that Samsung did not properly preserve this issue by raising it at trial and, thus, waived it on appeal. We disagree. The district court ruled on this issue as a matter of law before trial, and Samsung continually objected to that legal ruling before the district court. Therefore, the issue has not been waived and is ripe for appeal. *See Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 790 F.3d 1329, 1338 (Fed. Cir. 2015), *cert. denied*, 136 S. Ct. 1226 (2016).

patent. Specifically, Rembrandt had licensed the '580 patent to Zhone Technologies, Inc., and Samsung alleged that Zhone sold unmarked products embodying asserted claim 40 of the '580 patent. The license agreement between Rembrandt and Zhone did not require Zhone to mark its products with the patent number. Pursuant to the patent marking statute, 35 U.S.C. § 287, Samsung sought to limit Rembrandt's damages to those incurred after Samsung received notice of Rembrandt's patents, which, according to Samsung, occurred when Rembrandt filed its complaint. Eight days later, Rembrandt withdrew claim 40 from its infringement allegations and filed a statutory disclaimer pursuant to 35 U.S.C. § 253(a) and 37 C.F.R. § 1.321(a), disclaiming claim 40 in the U.S. Patent and Trademark Office.

The district court denied Samsung's motion to bar Rembrandt's recovery of pre-notice damages based on Rembrandt's disclaimer of claim 40. The court accepted Rembrandt's argument that any prior obligation to mark products embodying claim 40 vanished once it disclaimed claim 40. Adopting the Magistrate Judge's recommendation, the District Judge relied on the proposition that "[u]nder Federal Circuit precedent, a disclaimed patent claim is treated as if it never existed." J.A. 337, 342 (citing *Genetics Inst., LLC v. Novartis Vaccines & Diagnostics, Inc.*, 655 F.3d 1291 (Fed. Cir. 2011)).

B.

The patent marking statute provides that "[p]atentees, and persons making, offering for sale, or selling within the United States any patented article for or under them, or importing any patented article into the United States, may give notice to the public that the same is patented" by marking the article in a method provided by the statute. 35 U.S.C § 287(a). Marking under the statute is permissive, not mandatory. While permissive, there is a consequence if the patent owner chooses not to

mark: “In the event of failure so to mark, no damages shall be recovered by the patentee in any action for infringement, except on proof that the infringer was notified of the infringement and continued to infringe thereafter, in which event damages may be recovered only for infringement occurring after such notice.” *Id.* “A licensee who makes or sells a patented article does so ‘for or under’ the patentee, thereby limiting the patentee’s damage recovery when the patented article is not marked.” *Amsted Indus. Inc. v. Buckeye Steel Castings Co.*, 24 F.3d 178, 185 (Fed. Cir. 1994) (citing *Devices for Med., Inc. v. Boehl*, 822 F.2d 1062, 1066 (Fed. Cir. 1987)).

Consistent with Supreme Court precedent, we have repeatedly emphasized that the marking statute serves to protect the public. The marking statute protects the public’s ability to exploit an unmarked product’s features without liability for damages until a patentee provides either constructive notice through marking or actual notice. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 162 (1989) (“The notice requirement is designed ‘for the information of the public,’ [and] . . . [t]he public may rely upon the lack of notice in exploiting shapes and designs accessible to all.” (quoting *Wine Ry. Appliance Co. v. Enter. Ry. Equip. Co.*, 297 U.S. 387, 397 (1936))). The essence of “the marking statute is to encourage the patentee to give notice to the public of the patent.” *Crown Packaging Tech., Inc. v. Rexam Beverage Can Co.*, 559 F.3d 1308, 1316 (Fed. Cir. 2009) (quoting *Am. Med. Sys., Inc. v. Med. Eng’g Corp.*, 6 F.3d 1523, 1538 (Fed. Cir. 1993)). More specifically, “[t]he marking statute serves three related purposes: 1) helping to avoid innocent infringement; 2) encouraging patentees to give notice to the public that the article is patented; and 3) aiding the public to identify whether an article is patented.” *Nike, Inc. v. Wal-Mart Stores, Inc.*, 138 F.3d 1437, 1443 (Fed. Cir. 1998) (internal citations omitted).

Rembrandt's position, adopted by the district court, effectively provides an end-run around the marking statute and is irreconcilable with the statute's purpose. Allowing Rembrandt to use disclaimer to avoid the consequence of its failure to mark undermines the marking statute's public notice function.

In denying Samsung's motion, the district court relied on the proposition that a disclaimed patent claim is treated as if it "had never existed in the patent," *Guinn v. Kopf*, 96 F.3d 1419, 1422 (Fed. Cir. 1996) (citing *Altoona Publix Theatres, Inc. v. Am. Tri-Ergon Corp.*, 294 U.S. 477, 492 (1935)), and allowed Rembrandt's disclaimer to retroactively excuse its failure to mark. But while we have held that a disclaimer relinquishes the rights of the patent owner, we have never held that the patent owner's disclaimer relinquishes the rights of the public. Indeed, our precedent and that of other courts have not readily extended the effects of disclaimer to situations where others besides the patentee have an interest that relates to the relinquished claims. *See Kearney & Trecker Corp. v. Cincinnati Milacron Inc.*, 562 F.2d 365, 372 (6th Cir. 1977) (recognizing accused infringer's inequitable conduct defense against original patent claims after reissue claims secured through inequitable conduct were disclaimed); *Nat'l Semiconductor Corp. v. Linear Tech. Corp.*, 703 F. Supp. 845, 850 (N.D. Cal. 1988) (allowing antitrust and patent misuse counterclaims premised on disclaimed claims to proceed). *Cf. Guinn*, 96 F.3d at 1422 (holding disclaimer of an allegedly interfering claim did not divest the Board of jurisdiction over interference proceeding). As our marking cases make clear, the marking statute's focus is not only the rights of the patentee, but the rights of the public. *See, e.g., Crown Packaging*, 559 F.3d at 1316; *Nike*, 138 F.3d at 1443; *Bonito Boats*, 489 U.S. at 162. Considering these rights held by the public, we hold that disclaimer cannot serve to retroac-

tively dissolve the § 287(a) marking requirement for a patentee to collect pre-notice damages.

C.

Separate from its disclaimer argument, Rembrandt also argued to the district court that the marking statute should attach on a claim-by-claim, rather than on a patent-by-patent, basis. Applying Rembrandt's claim-by-claim approach in this case, for example, would permit Rembrandt to recover pre-notice damages for Samsung's infringement of claims other than claim 40, which is the only claim that Samsung alleges the unmarked Zhone product embodied. Samsung disagreed with Rembrandt's position at the district court, arguing that the marking statute attaches on a patent-by-patent basis. Put another way, Samsung argued that because Rembrandt's licensee Zhone sold a product embodying one claim of the '580 patent (claim 40), Rembrandt may not recover pre-notice damages for any infringed claim of the patent.

The Magistrate Judge, after deciding Samsung's motion to limit damages on the disclaimer ground, expressly declined to rule on this theory, as did the District Judge. *Rembrandt Wireless Techs., LP v. Samsung Elecs. Co.*, No. 2:13-CV-213-JRG-RSP, 2015 WL 627971, at *1, *3 & n.4 (E.D. Tex. Feb. 9, 2015). On appeal, Rembrandt did not present this argument as an alternative basis for affirming the district court's marking decision. Oral Arg. at 45:04–45:55, <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2016-1729.mp3>. Rembrandt did concede, however, that the Zhone product practices claim 40, and thus that question is no longer a “live dispute” in this case. *Id.* at 43:38–45:43.

The patent-by-patent versus claim-by-claim marking dispute between the parties raises a novel legal issue not squarely addressed by our past decisions. Although Rembrandt did not raise this issue on appeal, it has not waived this argument. *See WesternGeco L.L.C. v. ION*

Geophysical Corp., 837 F.3d 1358, 1364 n.3 (Fed. Cir. 2016) (holding arguments are not waived if they involve issues both not decided by district court and “properly considered moot” until reversal of another district court ruling). But as we have remarked in earlier cases regarding legal issues not addressed by the parties:

It is tempting to explore these unanswered questions, both because they are interesting and because the parties and the trial court might benefit from early answers. But, that is a temptation to be resisted. None are questions directly raised in this appeal, and the parties have not briefed or argued them. We thus leave to the trial court in the first instance the responsibility to address such questions

Cardiosom, L.L.C. v. United States, 656 F.3d 1322, 1329 (Fed. Cir. 2011); *see also In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1321 (Fed. Cir. 2011) (remanding legal issue not briefed on appeal for district court to address on remand). We therefore remand to the district court to address in the first instance whether the patent marking statute should attach on a patent-by-patent or claim-by-claim basis.

CONCLUSION

We have considered Samsung’s remaining arguments and find them unpersuasive. Accordingly, we affirm the challenged portion of the district court’s claim construction order and the district court’s denial of Samsung’s JMOL motions. We vacate the district court’s denial of Samsung’s motion to limit damages, and remand that issue for proceedings consistent with this opinion.

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

COSTS

Each party shall bear its own costs.