No. 24-1822

In the United States Court of Appeals for the Federal Circuit

LG ELECTRONICS, INC., et al.,
Appellants,

v.

CONSTELLATION DESIGNS, LLC,
Appellee.

Appeal from the United States District Court for the Eastern District of Texas
(No. 2:21-cv-448) (The Hon. J. Rodney Gilstrap)

CORRECTED RESPONSE TO LG'S COMBINED PETITION FOR PANEL AND EN BANC REHEARING

JASON CASSADY
AISHA MAHMOOD HALEY
JAMES SMITH
CALDWELL CASSADY & CURRY P.C.
2121 N. Pearl Street
Suite 1200
Dallas, TX 75201
(214) 888-4848
jcassady@caldwellcc.com

JEFFREY B. WALL
JUDSON O. LITTLETON
GIBSON DUNN & CRUTCHER LLP
1700 M Street, N.W.,
Washington, DC 20036
(202) 955-8533
jwall@gibsondunn.com

CERTIFICATE OF INTEREST

1. The full name of every entity represented in the case by the counsel filing the certificate:

   Constellation Designs, LLC

2. For each entity, the name of every real party in interest, if that entity is not the real party in interest:

   N/A

3. For each entity, that entity's parent corporation(s) and every publicly held corporation that owns ten percent (10%) or more of its stock:

   N/A

4. The names of all law firms, partners, and associates that have not entered an appearance in the appeal, and (A) appeared for the entity in the lower tribunal; or (B) are expected to appear for the entity in this court:

   Caldwell Cassady Curry P.C.: Adrienne R. Dellinger, Alexander A. Waldrop, Daniel R. Pearson, Brian D. Johnston

   Ward, Smith & Hill, PLLC: Andrea L. Fair

5. An indication as to whether there are any related or prior cases, other than the originating case number(s), that meet the criteria under Federal Circuit Rule 47.5:

   N/A

6. All information required by Federal Rule of Appellate Procedure 26.1(b) and (c) that identifies organizational victims in criminal cases and debtors and trustees in bankruptcy cases:

   N/A

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INTRODUCTION

LG's rehearing petition raises factual disputes dressed up in legal garb. Out of the gate, LG claims that this case tees up the "important patent damages law question" of "whether a patentee may recover a royalty covering an entire technology rather than the value of the patent claims it actually asserts." Pet. 2. But LG does not address that "question" until the end of its brief (at 17). Instead, LG spends the vast majority of its petition rehashing factbound objections to the panel's determination that there was a sufficient evidentiary basis supporting the damages award. It first disputes (at 7-9) that Constellation's damages expert sufficiently "account[ed] for [the] distinguishing facts" between the hypothetical license here and prior licenses for similar technology negotiated by Zenith (an LG subsidiary). Then LG quibbles (at 11-17) with the panel's finding that the Zenith licenses were "sufficiently comparable" to the hypothetical license here to allow Constellation's expert to rely on them. Those arguments were fully aired in the parties' briefs and considered by the panel in its decision. The panel's factual determinations are not even wrong, let alone worthy of rehearing.

When LG finally gets around to its headline argument, it becomes clear why LG saved it for last. LG claims that, after the panel held some (but not all) of the asserted claims ineligible, the panel was required to set aside the jury's damages award. By declining to do so, LG says (at 17), the panel "applied a single rate for an entire technology without regard to which or how many claims are infringed." But as LG admits at the very end of its petition, the panel held in a footnote that LG "*forfeited*" this argument. Op. 31 n.4 (emphasis added). As the panel noted, LG raised this point for the first time at oral argument, and even its trial witnesses agreed that "the value of Constellation's asserted patents was tied to the technology." *Id.*

In short, nothing in the petition remotely merits rehearing. LG's real complaint is about the panel's factual determination—on abuse-of-discretion review—that there was sufficient evidence at trial to show that previous licenses were comparable to a hypothetical license here. But all of LG's arguments were before the panel, which rejected them. LG's disagreement with that decision is no basis for rehearing. LG tries to wrap its factual challenge in a legal issue about whether the jury's damages award can rest on only some (but not all) asserted claims. As the panel correctly recognized, LG forfeited that argument by not timely raising it. None of that is the stuff of either panel or en banc rehearing. LG's petition should be denied.

RELEVANT BACKGROUND

A. The Jury Trial

Constellation filed this suit in December 2021, alleging that LG had willfully infringed the claims of four patents describing breakthrough inventions that massively improved the efficiency of over-the-air television broadcasts. At summary judgment, the district court held that all asserted claims were eligible. It then held a jury trial on validity, infringement, willful infringement, and damages. In July 2023, the jury returned a verdict finding that LG had willfully infringed Constellation's patents and awarding Constellation $6.75 per infringing television.

B. The Underlying Damages Case

The jury's damages award was based on substantial testimony of Constellation's experts, which established (among other things) that LG's subsidiary Zenith had sought a similar per-unit royalty for similar patents negotiated under similar circumstances. The award reflected the contributions of the patented inventions, which amounted to a seismic shift in the efficiency of digital-communications systems and achieved benefits that even LG's witnesses and amici heralded as "revolutionary." Appx20316.

To calculate a reasonable royalty for LG's infringement, Constellation relied on licenses negotiated by Zenith, a wholly owned subsidiary of LG.

Appx20275-20276. Constellation offered extensive evidence that those licenses were technically and economically comparable to the license that would arise from its hypothetical negotiation with LG. It also explained why each of the relevant differences between the prior license and the hypothetical negotiation either did or did not support adjustments to the damages award. Constellation's evidence included testimony from Bill Marino, the CEO of Constellation, who would have negotiated the license. Constellation also presented as a fact witness LG's corporate representative Richard Lewis, who had personally negotiated the comparable Zenith licenses. As the district court explained, that testimony provided "substantial evidence" supporting the jury's finding "that the licenses are comparable." Appx49.

Technical comparability. Dr. Mark Jones testified at length regarding the technical similarities between the Zenith patents and Constellation's patents. Appx20236-20239. First, he explained that, like the asserted patents here, the Zenith patents were directed to receiving and decoding broadcast signals to improve the efficiency of digital-communications channels. For example, Dr. Jones analyzed common features in the components that Constellation's and Zenith's patents both used to process a received broadcast signal (including demappers, demodulators, and decoders). Appx20237-20238.

Dr. Jones also explained that the Zenith patents related to a particular section of the ATSC 1.0 standard, which described a part of digital communication referred to as the physical layer. Trial Tr. Vol. 2 at 169:13–24; JTX 69. And he explained that the asserted patents in this case likewise involved physical-layer functionality, which was supported by the analogous section of the more modern ATSC 3.0 standard. *Id.* Moreover, Constellation's CEO explained that he had consulted the Zenith licensing program in his negotiations with LG precisely because both technologies purported to address a similar technological problem—signal reception and demodulation generally. Trial Tr. Vo. 2 at 18:22-19:6.

Second, Dr. Jones testified that the Zenith patents were put to similar use by television manufacturers. As he explained, Zenith's patented technology did not cover the entire ATSC 1.0 standard, but was limited to the "physical layer." Appx20237; *see* Trial Vol. 3 at 255:15-18 (LG's corporate representative confirming as much). In this way, the technology covered by Zenith's patents was analogous to Constellation's patented technology, which likewise did not cover the entire ATSC 3.0 standard, but was instead directed at the "physical layer." Appx20237.

Third, Dr. Jones explained that Zenith's and Constellation's technology provided similar technological benefits. Zenith's patents, Dr. Jones explained, claimed an innovative "VSB receiver" that improved the efficiency of digital communications by "deriv[ing] estimated data from the" signals sent to the receiver. Appx20238-20239. And the same was true of Constellation's technology, *see id.*, though the magnitude of the benefit was significantly higher for Constellation's invention than for Zenith's, Appx20217; Appx20316.

Economic comparability. In addition to the technical comparability, Dr. Ryan Sullivan demonstrated in detail that Zenith's licenses arose in economic circumstances very similar to the hypothetical negotiation over Constellation's. Appx20276.

First, Dr. Sullivan explained that the licensor and licensee for the Zenith patents were similarly situated to the parties here. Like Constellation, Zenith was solely in the business of licensing its intellectual property and was not producing its own products at the time it licensed its VSB technology. Appx20276. So Zenith did not have any incentive to alter its royalties based on its need to license patents from others. Moreover, at the time that it negotiated its licenses, Zenith had "under[taken] some very strong licensing efforts" and had not yet decided to enter a patent pool, which would have reduced the per-unit royalty for Zenith's technology. Appx20279. On the other side of the ledger, the licensees for Zenith's patents were companies like LG that manufactured ATSC-compliant televisions; in fact, one of those licensees was *LG itself*. Appx20276.

Second, Dr. Sullivan explained that the Zenith licenses had a comparable scope to the license that would arise from a hypothetical negotiation. The Zenith licenses extended through the life of the patents and were non-exclusive. Appx20276-20277. They were structured as a running royalty, which was tied to the number of televisions sold, thereby accounting for any uncertainty about consumer demand for ATSC televisions. Appx20276-20277; *see* Appx20201. They applied only to sales with a nexus to the United States. Appx20294; Appx20299. And they covered only the technology necessary to receive ATSC 1.0 broadcast signals, rather than other technology or features of the licensed televisions. Appx20280. All of those characteristics line up with the hypothetical negotiation in this case.

Dr. Sullivan's analysis was buttressed by Constellation's lead negotiator, Mr. Marino, who testified that he had considered the Zenith licenses throughout his negotiations with LG. Appx20199 (explaining that Zenith's patents were incorporated into the same "area of the [ATSC] standard").

Mr. Marino also testified that he had tried to negotiate a running-royalty arrangement so that Constellation would bear the risk associated with the adoption of the ATSC 3.0 standard—just as Zenith had when structuring its licenses for ATSC 1.0 technology. Appx20201; *see* Appx20276-20277.

Relevant differences. In addition to explaining these similarities between the Zenith licenses and the hypothetical negotiation, Constellation's experts also identified and accounted for any relevant differences.

On the technical side, Dr. Jones explained that Constellation's inventions were far more valuable than Zenith's patented technology. He testified that, at the time the ATSC 1.0 standard was developed, Zenith's technology was one of two potential options for the "physical layer" of the standard. Appx20238-20239 (discussing the option to use "a QAM-based solution rather than a VSB-based solution").

That was not true of Constellation's technology. Multiple witnesses—including LG's—spoke to the transformative nature of the patented inventions, explaining that they unlocked efficiency gains comparable to those achieved over the prior forty years of research combined. Appx20217; Appx20316. Dr. Jones also explained that Constellation's technology was the only viable option to achieve the benefits touted by ATSC 3.0 and was responsible for one-third of the efficiency gains attributable to the standard. Appx20238-20239. As Dr. Sullivan explained, that technological difference would "cause the royalty, if anything, to be higher for the Constellation Designs patents." Appx20277.

Dr. Sullivan also walked through relevant economic differences. He accounted for the fact that Zenith's licenses covered more patents than those asserted in this case and explained why that did not require an adjustment to the license amount, given that Zenith's patents (like Constellation's) had substantial technological overlap and only a single royalty rate. Appx20280. He considered evidence about the value of patents licensed through patent pools for the ATSC 1.0 and ATSC 3.0 standards, finding that those license rates supported his proposed royalty. Appx20278-20279. Finally, Dr. Sullivan noted the differences in the price of consumer televisions over time, explaining that the prices of new television models had kept pace with inflation and that Zenith had baked inflation adjustments into many of its earlier licenses. Appx20278. To account for that change, Dr. Sullivan applied an inflationary adjustment to the royalty charged by Zenith, arriving at a royalty of $6.75 per infringing television. Appx20280.

C. The Panel Opinion

In its appellate briefing, LG mounted a kitchen-sink attack on the district court's judgment. It advanced a slew of arguments seeking reversal of the district court's (1) grant of summary judgment to Constellation on patent eligibility, (2) denial of LG's motion for judgment as a matter of law of non-infringement, and (3) denial of LG's motion to exclude the testimony of Constellation's damage's expert.* The panel rejected nearly all of LG's arguments. As to eligibility, it affirmed summary judgment in Constellation's favor on four of the asserted claims, but vacated as to others. Op. 2-3. As to non-infringement, it affirmed the denial of LG's motion for judgment as a matter of law. And as to damages, the panel affirmed the denial of LG's motion to exclude Constellation's expert, explaining that it "agree[d] with the district court that Dr. Sullivan relied on sufficient facts to opine that the Zenith licenses were sufficiently comparable." Op. 30.

At oral argument, however, LG had advanced a new argument—seeking a new form of relief—that appeared nowhere in its briefing. Whereas LG had

* As the panel explained, LG alternatively styled the last of these as a challenge to the denial of LG's motion for a judgment of no damages as a matter of law. But *Daubert*, not JMOL, was the proper mode of analysis, and LG made no independent argument under its alternative framing in any event. Op. 29-30.

argued previously that it was entitled to judgment as a matter of law on damages, LG asserted at argument that if the panel found some, but not all, of the asserted claims ineligible, it had to "vacate the damages award" and remand for further proceedings. Op. 31 n.4. The panel rejected this belated, "forfeited" argument in a three-sentence footnote at the end of its opinion. It noted that LG had failed to raise this argument until oral argument even though it "was foreseeable and should have been raised in LG's opening brief." *Id.* That opening brief raised different eligibility arguments as to different patents, *compare* LG Br. 20-24 (arguments as to the '761 patent), *with* LG Br. 24-26 (different arguments as to the '700, '509, and '902 patents), meaning that the panel might find only some of the asserted claims ineligible—and so LG should have argued for vacatur in that event, if that is what it wanted. And the panel further observed that LG had not even laid the groundwork for this argument below, as "none of LG's witnesses disputed" testimony indicating "that the value of Constellation's asserted patents was tied to the technology" as a whole rather than the number of infringed claims. Op. 31 n.4.

ARGUMENT

A. This Case Does Not Present The Primary Question On Which LG Urges En Banc Review.

1. LG premises its request for rehearing on its assertion that, in upholding the damages award, "[t]he panel held that" a "patentee may recover a royalty covering an entire technology rather than the value of the patent claims it actually asserts." Pet. 2. That assertion is misleading at best. In fact, the panel rejected LG's request for vacatur because it found that LG had "forfeited" that challenge by raising it for the first time at oral argument. Op. 31 n.4. LG seizes on the panel's subsequent observation that LG's trial witnesses had not disputed Constellation's testimony that "the value of Constellation's asserted patents was tied to the *technology* rather than any asserted patent or claim." *Id.* LG repeatedly suggests that this sentence—and not the forfeiture finding it followed—was "[t]he panel's basis for not setting aside the [damages] award." Pet. 17; *see, e.g.*, Pet. 6 (asserting that "the panel … accepted that the value of Constellation's asserted patents 'was tied to the *technology* rather than any asserted patent or claim'") (quoting Op. 31 n.4); Pet. 3, 5 (similar). That is a vast overreading of a comment offered by the panel only *after* holding that LG forfeited the argument it now presses.

Fairly read, the "important patent damages law question" that LG urges this Court to review en banc is not even presented by this case. Pet. 2.

2. When it finally acknowledges this problem, LG tries to sidestep it by challenging "the panel's forfeiture finding" too. Pet. 18. But that finding was utterly uncontroversial in both rule and application, and LG does not even try to explain why it warrants review by the en banc court.

This Court has said countless times that when a party "rais[es] [an] issue for the first time at oral argument, [it] fail[s] to preserve th[e] argument" and thus runs headlong into the doctrine of "forfeiture." *Worldwide Door Components, Inc. v. United States*, 119 F.4th 959, 962 n.1 (Fed. Cir. 2024). LG does not dispute that it never asked in its briefing before the panel for vacatur of the jury's damages award in the event that the panel held one or more of Constellation's patents ineligible—even though that outcome was foreseeable in light of LG's decision to raise different ineligibility arguments as to different patents. *See* Pet. 18; *compare* LG Br. 20-24 ('761 patent), *with* LG Br. 24-26 ('700, '509, and '902 patents). Instead, LG's papers asked for only two things: reversal of summary judgment and remand on eligibility, or entry of judgment of ineligibility in favor of LG. *See* LG Br. 30.

LG asserts, citing *Optis Cellular Tech., LLC v. Apple Inc.*, 139 F.4th 1363, 1376 (Fed. Cir. 2025), that it did not need to specifically ask for vacatur of the damages award, because vacatur was "the natural and necessary consequence" of the relief that it actually "requested" (reversal of the district court's summary-judgment order). Pet. 18. But *Optis Cellular* nowhere held that a damages award must be vacated upon a partial victory as to eligibility (or any other liability element). Instead, it vacated a damages award only after vacating an infringement judgment *in toto*, because doing so left "no infringement finding on which any damages c[ould] be awarded." *Optis Cellular*, 139 F.4th at 1376. And even then, *Optis Cellular* did so only after the appellant—unlike LG—specifically asked for a vacatur of the district court's damages award, in the event it prevailed on its liability challenge. *Optis Cellular*, No. 22-1904, Apple Br. 52-57 (Fed. Cir. filed Oct. 14, 2022). *Optis Cellular* thus only underscores the correctness of the panel's holding that LG should have done the same here.

LG has thus shown no error in the panel's forfeiture finding, and has not even tried to show how any such error would warrant en banc review. Even on LG's telling, the only way that this Court could even reach the question in its petition is if it first takes up and reverses the panel's entirely correct forfeiture holding. Pet. 18-19. And even then, there would still be no substantive holding to review on that issue—just an observation at the end of a three-sentence footnote about how LG's witnesses at trial did not raise the issue LG now presses in its petition. Op. 31 n.4. It is hard to imagine a poorer candidate for en banc review.

3. In any event, even if the panel's half-sentence in a footnote could be read as addressing the question LG poses, LG still has identified no reason to grant review. LG's position advances a categorical rule: a patentee may *never* "recover a royalty covering an entire technology." Pet. 2. But this Court has repeatedly made clear—including in the precedent that LG relies upon—that no such categorical bar exists. *Omega Pats., LLC v. CalAmp Corp.*, 13 F.4th 1361, 1376 (Fed. Cir. 2021) (citing *Virnetx, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1326 (Fed. Cir. 2014)). Rather, "the governing rule" is simply that damages "must reflect the value attributable to the infringing features of the product, and no more." *Id.* And Constellation's damages expert explained exactly why that was true here. He testified (and no LG witness disputed) that, as Zenith's own licenses demonstrated, the real-world royalties paid for similar inventions were based on the technology itself, and not whether "it's two patents, one patent, [or] four patents" that comprise that technology.

Appx20280; *see* Op. 31 n.4. It is thus not the panel, but LG, whose position "br[eaks] with settled law." Pet. 2. For this independent reason, LG's primary argument provides no basis for en banc review.

B. Neither Of LG's Other Factbound Challenges Warrants En Banc Review.

There is likewise no reason to review the other questions raised in LG's petition, which are both factbound and meritless.

Although LG frames its attacks as presenting two distinct inquiries—whether Zenith licenses were "sufficiently comparable" to the hypothetical license, and whether Constellation's damages expert sufficiently "account[ed] for [the] distinguishing facts" between them, Pet. 8-9, 11-12—in this case, the analysis collapses. As LG itself acknowledges (at 6), when prior licenses are "sufficiently comparable" to the hypothetical one, an expert can rely on "built-in apportionment," *Omega*, 13 F.4th at 1377—a principle that allows "adopt[ing] the comparable license's royalty rate and royalty base without further" adjusting for differences between it and the hypothetical license. *Vectura Ltd. v. Glaxosmithkline LLC*, 981 F.3d 1030, 1041 (Fed. Cir. 2020). Accordingly, both of LG's arguments amount to an attack on whether the Zenith licenses on which Constellation's expert relied were "sufficiently comparable" to the hypothetical one.

That is a textbook factual inquiry, subject to only deferential review. As this Court has said many times, "the 'degree of comparability' of [prior] license agreements [is] 'a factual issue.'" *Virnetx*, 767 F.3d at 1331 (quoting *ActiveVideo Networks, Inc. v. Verizon Communications, Inc.*, 694 F.3d 1312, 1333 (Fed. Cir. 2012)). And an expert's determination that licenses are sufficiently comparable to support his damages model is reviewed under the *Daubert* framework. Op. 30 (citing *Versata Software, Inc. v. SAP Am., Inc.*, 717 F.3d 1255, 1264 (Fed. Cir. 2013)). Because the district court concluded that Constellation's expert had sufficient factual basis to render his damages opinion, LG's challenge to that decision is reviewed only for abuse of discretion. Op. 30 (citing *Eco-Factor, Inc. v. Google LLC*, 137 F.4th 1333, 1338 (Fed. Cir. 2025)).

The record makes clear there was no abuse of discretion in the district court's decision, nor any error in the panel's affirmance—much less a conflict with a decision of this or any other court. *See* Fed. Cir. R. 40(b)(2). At trial, Constellation offered two witnesses who explained the technical and economic similarity between the prior Zenith licenses and the hypothetical license here. Dr. Jones testified at length about the technological overlap, explaining that the Zenith patents and the asserted patents recited similar features (*e.g.*, demappers, demodulators, and decoders), Appx20236-20239; were put to similar uses by television manufacturers, Appx20236-20237; and had similar technological benefits, Appx20238-20239. And Dr. Sullivan provided detailed testimony explaining that the Zenith licenses arose in economic circumstances very similar to the hypothetical one, because the licensor and licensee in each case were similarly situated, Appx20276; Appx20279; and the licenses had similar temporal, geographic, and technological scopes, as well as a similar running-royalty structure, Appx20276-20277; Appx20280; Appx20294; Appx20299. Constellation's expert thus had ample basis to conclude that the Zenith licenses were sufficiently comparable to rely on built-in apportionment.

In any event, built-in apportionment aside, Constellation's witnesses also identified and accounted for any relevant differences. Technologically, Dr. Jones explained that Constellation's inventions were more valuable than Zenith's patented technology. Appx20238-20239. Indeed, Zenith's inventions resulted in only a small improvement whereas Constellation's technology unlocked efficiency gains comparable to those achieved over the prior forty years of research combined. Appx20217; Appx20316. Accounting for the technological difference would thus have "cause[d] the royalty, if anything, to be higher for the Constellation Designs patents." Appx20277. Economically, Dr. Sullivan testified that he accounted for differences between the licenses—including by considering the fact that Zenith's licenses covered more patents than those asserted in this case, Appx20280. Dr. Sullivan also considered evidence about the value of patents licensed through patent pools for the different applicable standards (ATSC 1.0 for Zenith; and ATSC 3.0 for Constellation's), Appx20278-20279, and the time that had passed between the Zenith licenses and the hypothetical one, Appx20278. And he explained why some of those differences warranted an adjustment to the per-unit royalty rate, while others did not. Appx20278-20280.

Based on that evidence, the panel correctly concluded that there was no abuse of discretion in permitting Dr. Sullivan's testimony. Op. 30. While LG disagrees, en banc review is not warranted merely to second-guess the panel's answers to case-specific questions of fact by re-weighing trial testimony under an abuse-of-discretion standard. LG's petition should be denied.

CONCLUSION

For the foregoing reasons, the Court should deny rehearing and affirm the judgment below.

Respectfully submitted,

/s/ *Jeffrey B. Wall*

JEFFREY B. WALL
JUDSON O. LITTLETON
GIBSON DUNN & CRUTCHER LLP
1700 M Street, N.W.,
Washington, DC 20036
(202) 955-8533
jwall@gibsondunn.com

JASON CASSADY
AISHA MAHMOOD HALEY
JAMES SMITH
CALDWELL CASSADY & CURRY P.C.
212 N. Pearl St.
Suite 1200
Dallas, Texas 75201
(214) 888-4848
jcassady@caldwellcc.com

Counsel for Constellation Designs LLC

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATIONS

This brief complies with the type-volume limitations of the Federal Rules of Appellate Procedure and the Rules of this Court. According to the word processing system used to prepare it, the brief contains 3,890 words.

/s/ *Jeffrey B. Wall*
JEFFREY B. WALL

CERTIFICATE OF SERVICE

On July 30, 2026, a copy of the foregoing brief was filed electronically through the CM/ECF system and thereby served on all parties.

/s/ *Jeffrey B. Wall*
JEFFREY B. WALL