

NOTE: This disposition is nonprecedential.

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

BELL SEMICONDUCTOR LLC,
Appellant

v.

**ADVANCED SEMICONDUCTOR ENGINEERING,
INC.,**
Appellee

2022-2048

Appeal from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in No. IPR2021-
00180.

Decided: November 17, 2023

ALAN WRIGHT, Devlin Law Firm, Wilmington, DE, ar-
gued for appellant. Also represented by TIMOTHY DEVLIN.

STEVEN J. RIZZI, McKool Smith, P.C., New York, NY,
argued for appellee. Also represented by RAMY HANNA,
Houston, TX.

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

TARANTO, *Circuit Judge*.

Bell Semiconductor LLC is the patent owner of record, by assignment in 2020, of U.S. Patent No. 6,624,007, which describes and claims methods for making semiconductor devices. Advanced Semiconductor Engineering, Inc. petitioned the United States Patent and Trademark Office (PTO) for an inter partes review (IPR) of all of the '007 patent's claims (1–8) under 35 U.S.C. §§ 311–319. After Bell disclaimed claim 8, the Patent Trial and Appeal Board, acting as delegatee of the PTO's Director, instituted the requested review of claims 1–7. The Board ultimately issued a final written decision under 35 U.S.C. § 318 determining that claims 1–7 are unpatentable. *Advanced Semiconductor Engineering, Inc. v. Bell Semiconductor, LLC*, No. IPR2021-00180, 2022 WL 1797393 (P.T.A.B. June 2, 2022) (*Decision*).

Bell appeals the final written decision under 35 U.S.C. §§ 319 and 141(c). The appeal was timely filed under 35 U.S.C. § 142 and 37 C.F.R. § 90.3(a)(1). Bell principally challenges the Board's claim construction. We affirm.

I

We begin by addressing our jurisdiction to review the Board's decision. The constitutional standing requirement for this court's jurisdiction under Article III is met. It suffices that Bell has a pending action in district court in which it asserts the '007 patent and seeks to recover for the alleged infringement; its concrete stake in that action is unquestioned; and the Board's determination of unpatentability, unless set aside on appeal, will defeat any ability it has to recover in the infringement suit, whereas setting aside the Board's decision will restore that ability.

This court's statutory jurisdiction is governed by 28 U.S.C. § 1295(a)(4)(A), which grants this court "exclusive jurisdiction . . . of an appeal from a decision" of the Board "with respect to" an "inter partes review under title 35, at

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the instance of a party who exercised that party’s right to participate in the . . . proceeding before . . . the Board.” We plainly have an appeal from a Board decision in an IPR—an appeal filed under the authority provided by 35 U.S.C. §§ 319 and 141, within the time allowed by 35 U.S.C. § 142 and 37 C.F.R. § 90.3(a)(1). What warrants some discussion is the requirement that the appeal be “at the instance of a party who exercised that party’s right to participate in the” IPR before the Board. 28 U.S.C. § 1295(a)(4)(A).

Neither Bell nor Advanced Semiconductor Engineering nor anyone else has contended that this requirement is not met. We need not decide whether this “at the instance of a party” requirement is jurisdictional or, instead, a nonjurisdictional statutory standing requirement. *Cf. CACI, Inc.-Federal v. United States*, 67 F.4th 1145, 1151 (Fed. Cir. 2023) (explaining that the “interested party” requirement of 28 U.S.C. § 1491(b)(1) is not jurisdictional). Even if the requirement is jurisdictional, and so must be considered even if satisfaction of it is undisputed, we conclude that the requirement is met here, *i.e.*, that Bell was a party with a right to participate in the IPR before the Board. We so conclude recognizing that, in two district-court cases filed by Bell to enforce the ’007 patent, questions arose about the interest, if any, Rohm Co., Ltd.—the assignee listed on the face of the ’007 patent—retains in the ’007 patent despite the assignment from Rohm to Bell on file with the PTO.

The “patent owner” is a party with the right, granted by statute, to participate in an IPR. *See, e.g.*, 35 U.S.C. § 313 (“[T]he patent owner shall have the right to file a preliminary response to the petition.”); 35 U.S.C. § 314 (“The Director shall notify the petitioner and patent owner, in writing, of the Director’s determination [regarding institution of an IPR].”); 35 U.S.C. § 316(d) (“During an [IPR] instituted under this chapter, the patent owner may file 1 motion to amend the patent.”). Bell participated as the sole patent owner in the IPR appealed here. Who is a “patent owner” depends on facts, but the statute does not prescribe

how the PTO is to determine the facts. Here, we see no error in the Board's treatment of Bell as the patent owner, giving Bell a right to participate in the IPR.

Although Bell was not the original applicant for the '007 patent—Rohm was—the Board properly found Bell to be the patent owner of record by the time relevant for participation as the patent owner. Patent ownership may transfer via assignment, *see* 35 U.S.C. § 261, but “[i]n order to request or take action in a patent matter, an assignee who is not the original applicant must establish its ownership of the patent property . . . to the satisfaction of the Director.” 37 C.F.R. § 3.73(c)(1); *see also* 37 C.F.R. § 3.54 (“When necessary, the Office will determine what effect a document has, including whether a party has the authority to take an action in a matter pending before the Office.”). Patent ownership may be established through an assignment document recorded at the Patent Office. 37 C.F.R. § 3.73(c)(1)(ii). A recorded patent assignment is not conclusively valid, but the recordation “creates a presumption of validity as to the assignment and places the burden to rebut such a showing on one challenging the assignment.” *SiRF Technology, Inc. v. International Trade Commission*, 601 F.3d 1319, 1327–28 (Fed. Cir. 2010).

Here, Advanced Semiconductor Engineering named Bell as the patent owner in its November 10, 2020 petition for an IPR and served the petition on counsel for Bell. In March 2020, Bell had submitted to the PTO an assignment transferring the entire right, title, and interest in the '007 patent from Rohm to Bell, and that assignment was recorded at the PTO a few days later. Reel 052261/Frame 0102–05 (executed March 26, 2020; recorded March 30, 2020). On March 12, 2021, Bell filed a preliminary response to the petition, stating in that filing that it was the patent owner. Bell further stated in the preliminary response that it had filed a disclaimer of claim 8, and it attached as an exhibit the disclaimer under 37 C.F.R. § 1.321(a), dated March 11, 2021, along with the statement

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under 37 C.F.R. § 3.73(b), also dated March 11, 2021, declaring that it was “the assignee of the entire right, title, and interest” in the ’007 patent and identifying the Reel/Frame location of the assignment. J.A. 1886–87. On that record, and with no dispute from Advanced Semiconductor Engineering, from Rohm, or from anyone else (as has remained true), the Board deemed Bell the patent owner when instituting the IPR on June 9, 2021, and it did not, and had no reason to, change that determination later in the proceeding.

We see no error in the Board’s treatment. It is consistent with Board practice. “In *inter partes* review proceedings, the Board generally accepts a party’s identification of itself as patent owner,” particularly when the party seeking to proceed as patent owner is the assignee and patent owner of record and when no other party purporting to be the patent owner appears before the Board. *FedEx Corp. v. Patent Owner*, No. IPR2017-01786, 2018 WL 3870035, at *4 (P.T.A.B. Aug. 13, 2018); *see Legend3D, Inc. v. Prime Focus Creative Services Canada Inc.*, No. IPR2015-01350, 2015 WL 7301808 (P.T.A.B. Nov. 19, 2015); *Activision Blizzard, Inc. v. Acceleration Bay, LLC*, No. IPR2015-01951, 2016 WL 8969284, at *1–2 (P.T.A.B. July 13, 2016); *The Jewelry Channel, Inc. USA v. America’s Collectibles Network, Inc.*, No. CBM2014-00119, 2014 WL 5386840, at *2 (P.T.A.B. Oct. 20, 2014).

Nor is the Board’s treatment of Bell contradicted by any court determination regarding Rohm’s continuing interest in the ’007 patent. In one district-court case filed by Bell to allege infringement of the ’007 patent, the district court granted an unopposed motion to join Rohm as a “Required Party” under Federal Rule of Civil Procedure 19(a)(1)(B)(i), *i.e.*, as a party that “claims an interest relating to the subject of the action.” *Bell Semiconductor, LLC v. Microchip Technology Inc.*, No. 6:20-cv-00296 (W.D. Tex. May 4, 2021), ECF No. 64 (quoting Fed. R. Civ. P. 19(a)(1)(B)(i)). The unelaborated ruling that Rohm claims

an interest relating to the '007 patent is not a finding that Rohm has an interest making it a patent owner. On May 21, 2021, the *Microchip* case was dismissed by agreement of the parties. *Id.* ECF No. 67 (order granting joint motion to dismiss); *id.* (May 20, 2021), ECF No. 66 (joint motion to dismiss). Subsequently, a similar issue was raised in a second case, *Bell Semiconductor, LLC v. NXP Semiconductors, N.V.*, No. 1:20-cv-00611 (W.D. Tex. Feb. 3, 2022), ECF 113, but that case was stayed (pending the present IPR) before any ruling on the issue, *id.* (Feb. 7, 2022), ECF No. 114. Bell explained in *NXP* that Rohm, after the joinder order in *Microchip* in May 2021, quickly declined to participate voluntarily after receiving notice of the litigation. *Id.* at 2–3 (Feb. 3, 2022), ECF 113.

Finally, just as Rohm declined to participate in the *Microchip* litigation—even though invalidity of the '007 patent was asserted as a counterclaim, Defendants Answer to Original Complaint and Counterclaims at 47, *Microchip*, No. 6:20-cv-00296 (Sept. 14, 2020), ECF No. 22 (counterclaim XIV)—Rohm has made no attempt to assert an ownership interest in the '007 patent in the present IPR matter, either when the matter was before the Board or since then. Without ruling on the legal implications, we note various forms of notice of the IPR. The PTO's Official Gazette published a notice of the IPR in January 2021, which might constitute constructive notice of the proceeding. AIA Trial Proceedings Filed before the Patent Trial and Appeal Board, 1482 Off. Gaz. Pat. & Trademark Office 74 (Jan. 5, 2021); *cf.* MPEP § 2230 (discussing constructive notice in an ex parte reexamination). In late March 2021—more than two months before institution of the IPR here—the PTO notified Rohm's counsel of record of the revocation of that counsel's power of attorney based on the 2020 assignment documents filed in the Patent Office. Letter from United States Patent & Trademark Office, to Merchant & Gould P.C. (Mar. 29, 2021) ("Notice Regarding Change of Power of Attorney," on file at the PTO). And at oral

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argument before this court, Bell’s counsel represented that Rohm had recently been contacted again about the pendency of this appeal, after this court ordered the parties to be prepared to discuss the ownership issue at the upcoming argument. *See, e.g.*, Oral Arg. at 11:17–13:20; Order (Oct. 24, 2023), ECF No. 35. In these circumstances, we have no occasion to address issues that could arise if a nonparty seeks to assert ownership of a patent that is the subject of an IPR, issues that might well vary according to the timing of such an assertion.

II

On the merits, we reject Bell’s challenge to the final written decision of the Board now before us. The ’007 patent describes and claims methods of producing an “intermediate product” that includes a semiconductor chip mounted on a leadframe and enclosed in a “packaging layer,” then cutting that intermediate product from the surrounding leadframe in two steps to release a finished semiconductor device. Claim 1 is representative:

1. A method of making a semiconductor device, the method comprising the steps of:

mounting a semiconductor chip on a leadframe;

producing an intermediate product by forming a packaging layer to enclose the chip, the intermediate product including the leadframe, the chip and the packaging layer; and

cutting the intermediate product;

wherein the cutting step is performed by using a first cutter having a first thickness and a second cutter having a second thickness greater than the first thickness, the first cutter being used for making a full cut

in the leadframe, the second cutter being used for making a partial cut in the leadframe, the full cut and the partial cut corresponding in position to each other.

'007 patent, col. 8, lines 51–65.

Bell challenges the Board's claim constructions for three claim terms: "an intermediate product," "packaging layer," and "cutting the intermediate product." The Board construed those claim limitations, based on the "unambiguous" claim language and "consistent with the . . . [s]pecification," as including within their scope an intermediate product with only a *single* chip encased in a resin packaging layer. *Decision*, at *8, *11, *14. Bell's claim construction arguments, in contrast, all flow from the premise that "an intermediate product" must be construed to have the structure shown in Figure 16—specifically, each such intermediate product must itself include a plurality of chips, all enclosed in a continuous resin "packaging layer" that runs on and between the chips. Appellant's Opening Br. at 36–56. Bell has made no meaningful argument for overturning the Board's decision independent of its challenge to the Board's claim constructions. We review the Board's claim constructions, here determined by intrinsic evidence, without deference. *Polaris Innovations Ltd. v. Brent*, 48 F.4th 1365, 1372 (Fed. Cir. 2022).

We reject Bell's claim-construction arguments because we reject Bell's multi-chip view of "an intermediate product" based on Figure 16. First, Bell's proposed constructions are inconsistent with the claim language. Claim 1 claims an intermediate product that includes, by definition, "the chip" enclosed in "a packaging layer," where "the chip" refers back to "*a* semiconductor chip" for its antecedent basis. (Emphasis added.) Articles like "a" and "an"—and "the" when used to refer back to "a" or "an"—must be construed to mean "one or more" unless the claim language, specification, or prosecution history demand

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otherwise. *See ABS Global, Inc. v. Cytonome/ST, LLC*, 84 F.4th 1034, 1040 (Fed. Cir. 2023) (citing cases). Sometimes we have found context to make clear that “a” before a noun is restricted to one only (of the things named by the noun), rather than covering both one and more than one (of the noun-named things). Bell has not cited examples of what in any event must be far more extraordinary—use of “a” or “an,” in patent usage or English usage outside patents, to require a plurality, excluding the singular. And nothing in claim 1’s language otherwise requires “an intermediate product” with a “packaging layer” to contain multiple chips.

Second, the ’007 patent’s specification does not contradict the singular-permitting construction strongly supported by the claim language. Bell relies heavily on the embodiment shown in Figure 16, but “the claims of the patent will not be read restrictively” as limited to a single embodiment, even when the patent “describes *only* a single embodiment,” “unless the patentee has demonstrated a clear intention to limit the claim scope using ‘words or expressions of manifest exclusion or restriction.’” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (emphasis added) (quoting *Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1327 (Fed. Cir. 2002)). The ’007 patent’s specification does not restrict claim 1’s language by clearly and expressly defining “an intermediate product” with a “packaging layer” as limited to the embodiment shown in Figure 16.

Instead, the specification directly supports a singular-permitting construction of the claim language. The Summary of the Invention discusses a first aspect of the invention in singular-permitting language that mirrors the claim: It refers to producing “an intermediate product” by mounting “a semiconductor chip on a leadframe” and forming a “packaging layer” to enclose “the chip.” ’007 patent, col. 2, lines 32–34. When the ’007 patent describes methods for enclosing a chip within a packaging layer to produce

“an intermediate product,” the specification explains that each individual chip may be enclosed within a single resin mold. *Id.*, col. 6, lines 27–42 (“[E]ach of the chips **3** is accommodated in the relevant *one* of the molding cavities. Then, a thermosetting resin for example is poured into the . . . *cavities*.” (emphasis added)). And more broadly, the inventive aspect of the ’007 patent is a two-step cutting method that removes the burrs that can form when only a single-step cutting method is used. *Id.*, col. 8, lines 15–32. That method is described and claimed in terms that are agnostic as to whether the particular semiconductor device being cut from the leadframe is adjacent to other semiconductor devices.

Finally, regarding the proper construction of the claim phrase “cutting the intermediate product,” Bell’s argument—that “cutting the intermediate product” requires cutting through the packaging layer—is merely an extension of Bell’s argument, based on Figure 16, that a packaging layer must be continuous between multiple adjacent chips, and it fails for similar reasons. Claim 1 defines “the cutting step” performed when “cutting the intermediate product” as involving two cuts “*in the leadframe*.” (Emphasis added.) The claim language does not define “cutting the intermediate product” or “the cutting step” as necessarily involving cutting through any layers or pieces of the intermediate product other than the leadframe. The specification, too, states that the cutting step described and claimed in the ’007 patent is directed to making cuts “in the leadframe.” *See id.*, col. 2, lines 31–51; *see also id.*, col. 3, lines 5–7 (“Preferably, the packaging layer maybe be formed in a manner such that it . . . allows part of the leadframe to be exposed.”); *id.* Figures 14A–E (showing semiconductor devices with the leadframe exposed). In short, the claims and specification nowhere limit “cutting the intermediate product” to only the embodiment described in Figures 16–18, to the exclusion of all other disclosed and claimed embodiments.

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III

We affirm the Board's claim constructions and its final written decision determining that claims 1–7 are unpatentable.

AFFIRMED