United States Court of Appeals for the Federal Circuit

KNOWLES ELECTRONICS LLC,

Appellant

v.

ANDREI IANCU, UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE,

Intervenor 2016-1954

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. 95/001,850.

Decided: April 6, 2018

RICHARD L. RAINEY, Covington & Burling LLP, Washington, DC, argued for appellant. Also represented by BRIAN GERARD BIELUCH, MICHAEL S. SAWYER, CYRIL DJOUKENG.

MOLLY R. SILFEN, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA, argued for intervenor. Also represented by NATHAN K. KELLEY, THOMAS W. KRAUSE, MEREDITH HOPE SCHOENFELD; MARK R. Freeman, Appellate Staff, Civil Division, United States Department of Justice, Washington, DC.

Before NEWMAN, CLEVENGER, and WALLACH, Circuit Judges.

Opinion for the court filed by Circuit Judge WALLACH.

Dissenting opinion filed by Circuit Judge NEWMAN.

Wallach, Circuit Judge.

Appellant Knowles Electronics LLC ("Knowles") appeals the inter partes reexamination decision of the U.S. Patent and Trademark Office's ("USPTO") Patent Trial and Appeal Board ("PTAB") that affirmed an examiner's findings that (1) claims 1-2, 5-6, 9, 11-12, 15-16, and 19 of U.S. Patent No. 8,018,049 ("the '049 patent") are unpatentable as anticipated; and (2) claims 21–23 and 25–26 of the '049 patent would have been obvious over various prior art references. Analog Devices, Inc. v. Knowles Elecs. LLC (Analog Devices I), No. 2015-004989, 2015 WL 5144183, at *7, *9 (P.T.A.B. Aug. 28, 2015); see Analog Devices, Inc. v. Knowles Elecs. LLC (Analog Devices II), No. 2015-004989, 2016 WL 675856, at *7 (P.T.A.B. Feb. 17, 2016) (denying request for rehearing). jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A) (2012).² We affirm.

¹ Third-party requester Analog Devices, Inc. declined to defend the judgment in its favor. *See* Letter from Appellee Analog Devices, Inc. 1, ECF No. 2. Pursuant to 35 U.S.C. § 143 (2012), the Director of the USPTO intervened and participated at oral argument. *See* Notice of Intervention 1, ECF No. 11.

We have an independent obligation to satisfy ourselves that we have jurisdiction. *Bender v. Williamsport*

BACKGROUND

I. The '049 Patent

The '049 patent, entitled "Silicon Condenser Micro-

Area Sch. Dist., 475 U.S. 534, 541 (1986). The Dissent questions whether the USPTO has Article III standing to "continue the litigation," let alone participate, "when it has asserted no injury to itself." Dissent at 2. There is no dispute Knowles has standing since its patent has been judged unpatentable and therefore it has presented "a justiciable case or controversy." ASARCO Inc. v. Kadish, 490 U.S. 605, 618 (1989). The Director of the USPTO has an unconditional statutory "right to intervene in an appeal from a [PTAB] decision." 35 U.S.C. § 143; see Leahy-Smith America Invents Act, Pub. L. No. 112-29, §7(e), 125 Stat. 284, 315 (2011) (stating that the Director's right to intervene "shall be deemed to extend to inter partes reexaminations that are requested under section 311 of such title before the effective date" of the America Invents Act). Our precedent allows the USPTO to intervene to defend a PTAB decision when a petitioner withdraws on appeal, necessarily implying jurisdiction. e.g., NFC Tech., LLC v. Matal, 871 F.3d 1367, 1371 (Fed. Cir. 2017); In re NuVasive, Inc., 842 F.3d 1376, 1379 n.1 (Fed. Cir. 2016); In re Cuozzo Speed Techs., LLC, 793 F.3d 1268, 1272 (Fed. Cir. 2015), aff'd sub nom., Cuozzo Speed Techs., LLC v. Lee, 136 S. Ct. 2131, 2143–44 (2016). We follow the Supreme Court guidance in Cuozzo that "the [USPTO] may intervene in a later Judicial proceeding to defend its decision—even if the private challengers drop 136 S. Ct. at 2144; cf. Pers. Audio, LLC v. Elec. Frontier Found., 867 F.3d 1246, 1249 (Fed. Cir. 2017) (reaffirming that "[w]ith Article III satisfied as to the appellant, [the appellee] is not constitutionally excluded from appearing in court to defend the PTAB decision in its favor"). The Director of the USPTO, thus, has standing.

phone and Manufacturing Method," generally discloses a silicon condenser microphone apparatus, including a housing for shielding a transducer, used in certain types of hearing aids to protect the transducer from outside interferences. See '049 patent, Abstract; id. col. 1 ll. 17–19, 26–30, 46–51. The components of the microphone apparatus, i.e., "package," may specifically be processed "in panel form" that can be separated later into individual units. See id. col. 3 ll. 10–19. As a result, the invention purportedly improves over the prior art's "drawbacks associated with manufacturing these housings, such as lead time, cost, and tooling." Id. col. 1 ll. 39–41.

Independent claim 1 is representative of the apparatus claims and discloses:

A silicon condenser microphone package comprising:

a package housing formed by connecting a multi-layer substrate comprising at least one layer of conductive material and at least one layer of non-conductive material, to a cover comprising at least one layer of conductive material:

a cavity formed within the interior of the package housing;

an acoustic port formed in the package housing; and

a silicon condenser microphone die disposed within the cavity in communication with the acoustic port;

where the at least one layer of conductive material in the substrate is electrically connected to the at least one layer of conductive material in the cover to form a shield to protect the silicon condenser microphone die against electromagnetic interference.

Id. col. 12 ll. 16–31. Independent claim 21 is representative of the method claims and discloses:

A method of manufacturing a silicon condenser microphone package comprising:

providing a panel comprising a plurality of interconnected package substrates, where each of the plurality of package substrates comprises at least one layer of conductive material and at least one layer of nonconductive material;

attaching a plurality of silicon condenser microphone dice to the plurality of package substrates, one die to each package substrate:

attaching a plurality of package covers, each comprising at least one layer of conductive material, to the panel, one package cover to each of the package substrates, where attaching the plurality of package covers to the panel comprises electrically connecting the at least one layer of conductive material in the package cover to the at least one layer of conductive material in the corresponding package substrate to form a shield to protect the silicon condenser microphone die against electromagnetic interference; and

separating the panel into a plurality of individual silicon condenser microphone packages.

Id. col. 13 l. 34-col. 14 l. 18.

DISCUSSION

Knowles argues that the PTAB erred in two respects. First, Knowles argues that the PTAB improperly construed "package," including by failing to consider this court's construction of package for a related patent. See Appellant's Br. 58–73. Second, Knowles argues that the PTAB improperly relied on a new ground of rejection to sustain the Examiner's obviousness findings. See id. at 74–80. After stating the applicable standard of review and legal framework, we address these arguments in turn.³

I. Claim Construction

A. Standard of Review and Legal Standard

"We review the [PTAB]'s ultimate claim construction in a reexamination de novo." In re CSB-Sys. Int'l, Inc., 832 F.3d 1335, 1340 (Fed. Cir. 2016) (citing, inter alia, Teva Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831, 840–41 (2015)). A patent's specification, together with its prosecution history, 4 constitutes intrinsic evidence to

³ Knowles also avers that the PTAB erred in finding certain claims of the '049 patent anticipated by a prior art reference. See Appellant's Br. 74. Because Knowles's anticipation argument is conditioned upon its claim construction argument, see id., which we find unpersuasive, we need not separately address it, see GrafTech Int'l Holdings, Inc. v. Laird Techs. Inc., 652 F. App'x 973, 983 (Fed. Cir. 2016) ("Because we conclude that the PTAB did not err in its construction of [the disputed limitation], we need not address [the appellant]'s conditional arguments as to the PTAB's [unpatentability] determinations." (footnote omitted)).

⁴ A patent's prosecution history "consists of the complete record of the proceedings before the [US]PTO," and "provides evidence of how the [US]PTO and the

which the PTAB gives priority when it construes claims. See Microsoft Corp. v. Proxyconn, Inc., 789 F.3d 1292, 1297–98 (Fed. Cir. 2015), overruled on other grounds by Agua Prods., Inc. v. Matal, 872 F.3d 1290 (Fed. Cir. 2017) (en banc). We review the PTAB's assessment of intrinsic evidence de novo. See id. When the PTAB "look[s] beyond the patent's intrinsic evidence and . . . consult[s] extrinsic evidence," Teva, 135 S. Ct. at 841, such as expert testimony, dictionaries, and treatises, those underlying findings amount to factual determinations that we review for "substantial evidence," Microsoft Corp., 789 F.3d at 1297. Substantial evidence means "relevant evidence [that] a reasonable mind might accept as adequate to support a conclusion." Consol. Edison Co. v. NLRB, 305 U.S. 197, 229 (1938) (citations omitted). "If two inconsistent conclusions may reasonably be drawn from the evidence in record, the PTAB's decision to favor one conclusion over the other is the epitome of a decision that must be sustained upon review for substantial evidence." Elbit Sys. of Am., LLC v. Thales Visionix, Inc., 881 F.3d 1354, 1537 (Fed. Cir. 2018) (internal quotation marks, brackets, and citation omitted).

"During reexamination proceedings of unexpired patents...the [PTAB] uses the 'broadest reasonable interpretation consistent with the specification' standard, or BRI." In re CSB-Sys., 832 F.3d at 1340 (citation omitted); cf. Cuozzo, 136 S. Ct. at 2145 (acknowledging the PTAB's use of BRI during reexamination). "Accordingly, this court reviews the reasonableness of the [US]PTO's disputed claim term interpretations." In re Bigio, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (internal quotation marks and citation omitted). However, "[e]ven under the [BRI], the

inventor understood the patent." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc) (citations omitted).

[PTAB]'s construction cannot be divorced from the specification and the record evidence . . . and must be consistent with the one that those skilled in the art [('PHOSITA')] would reach." *Microsoft Corp.*, 789 F.3d at 1298 (internal quotation marks and citations omitted).

B. The PTAB Did Not Err in Its Claim Construction

On appeal, Knowles maintains that the PTAB has "failed to resolve critical claim construction disputes regarding the meaning of the term 'package." Appellant's Br. 58; see id. at 58–62. Specifically, Knowles avers that we "should direct the [PTAB] to adopt the definition of 'package' in MEMS Technology and follow the analysis therein, construing 'package' to require a second-level connection with a mounting mechanism." Id. at 62

⁵ The term "package" appears in the preamble of the claims. See '049 patent col. 12 l. 16 (claim 1), col. 13 l. 35 (claim 21). A preamble is limiting when it "recit[es] additional structure or steps underscored as important by the specification." Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc., 289 F.3d 801, 808 (Fed. Cir. 2002) (citations omitted). The parties do not contest that the term limits the claims. See generally Appellant's Br.; Intervenor's Br.

⁶ Although Knowles uses the term "mounting mechanism" on appeal, it argued for only connections using through-hole or surface mounts below to connect to an external printed circuit board. See Analog Devices I, 2015 WL 5144183, at *5. Knowles now concedes that "package" does not require connection to an external printed circuit board. See Reply Br. 9 ("[Th[e] issue [of whether a 'package' requires a connection to a printed circuit board] was never disputed before the [PTAB]."); Oral Arg. at 5:05–18, http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2016-1954.mp3 (Q: "Neither construction required that the package be connected to a

(emphasis added) (citing *MEMS Tech. Berhad v. Int'l Trade Comm'n*, 447 F. App'x 142, 159 (Fed. Cir. 2011)); see id. at 62–72.

The PTAB construed "package" as "a structure consisting of a semiconductor device, a first-level interconnect system, wiring structure, a second-level a interconnection platform, and an enclosure that protects the system and provides the mechanical platform for the sublevel." Analog Devices II, 2016 WL 675856, at *3; see id. ("[B]ased upon this definition, we construed the claim term 'package' as broad enough to encompass the transducer assembly . . . of [a prior art reference] Halter[e]n."): Analog Devices I, 2015 WL 5144183, at *4 (citing the same definition of package in the Final Written Decision). This definition does not require any specific mounting mechanism or use of mounting in the second-level connec-The PTAB also specifically rejected Knowles's proffered claim construction that "a package is mechanically and electrically connected to a printed circuit board by either through-hole or surface mounting." Id. at *7 (internal quotation marks and citation omitted). agree with the PTAB's construction of "package."

We begin with the words of the claims themselves. See Phillips, 415 F.3d at 1314–15. The claims of the '049 patent do not disclose any particular type of required second-level interconnection. See '049 patent col. 12 ll. 16–31 (claim 1), col. 13 l. 21–col. 14 l. 18 (claim 21). While dependent claim 15 contains additional limitations that "include an element" that could be used for mount-

printed circuit board?" A: "[W]e've not taken the position that a printed circuit board... is required."). We thus interpret Knowles's proposed claim construction to mean mounting to any second-level connection (circuit board or otherwise) by use of the through-hole or surface mount techniques.

ing, such as "circuitry, ground planes, solder pads,... capacitors[,] and through hole pads," *id.* col. 13 ll. 9–13, these limitations, by the doctrine of claim differentiation, cannot apply to limit independent claims 1 or 21, *see Phillips*, 415 F.3d at 1315 ("[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.").

The '049 patent's specification similarly does not limit the invention to any particular type of second-level connection. See '049 patent col. 1 l. 1-col. 12 l. 13. specification describes one embodiment in which microphone packages are *not* mounted via through-hole or surface mount but instead are "coupled" together without mention of a mounting mechanism. See id. col. 11 l. 62col. 12 l. 7 (describing a package in which "conductive traces may be formed in the various layers of either the top or bottom portion thus allowing multiple microphones to be electrically coupled"); see also J.A. 2903 (explaining by Analog Devices' expert that through-hole and surface mounting "are merely two of many other ways for making [an] interconnection"). Knowles's proffered construction would improperly read this embodiment out of the patent. See Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1320 (Fed. Cir. 2005) ("A claim construction that does not encompass a disclosed embodiment is . . . rarely, if ever, correct." (alteration in original) (internal quotation marks and citation omitted)). Finally, the parties do not identify any disclosures in the prosecution history that would aid in the construction of the term. See generally Appellant's Br.; Intervenor's Br.

We have held that, in some circumstances, previous judicial interpretations of a disputed claim term may be relevant to the PTAB's later construction of that same disputed term. See Power Integrations, Inc. v. Lee, 797 F.3d 1318, 1327 (Fed. Cir. 2015). While "the [PTAB] is not generally bound by a previous judicial interpretation

of a disputed claim term[, this] does not mean . . . that it has no obligation to acknowledge that interpretation or to assess whether it is consistent with the [BRI] of the term." Id. at 1326 (footnote omitted). Here, contrary to Knowles's arguments, the PTAB considered a previous interpretation of the term and properly determined its claim construction was consistent with the term's BRI. In fact, the PTAB explained that it "adopt[ed] a claim construction nearly identical to the construction adopted by the Federal Circuit in MEMS Technology." Analog Devices II, 2016 WL 675856, at *3 (citation omitted). While we note that there were different claims at issue in MEMS Technology, (i.e. the patent, in part, explicitly claimed a "surface mountable package"), the construction reviewed by our court in our affirmance of the U.S. International Trade Commission's anticipation and obviousness findings still did not require "package" to be limited to constructions with through-hole or surface mounting. 447 F. App'x at 159 ("[A PHOSITA] would know that a 'package' is a self-contained unit that has two levels of connection, to the device and to a circuit (or other system)" (emphasis added) (internal quotation marks and citation omitted)). The addition of "or other system" used to evaluate the disputed claims in MEMS Technology comports with the construction of "package" with a broad 'second-level connection" as adopted by the PTAB in this case.7

Finally, we turn to the extrinsic evidence. *See Phillips*, 415 F.3d at 1317–19. Knowles asks us to look to one

⁷ Knowles's argument that the PTAB did not address *MEMS Technology* until its rehearing decision, *see* Appellant's Br. 64, does not change this result. *Power Integrations* did not require the PTAB to evaluate prior constructions at any particular stage of review. *See* 797 F.3d 1318.

particular piece of evidence that states that "[i]n general, [integrated circuit] packages can be classified into two categories: 1) through-hole, and 2) surface mount." Appellant's Br. 70 (first emphasis added) (quoting J.A. 750). The PTAB found the use of the phrase "in general" "permits for possible exceptions" because it describes integrated packages in a non-limiting fashion. Analog Devices I, 2015 WL 5144183, at *5. We find that the PTAB's interpretation of this piece of extrinsic evidence is reasonable. Knowles further asks the court to look to extrinsic evidence such as certain treatise references describing common categories for mounting in microphone apparatuses to form second-level connections as through the hole and surface mount components. See Appellant's Br. 69–72. This extrinsic evidence cannot overcome the intrinsic evidence. See Phillips, 415 F.3d at 1318–19.

II. New Ground of Rejection

A. Standard of Review and Legal Standard

"Whether the [PTAB] relied on a new ground of rejection is a legal question that we review de novo." In re Stepan Co., 660 F.3d 1341, 1343 (Fed. Cir. 2011). "When considering whether the [PTAB] issued a new ground of rejection, the ultimate criterion of whether a rejection is considered new in a decision by the [PTAB] is whether applicants have had fair opportunity to react to the thrust of the rejection." In re Biedermann, 733 F.3d 329, 337 (Fed. Cir. 2013) (internal quotation marks and citation The PTAB is not limited to "recit[ing] and agree[ing] with the examiner's rejection in haec verba"; indeed, it may "further explain the examiner's rejection" and thoroughly "respond to an applicant's argument." Id. (internal quotation marks and citation omitted). However, if the PTAB "finds facts not found by the examiner regarding the differences between the prior art and the claimed invention, and these facts are the principal evidence upon which the [PTAB]'s rejection was based,"

then the PTAB improperly enters a new ground of rejection. *In re Leithem*, 661 F.3d 1316, 1320 (Fed. Cir. 2011) (citation omitted).

B. The PTAB Did Not Rely on a New Ground of Rejection

Knowles argues that the PTAB erred in affirming the Examiner's determination that claims 21–23 and 25–26 would have been obvious over U.S. Patent No. 6,594,369 ("Une") in view of U.S. Patent No. 6,327,604 ("Halteren"). See Appellant's Br. 74–80. Specifically, Knowles contends that the PTAB's finding regarding the motivation to combine Une with Halteren "does not appear anywhere in the Examiner's decision," such that "[t]he Examiner never compared Halteren's and Une's modes of operations in his obviousness determination." Id. at 77.8 Knowles therefore contends the PTAB has relied upon a new ground of rejection because "the [PTAB]'s new modes-of-operation rationale" set forth on appeal "was not previously raised to the applicant by the Examiner." Reply Br. 30 (capitalization modified); Appellant's Br. 77–78 (internal quotation marks and citation omitted).

Having reviewed the record below, we hold that the PTAB did not rely upon a new ground of rejection in its motivation to combine analysis. When rejecting the claims, the Examiner stated, in relevant part, that: "Une does not disclose that the condenser microphone is a silicon condenser microphone. However, Halteren...shows a package including a silicon condenser microphone...." J.A. 69–70 (citing Halteren col. 5 ll. 10–13). The Examiner went on to state that "[i]t would have been obvious to [a PHOSITA] at the time...the invention was made to use the silicon condenser microphone of

⁸ Knowles does not dispute the findings made by the PTAB that Une and Halteren together teach all of the claimed steps. *See* Appellant's Br. 56–74.

Halteren in Une's invention because the substitution of one known element for another would have yield[ed] predictable results." J.A. 70 (citing KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 416 (2007)).

In reaching its decision, the PTAB also relied on the similarities between Une's capacitor microphone and The PTAB Halteren's silicon condenser microphone. found that both types of microphones operate using the movement of a diaphragm with respect to a fixed elec-See Analog Devices I, 2015 WL 5144183, at *7 (discussing Une as "including diaphragm 4 and fixed electrode 6, and solid state device 8," where sound is measured by this solid state device, which "converts changes in capacity caused by a sound wave vibration into a voltage or current" (citations omitted)); id. (discussing Halteren's silicon microphone as "send[ing] output signals to [integrated circuit] 62" and finding that, in combination with "solid state device 8 of Une convert[ing] capacitance measured from electret capacitor microphone," "both Halteren and Une apply similar modes of operation by converting measured vibration into electrical signals"). Therefore, the PTAB found that a PHOSITA would understand it was possible to switch the microphone disclosed in Une for that in Halteren to achieve the claimed invention. See id.

The PTAB's rejection relied on the same reasons provided by the Examiner, albeit using slightly different verbiage. Compare id. ("We agree with the Examiner's determination... Combining Une and Halteren is no more than the simple substitution of the known silicon microphone 61 of Halteren for the known electret capacitor microphone of Une, to yield predictable results."), with J.A. 70 ("It would have been obvious to [a PHOSITA] to use the silicon condenser microphone of Halteren in Une's invention because the substitution of one known element for another would have yield[e]d predictable results."). Thus, it is not the case that the PTAB "f[ound] facts not

found by the [E]xaminer regarding the differences between the prior art and the claimed invention," *In re Leithem*, 661 F.3d at 1320 (citation omitted), and, as such, the PTAB's decision does not contain a new ground of rejection.

Moreover, Knowles had a fair opportunity to respond to this rejection, which is the "ultimate criterion" for finding no new ground of rejection. Id. at 1319 (internal quotation marks and citation omitted). Knowles responded in its appeal to the PTAB that the Examiner's rejection based on "substitution with predictable results" was incorrect because, inter alia, the capacitor microphone of Une would not be understood by a PHOSITA as a substitute for Halteren's condenser microphone. See J.A. 2793. Knowles's response demonstrates that it had sufficient notice of this particular rejection and took advantage of its opportunity to respond. See In re Adler, 723 F.3d 1322, 1328 (Fed. Cir. 2013) (finding no new ground of rejection "[b]ecause [appellant] had the opportunity to respond, and in fact did respond, to the thrust of the examiner's basis for rejecting the claims").9

⁹ Knowles argues that the PTAB erred in denying its request for rehearing because the PTAB improperly deemed Knowles to have waived its arguments related to differences between electret microphones and MEMS microphones due to Knowles's failure to raise them before the PTAB. See Appellant's Br. 79–80; see also Analog Devices II, 2016 WL 675856, at *5. The PTAB did not err in finding these arguments waived. See In re Watts, 354 F.3d 1362, 1367 (Fed. Cir. 2004) ("[O]ur review of the [PTAB]'s decision is confined to the 'four corners' of that record [below].... [I]t is important that the applicant challenging a decision not be permitted to raise arguments on appeal that were not presented to the [PTAB]." (citation omitted)).

CONCLUSION

We have considered Knowles's remaining arguments and find them unpersuasive. Accordingly, the Final Written Decision of the U.S. Patent and Trademark Office's Patent Trial and Appeal Board is

AFFIRMED

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Appellant

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ANDREI IANCU, UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE,

> Intervenor 2016-1954

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. 95/001,850.

NEWMAN, Circuit Judge, dissenting.

On this appeal, there is no appellee. The Petitioner, Analog Devices, Inc., prevailed in the PTO, where the Patent Trial and Appeal Board (PTAB) invalidated all of the challenged claims.¹ On appeal by Knowles Electron-

¹ Analog Devices, Inc. v. Knowles Elecs. LLC, No. 2015-004989, 2015 WL 5144183 (P.T.A.B. Aug. 28, 2015); Analog Devices Inc. v. Knowles Elecs. LLC, No. 2015-004989, 2016 WL 675856 (P.T.A.B. Feb. 17, 2016).

ics LLC ("Knowles"), the petitioner declined to appear, filed no brief and offered no argument. Dkt. No. 2 (Letter from Analog Devices, Inc., May 4, 2016). The PTO Director intervened in the appeal "as of right," filed a brief in support of the petitioner's position, and appeared at oral argument as "intervenor."

However, in the rare situation where there is no remaining appellee and the intervenor has asserted no injury to itself, the intervenor of right does not have independent standing to continue the litigation. And even when a party with standing remains on the side in which the intervenor joins, "an intervenor of right must have Article III standing in order to pursue relief that is different from that which is sought by a party with standing." Town of Chester v. Laroe Estates, Inc., 137 S. Ct. 1645, 1651 (2017). The "requirement of injury in fact is a hard floor of Article III jurisdiction that cannot be removed by statute." Summers v. Earth Island Inst., 555 U.S. 488, 498 (2009). I raise this concern in this case, for this appeal was abandoned by the prevailing party, leaving no platform for the intervenor to continue the litigation. From my colleagues' contrary ruling, I respectfully dissent.

The Statutory Authorization to Intervene

The America Invents Act authorizes the PTO Director to intervene in appeals to the Federal Circuit from designated classes of *inter partes* proceedings:

The Director shall have the right to intervene in an appeal from a decision entered by the Patent Trial and Appeal Board in a derivation proceeding under section 135 or in an *inter partes* or postgrant review under chapter 31 or 32. 35 U.S.C. § 143 (2012).² An administrative agency's intervention in judicial proceedings enables exploration of matters of agency concern such as the agency's jurisdiction or procedures or regulations. The legislative record provides no hint that Congress and the interested public may have contemplated intervention beyond the protocols established in law and precedent.

If it were indeed intended that the Director would enter the appeal and litigate the merits of the appellee's case although the appellee has quit the contest, surely some mention of this irregular purpose would have appeared in the legislative record. See Whitman v. Am. Trucking Ass'ns, Inc., 531 U.S. 457, 468 (2001) ("Congress, we have held, does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes.").

Following argument of this appeal, we requested additional briefing on this aspect. Knowles' brief accepts the PTO Director's intervention, but objects to the Director's filing of thirty-four pages of additional evidence upon intervening. The Director states that he does not need Article III standing to intervene, and that in all events he has Article III standing. The panel majority bases the Director's Article III standing on the America Invents Act provision that authorizes the Director to intervene. Maj. Op. 2 n.2. However, as I shall discuss, when no party remains on the side taken by the intervenor, and the intervenor asserts no injury of its own, an intervenor does not meet the requirements of Article III jurisdiction.

² Inter partes reexaminations requested before the effective date of the America Invents Act are grandfathered therein. Leahy–Smith America Invents Act, Pub. L. No. 112-29 § 7(e)(4), 125 Stat. 284, 315 (2011). The instant action is in that category.

The AIA, in authorizing intervention, did not and could not create Article III jurisdiction in circumstances where Article III jurisdiction is absent.

"Federal courts are not courts of general jurisdiction; they have only the power that is authorized by Article III of the Constitution and the statutes enacted by Congress pursuant thereto." Bender v. Williamsport Area Sch. Dist., 475 U.S. 534, 541 (1986) (citing Marbury v. Madison, 5 U.S. (1 Cranch) 137, 173–180 (1803)). A defect in standing is a defect in subject matter jurisdiction, for "standing in its most basic aspect can be one of the controlling elements in the definition of a case or controversy under Article III." ASARCO Inc. v. Kadish, 490 U.S. 605, 613 (1989); see Hollingsworth v. Perry, 570 U.S. 693, 705 (2013) (stating that "standing must be met by persons seeking appellate review, just as it must be met by persons appearing in courts of first instance." (quoting Arizonans for Official English v. Arizona, 520 U.S. 43, 64 (1997))); United States v. Cotton, 535 U.S. 625, 630 (2002) ("[S]ubject-matter jurisdiction . . . can never be forfeited or waived.").

It seems clear that the statutory authorization to the PTO Director to intervene was not intended to change the rules of intervenor standing. In an article following enactment of the AIA, former Director Matal observed that this provision received scant legislative attention. See Joe Matal, A Guide to the Legislative History of the America Invents Act: Part II, 21 Fed. Cir. B.J. 539, 543 (2012) ("Section 7(c)(3) of the AIA amends § 143 of title 35 to allow the Director to intervene in a Federal Circuit appeal of the PTAB's decision in a derivation proceeding or in an inter partes or post-grant review. Senator Kyl noted this provision in passing during the March 2011 debates on the bill." (citing 157 Cong. Rec. S1377 (daily ed. Mar. 8, 2011))).

This silence in the legislative record suggests that the intervenor proposal was not viewed as controversial, or as changing the intervenor's role. I doubt that Congress and the public intended silently to cast aside Constitution-based precedent such as *Diamond v. Charles*, where the Supreme Court explained that "an intervenor's right to continue a suit in the absence of the party on whose side intervention was permitted is contingent upon a showing by the intervenor that he fulfills the requirements of Article III." 476 U.S. 54, 68 (1986).

The America Invents Act's grant to the PTO Director of the right of intervention is consistent with the general rule that litigation solely by an intervenor is not permitted unless the intervenor is itself injured by the conduct at issue. "Injury in fact is a constitutional requirement, and 'filt is settled that Congress cannot erase Article III's standing requirements by statutorily granting the right to sue to a plaintiff who would not otherwise have standing." Spokeo, Inc. v. Robins 136 S. Ct. 1540, 1547–48 (2016) (alteration in original) (quoting Raines v. Byrd, 521 U.S. 811, 820 n.3 (1997)). The principle that a plaintiff "must demonstrate standing for each claim he seeks to press and for each form of relief that is sought" also "applies to intervenors of right." Town of Chester, 137 S. Ct. at 1650–51 (quoting Davis v. Fed. Election Comm'n, 554 U.S. 724, 734 (2008)).

In elaborating on whether an intervenor may continue the litigation when no party remains on that side of the case, the Court has explained:

The presence of a disagreement, however sharp and acrimonious it may be, is insufficient by itself to meet Art. III's requirements. This Court consistently has required, in addition, that the party seeking judicial resolution of a dispute "show that he personally has suffered some actual or threatened injury as a result of the putatively illegal conduct" of the other party.

Diamond, 476 U.S. at 62 (quoting Gladstone Realtors v. Vill. of Bellwood, 441 U.S. 91, 99 (1979)).

Precedent is clear, that when an intervenor is the only entity remaining on its side of the dispute, the intervenor must have an interest sufficient to satisfy Article III in order to continue the litigation. Where, as here, the PTO Director as intervenor is requesting this court to affirm the PTAB decision, although no party is requesting this action, an independent PTO interest or injury is required, such as a challenge to PTO jurisdiction or procedure.³ As

An example of appropriate intervention is seen in In re Cuozzo Speed Techs., LLC, 793 F.3d 1268 (Fed. Cir. 2015), where the PTO Director intervened although the appellee had withdrawn. The PTO defended the PTAB's decision on the merits, defended its regulation authorizing application of the "broadest reasonable interpretation" in post-grant proceedings, and also argued in support of the AIA provision barring judicial review of PTO institution decisions. On Cuozzo's petition, the Supreme Court granted certiorari to review these general aspects, and recaptioned the case to include the Director as respondent, viz., Cuozzo Speed Techs., LLC v. Lee, 136 S. Ct. 2131 (2016) (deciding the regulatory and statutory aspects).

The majority here notes that it is "follow[ing] the Supreme Court guidance in *Cuozzo*" on PTO intervention. Maj. Op. 2, n.2. I note, however, that the Supreme Court did not address intervenor standing in *Cuozzo*; the Court mentioned PTO intervention solely in the context of comparing inter partes review to district court litigation, in discussing the PTO's adoption of the "broadest reasonable interpretation." *See Cuozzo*, 136 S. Ct. at 2144. Nor did *Personal Audio*, *LLC v. Electronic Frontier Founda-*

stated in *Phigenix, Inc. v. Immunogen, Inc.*, the "irreducible constitutional minimum of standing' consists of 'three elements": (1) injury-in-fact, (2) causation, and (3) redressability. 845 F.3d 1168, 1171 (Fed. Cir. 2017) (quoting *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 560 (1992)). The PTO has not met this minimum, or attempted to do so. The PTO intervenor brief simply argues the unpatentability of the Knowles claims; the PTO asserts no injury or threatened injury to itself.

It is not disputed that Knowles, the losing party in the PTAB inter partes proceeding, has experienced injury and has standing to appeal. The Director states in its supplemental brief that this alone suffices for PTO intervenor standing to continue the appeal when there is no appellee. PTO Suppl. Br. 6 (stating that "Knowles [] has a concrete, personalized stake in the outcome" and as such, "[n]othing more is required under Article III"). It is correct that Knowles has a stake in the outcome, and the right to appeal. However, the PTO errs in stating that Knowles' stake provides Article III standing to the PTO as intervenor. In Diamond v. Charles the Court was explicit in stating "an intervenor's right to continue a suit in the absence of the party on whose side intervention was permitted is contingent upon a showing by the intervenor that he fulfills the requirements of Article III." 476 U.S. at 68. Here no party to the PTO proceeding remains on the intervenor's side of the appeal. Precedent requires that unless the intervenor itself has a sufficient interest in the outcome, the intervenor does not have "standing to litigate" and continue the action. Arizonans, 520 U.S. at 64.

tion concern intervenor standing, for Electronic Frontier Foundation was a party in the PTAB and the appellee on appeal, not an intervenor. 867 F.3d 1246, 1249–50 (Fed. Cir. 2017).

The Director states that "[t]he courts do not inquire into the standing of a party that is not seeking separate affirmative relief." PTO Suppl. Br 1. However, the Director is not a "party." "A 'party' to litigation is '[o]ne by or against whom a lawsuit is brought." U.S. ex rel. Eisenstein v. City of N.Y., 556 U.S. 928, 933–34 (2009) (quoting Black's Law Dictionary 1154 (8th ed. 2004)). Although "[a]n individual may also become a 'party' by intervening in the action," id., party status does not flow from the act of intervening, but from the requirements of Article III standing. An entity may not "invoke the authority of a federal court" unless it has standing. DaimlerChrysler v. Cuno, 547 U.S. 332, 342 (2006). The statutory grant of intervention does not alone provide party status to the intervenor. See Town of Chester, 137 S. Ct. at 1650–51; Spokeo, 136 S. Ct. at 1547–48 ("Congress cannot erase Article III's standing requirements by statutorily granting the right to sue to a plaintiff who would not otherwise have standing.").

The question is not whether the PTO Director is authorized to intervene in appeals under the America Invents Act. The question is whether, with that authorization, the PTO intervenor can continue to litigate the appellee's position when the appellee has dropped out and the intervenor has no independent interest or injury. Precedent answers in a clear negative: when no party remains on that side of the case, the intervenor must have independent standing in order to "continue a suit in the[ir] absence." Diamond, 476 U.S. at 68; see Lujan, 504 U.S. at 576-77 ("[T]here is absolutely no basis for making the Article III inquiry turn on the source of the asserted right. Whether the courts were to act on their own, or at the invitation of Congress, in ignoring the concrete injury requirement described in our cases, they would be discarding a principle fundamental to the separate and distinct constitutional role of the Third Branch.").

The Director argues that "[t]he presence of one party with standing is sufficient to satisfy Article III's case-orcontroversy requirement" and states that although an appellant must have Article III standing, "[o]ther parties, such as defendants, appellees, or intervenors who are not seeking affirmative relief, need not have constitutional standing for a case to proceed." PTO Suppl. Br. 4. That is not the situation before us. Here there is no party on the petitioner's side of the litigation, no appellee to defend the PTAB decision in its favor. Thus, constitutional standing is required of the intervenor. The Director's citation of Rumsfeld v. Forum for Academic and Institutional Rights, *Inc.*, 547 U.S. 47, 52 n.2 (2006) is inapt, for *Rumsfeld* does not deal with whether an intervenor without an interest can continue the case when there is no appellee. Rumsfeld addressed whether an association of law schools had constitutional standing to bring suit on behalf of its members; intervenor standing was not an issue.

The PTO also cites ASARCO Inc. v Kadish, 490 U.S. 605, 618 (1989) to support the position that standing for the Director as intervenor is not required. PTO Suppl. Br. 5. ASARCO too is inapt; that action was brought by "various individual taxpayers and the Arizona Education" Association" who sought "a declaration that the state statute governing mineral leases on state lands is void, and also seeking appropriate injunctive relief." Id. at 610 (internal citation omitted). The question was whether "the case should be dismissed for lack of standing, since neither respondent taxpayers nor respondent teachers association, who were the original plaintiffs, would have satisfied the requirements for bringing suit in federal court at the outset." Id. at 612. There was no issue of intervenor standing, for the mineral lessees who intervened had, without dispute, sufficient interest and injury for constitutional standing. The question of standing in ASARCO related to federal/state jurisdiction, for the action originated in the Arizona state courts. *Id.* at 610,

618. That case does not support intervenor standing in the absence of any appellee, and when there is no injury to the intervenor.

The PTO states that "even if the USPTO had to show Article III standing, for example if it were to seek relief from a decision of this court, it has Article III standing to participate in this case as the agency that made the decision" PTO Suppl. Reply Br. 2–3. But the agency that adjudicated a dispute between private parties does not automatically have standing to continue to litigate the appeal as intervenor, after the appellee has quit the contest. For the agency to continue to litigate a terminated dispute, it must have standing as a disputant.

The PTO cites Ingalls Shipbuilding, Inc. v. Director, Office of Workers' Compensation Programs, Department of Labor, 519 U.S. 248 (1997), for the proposition that an agency may participate in an appeal from its own decision. PTO Suppl. Br. 8–9. However, Ingalls was not a question of intervention. In Ingalls the Director of the Office of Workers' Compensation Programs was the respondent in an appeal to the court by "[a]ny person adversely affected or aggrieved by a final order of the Board." Id. at 263 (quoting 33 U.S.C. § 921(c)). In contrast, here the PTO Director is not the respondent.

The Director also argues that the public interest provides the PTO with "Article III standing to appear in this Court to advocate for the correct application of the federal patent laws." PTO Suppl. Br. 9–11. The Director quotes from *In re Debs*, 158 U.S. 564, 584 (1895): "As the Supreme Court has recognized, '[t]he obligations which [the United States] is under to promote the interest of all, and to prevent the wrongdoing of one resulting in injury to the general welfare, is often of itself sufficient to give it a standing in court." PTO Suppl. Br. 9 (alteration in original). *In re Debs* was a petition to the Supreme Court for a writ of habeas corpus from contempt charges originating

in violations of a district court's injunction that prohibited railroad union officers from, among other actions, "attempting to compel or induce" employees to "refuse or fail to perform any of their duties" with the railroads. *Id.* at 570–71. The Court upheld the injunction as a constitutional exercise of power by the federal government in preventing obstruction of interstate commerce. *Id.* at 599–600. There are no parallels to the case at hand.

Applying the established rules, unless the Director as intervenor has a concrete and particularized interest such as responding to a challenge to agency jurisdiction or regulations or procedures, the PTO does not have authority as intervenor to litigate when there is no appellee or respondent. If a purpose of the America Invents Act were to enlarge the government's authority to challenge patent validity, such a dramatic change cannot be inferred from legislative silence.

New Evidence Submitted by the PTO as Intervenor

Knowles challenges the PTO's position that as intervenor it can submit "significant new evidence discussing extra-record technology." Knowles Suppl. Br. 1; 5–10. The Director, on intervening, filed a Supplemental Appendix containing thirty-four pages of documents not previously in evidence, from various textbooks and reference works that had been cited by Knowles at the PTAB hearing.

Knowles cites *Michigan v. EPA* for the "foundational principle of administrative law that a court may uphold agency action only on the grounds that the agency invoked when it took the action." 135 S. Ct. 2699, 2710 (2015) (citing *S.E.C. v. Chenery Corp.*, 318 U.S. 80, 87 (1943) ("*Chenery I*")). For administrative proceedings, "the focal point for judicial review should be the administrative record already in existence, not some new record made initially in the reviewing court." *Camp v. Pitts*, 411

U.S. 138, 142 (1973). These thirty-four pages were not in the administrative record.

The PTO states that since these textbooks and reference works were referred to by Knowles, who placed some pages in evidence, the Director "should be able to respond to those assertions based on the entire books and not be forced to rely on that party's characterization of thousands of pages of text." Intervenor's Opp'n to Appellant's Mot. to Strike Portions of Suppl. App. 7. Knowles states that these books indeed contain thousands of pages, and that the filing of thirty-four newly selected pages by the Director intervening on appeal leaves Knowles with "no opportunity to introduce rebuttal factual and expert evidence and with this Court having to act as a court of first instance in the Board's stead." Knowles Suppl. Br. 1.

No reading of the America Invents Act signals a legislative intent to depart from the principle of administrative review set forth in *Chenery I. See S.E.C. v. Chenery Corp.*, 332 U.S. 194, 196 (1947) ("*Chenery II*") (stating the principle that review is based on the record before the agency is "a simple but fundamental rule of administrative law"). The Patent Act is explicit that the Federal Circuit must "review the decision from which an appeal is taken on the record before the Patent and Trademark Office." 35 U.S.C. § 144; see Fla. Power & Light Co. v. Lorion, 470 U.S. 729, 743–44 (1985) ("The task of the reviewing court is to apply the appropriate APA standard of review, 5 U.S.C. § 706, to the agency decision based on the record the agency presents to the reviewing court.").

If new evidence is deemed important for consideration on appeal, the proper course is to request remand to the agency tribunal, to assure that there is an appropriate opportunity to respond.

CONCLUSION

I respectfully dissent from my colleagues' position. Intervention is designed to permit participation by entities with interests in the matter before the court. When the intervenor does not have an independent interest or injury, and no party remains as appellee on the side favored by the intervenor, the requirements of intervenor status are not met.