

2025-1444

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

In re: SATIUS HOLDING, INC.,

Appellant.

Appeal from the United States Patent and Trademark Office,
Patent Trial and Appeal Board in No. 90/014,826.

**BRIEF FOR ACTING DIRECTOR OF THE
UNITED STATES PATENT AND TRADEMARK OFFICE**

AMY J. NELSON
Acting Solicitor

ROBERT J. McMANUS
Acting Deputy Solicitor

PETER J. SAWERT
OMAR AMIN
Associate Solicitors

U.S. Patent and Trademark Office
Mail Stop 8, P.O. Box 1450
Alexandria, Virginia 22313
(571) 272-9035

August 15, 2025

*Attorneys for the Director of the
U.S. Patent and Trademark Office*

CLAIM

1. A communications apparatus for transmitting electric or electromagnetic signals over air, *the air having a characteristic impedance*, the communications apparatus comprising:

a transmitter having an output impedance, said transmitter for transmitting the electric or electromagnetic signals at a preselected frequency; and

a coupler connected to the transmitter, said coupler comprising a transformer having a non-magnetic core, said transformer communicating the electric or electromagnetic signals to the air, said coupler matching the output impedance of the transmitter to *the characteristic impedance of the air*.

Appx47 (6:30-41) (emphases added).

TABLE OF CONTENTS

I.	STATEMENT OF THE ISSUES	1
II.	STATEMENT OF THE CASE	2
	A. The '385 Patent	2
	B. The Prior Art	5
	1. Lindenblad	5
	2. McCoy	6
	3. Orr	7
	C. The Board Decisions	7
III.	SUMMARY OF THE ARGUMENT	10
IV.	ARGUMENT	11
	A. Standard of Review	11
	B. The Board properly construed the Matching Limitation to have its plain and ordinary meaning, and Satus's arguments for a narrower construction are forfeited and lack merit.	12
	1. Satus's argument for a narrower construction of the Matching Limitation lacks merit.....	12
	2. Satus has forfeited its claim construction arguments.	15
	C. Under the plain and ordinary meaning of the Matching Limitation, substantial evidence supports the Board's findings that claim 1 would have been obvious over Lindenblad in combination with either McCoy or Orr.	18
V.	CONCLUSION	19

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Advanced Software Design Corp. v. Fiserv, Inc.</i> , 641 F.3d 1368 (Fed. Cir. 2011)	12, 13
<i>Apple Inc. v. Wi-LAN Inc.</i> , 25 F.4th 960 (Fed. Cir. 2022)	13
<i>Consol. Edison Co. v. NLRB</i> , 305 U.S. 197 (1938).....	11
<i>Ecolab, Inc. v. Envirochem, Inc.</i> , 264 F.3d 1358 (Fed. Cir. 2001)	14
<i>In re Gartside</i> , 203 F.3d 1305 (Fed. Cir. 2000)	11
<i>In re Google Tech. Holdings LLC</i> , 980 F.3d 858 (Fed. Cir. 2020)	15
<i>Hewlett-Packard Co. v. Bausch & Lomb, Inc.</i> , 909 F.2d 1464 (Fed. Cir. 1990)	13
<i>IOENGINE, LLC v. Ingenico Inc.</i> , 100 F.4th 1395 (Fed. Cir. 2024)	16
<i>IQRIS Techs. LLC v. Point Blank Enters., Inc.</i> , 130 F.4th 998 (Fed. Cir. 2025)	13
<i>In re Jolley</i> , 308 F.3d 1317 (Fed. Cir. 2002)	11
<i>Kamstrup A/S v. Axioma Metering UAB</i> , 43 F.4th 1374 (Fed. Cir. 2022)	11
<i>In re Nuvasive Inc.</i> , 842 F.3d 1376 (Fed. Cir. 2016)	15

<i>Omega Eng’g, Inc, v. Raytek Corp.,</i> 334 F.3d 1314 (Fed. Cir. 2003)	18
<i>Paragon Sols., LLC v. Timex Corp.,</i> 566 F.3d 1075 (Fed. Cir. 2009)	14
<i>ParkerVision, Inc. v. Qualcomm Inc.,</i> 903 F.3d 1354 (Fed. Cir. 2018)	19
<i>Samsung Elecs. Co. Ltd. v. Infobridge Pte. Ltd.,</i> 929 F.3d 1363 (Fed. Cir. 2019)	15
<i>In re Urbanski,</i> 809 F.3d 1237 (Fed. Cir. 2016)	11
<i>In re Watts,</i> 354 F.3d 1362 (Fed. Cir. 2004)	11
Statutes	
5 U.S.C. § 706(2)(E)	11

STATEMENT OF RELATED CASES

The Acting Director is unaware of any other appeal in connection with the patent at issue in this case that was previously before this or any other court. Other than Appeal No. 2025-1446 pending before this Court and identified in Satius's Statement of Related Cases, the Acting Director is not aware of any cases that are pending in this or any other court that will directly affect, or directly be affected by, the Court's decision in this appeal.

I. STATEMENT OF THE ISSUES

This appeal relates to the ex parte reexamination of U.S. Patent No. 6,711,385 (“the ’385 patent”) belonging to Appellant Satus Holdings, Inc. (“Satus”). The patent relates to wireless communication. Only claim 1 is at issue on appeal. Claim 1 recites a communication apparatus comprising (1) a transmitter for transmitting electric or electromagnetic signals and (2) a coupler for “matching the output impedance of the transmitter to the characteristic impedance of the air.”

The Patent Trial and Appeal Board (“Board”) determined that claim 1 would have been obvious over Lindenblad in combination with either McCoy or Orr. On appeal, only the Board’s findings that these two prior art combinations teach the “matching” limitation are at issue.

The issues are:

- (1) whether Satus forfeited its arguments about the proper construction of the “matching” limitation, and, if not, whether the Board applied a correct construction; and
- (2) whether the Board’s factual findings underlying obviousness are supported by substantial evidence and whether the Board’s conclusion that claim 1 would have been obvious was correct as a matter of law.

II. STATEMENT OF THE CASE

This appeal arises from the ex parte reexamination of the '385 patent, which claims a communication apparatus with a coupler that matches the output impedance of the transmitter to the impedance of the air. The Board entered a new ground of rejection for claim 1 as obvious over the combination of Lindenblad and McCoy as well as the combination of Lindenblad and Orr. Appx1–18. Satius requested rehearing, which the Board denied. Appx20–26. Satius's appeal followed.

A. The '385 Patent

The '385 patent relates to a coupler for wireless communications that matches the impedance for a transmitter and receiver to the impedance of the air. Appx45 (1:6–10). As background, the patent explains that wireless signals interact with the environment (e.g., buildings) as they propagate, creating reflections that in turn interfere with the transmitted signal (“cause notches ... in the bandwidth”). Appx45 (1:11–21). The patent further states that digital signal processing solutions to this problem, such as spread spectrum techniques and CDMA, are disadvantageous in that they require wide bandwidths and high sampling rates, respectively. *Id.* (1:22–42). The patent teaches that “two impedances (air and transmitter/receiver) need to be matched to each other to avoid notches in the communications bandwidth.” *Id.* (1:50–52).

The '385 patent discloses a “coupler ... to match the impedance of the air with the impedance of a wireless transmitter and receiver.” Appx46 (3:3–7).

Figure 2 illustrates one embodiment of the invention:

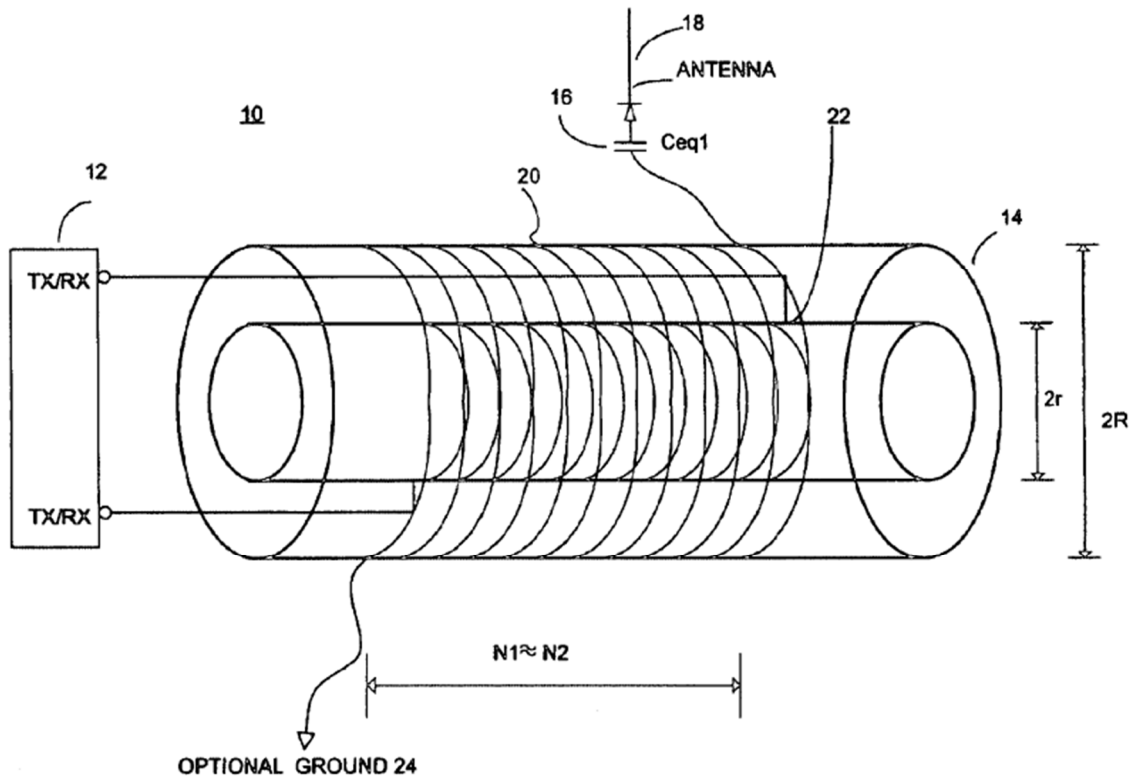


FIGURE 2

Appx39 (Fig. 2). “The air-core transmitter/receiver **10** includes a wireless transmitter or receiver **12**, an air-core transformer **14**, a tuning capacitor (C_{eq1}) **16**, and an antenna **18**.” Appx46 (4:1–4). Air-core transformer **14** serves as the coupler. *Id.* (3:42–46). Air-core transformer **14** includes a primary (outer) winding **20** connected to the antenna and a secondary (inner) winding **22** connected to the transmitter/receiver. *Id.* (3:10–15). Any wireless transmitter/receiver and any antenna may be used, though the antenna is

preferably designed to match the air-core transformer. *Id.* (4:4–6, 37–40). In a preferred embodiment, the coupler is designed differently for higher transmission/reception frequencies. Appx46-47 (4:41–5:10).

The '385 patent teaches that the characteristic impedance of the air will vary with the transmission/reception frequency (characterized by the “carrier frequency **FA**”). Appx46 (3:15–30, 4:21–23); Appx38 (Fig. 1). While the patent does not fully describe the range of possible air impedances, it suggests that, at least for the carrier frequencies of interest, the impedances will fall within the range of 1–200 ohms. Appx46 (3:18–30); Appx38 (Fig. 1). The patent also teaches that the characteristic impedance of air is lower inside homes and buildings than outside. Appx46 (3:30–32). “The primary winding [20] is designed to match the most common characteristic impedance of the air where the wireless transmitter/receiver will be used.” *Id.* (4:29–32).

Claim 1 of the '385 patent, below, is the only claim at issue on appeal:

1. A communications apparatus for transmitting electric or electromagnetic signals over air, *the air having a characteristic impedance*, the communications apparatus comprising:
 - a transmitter having an output impedance, said transmitter for transmitting the electric or electromagnetic signals at a preselected frequency; and
 - a coupler connected to the transmitter, said coupler comprising a transformer having a non-magnetic core, said transformer communicating the electric or electromagnetic signals to the air, said

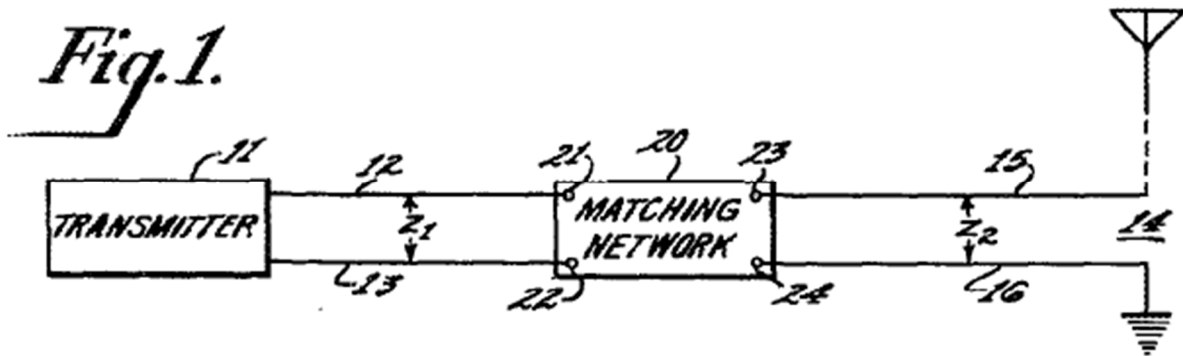
coupler matching the output impedance of the transmitter to *the characteristic impedance of the air*.

Appx47 (6:30–41) (emphases added).

B. The Prior Art

1. Lindenblad

Lindenblad¹ is generally directed to “impedance transformation or matching networks for signal transmission circuits, and more particularly to transformer coupling means for matching two portions of a signal transmission circuit which operate at two different impedance levels.” Appx483 (1:1–6). In Figure 1, below, Lindenblad illustrates an embodiment of such “an impedance matching network used in a transmitter-antenna system,” *Id.* (2:36–38):



Appx482 (Fig. 1). Lindenblad teaches that impedance matching network 20 is connected to transmitter 11 by lines 12 and 13 (characterized by impedance Z_1)

¹ U.S. Patent No. 2,687,513 (“Lindenblad”). Appx482–485.

and to antenna system **14** by lines **15** and **16** (characterized by impedance Z_2). Appx483-484 (2:49–3:4).

Lindenblad teaches that “[a] typical use for which [its] invention is adapted is found in radio transmitter stations ... where impedance matching between a transmitter output circuit and an antenna input circuit is desired.” Appx483 (1:37–40). Lindenblad also teaches that for such high-power radio-frequency applications, “such impedance matching can be done most effectively and economically by air-core transformer means.” *Id.* (1:40-43).

2. McCoy

McCoy² is a book on antennas that includes discussion of various high-frequency amateur radio antennas. Appx3588, Appx3590–3593. McCoy teaches that half-wave dipole antennas have an impedance of 20 to 100 ohms (most typically 70 ohms), depending on height at installation. Appx3590. McCoy also teaches a 10-meter full-wave quad loop antenna has an impedance of 100 ohms, and a 20-meter full-wave quad loop antenna has an impedance of 250 ohms. Appx3591. McCoy teaches that another five-band quad loop antenna has a 100 ohm impedance on each band for a total estimated array impedance of 20 to 25 ohms. *Id.* The five-band quad uses a 2 to 1 transformer to match the antenna

² Lew McCoy, *Lew McCoy On Antennas* (Gail M. Scheiber ed., 1994) (“McCoy”). Appx3588–3593.

array's 25 ohm impedance to the 50 ohm impedance of the input coaxial cable. *Id.* McCoy similarly teaches use of a 2 to 1 transformer to match the 100 ohm impedance of a two-element quad antenna to a 50 ohm coaxial cable. Appx3592.

3. Orr

Orr³ is an antenna handbook that includes discussion on various high-frequency amateur radio antennas. Appx3594, Appx3596. Orr teaches that some simple single loop quad antennas have an impedance ranging from 105–135 ohms, depending on the shape. Appx3596. Orr also teaches the use of a 75-ohm transformer to help match the 50 ohm transmission line impedance to the antenna impedances. Appx3596–3598.

C. The Board Decisions

On appeal from the Examiner's final action, the Board entered a new ground of rejection, finding substantial evidence supported the conclusion that claim 1 would have been obvious over Lindenblad in combination with either McCoy or Orr. Appx8, Appx16.⁴ The Board found that Lindenblad discloses all

³ William I. Orr, *The W6SAI HF Antenna Handbook* (Terry Littlefield ed., 1996) ("Orr"). Appx3594–35602.

⁴ The Board reversed the Examiner's rejections of claim 1 as anticipated by, and obvious in view of, Lindenblad. Appx4, Appx5, Appx7, Appx16. Significantly, the Board determined that Lindenblad alone did not teach, or render obvious, claim 1's requirement that "said coupler match[] the output impedance of the transmitter to the characteristic impedance of the air." Appx6, Appx8.

the elements of claim 1 except “said coupler matching the output impedance of the transmitter to the characteristic impedance of the air” (hereinafter, “Matching Limitation”). Appx8–11. The Board also found that Satius’s counsel had admitted that shifting the transmission impedance (typically, 50 ohms) to an impedance value that matches the characteristic impedance of the air where the transmitter is used (in the range of 1–200 ohms per the ’385 patent), satisfies the claim’s requirement. Appx11–12 (citing Appx3547–3549).

The Board then found that “conventional antennas, such as those used for high-frequency (HF) communications in amateur radio, have impedances that match air’s characteristic impedance” as described in the ’385 patent. Appx12. In support, the Board found the amateur radio antennas in McCoy had impedances of 20–100 ohms and that McCoy taught a transformer that matches transmission impedance to antenna impedance. *Id.* (citing Appx3590–3592). The Board similarly found that Orr teaches amateur radio antennas with impedances of 105–135 ohms and a transformer that matches transmission impedance to antenna impedance. Appx12–14 (citing Appx3596).

The Board then found that it would have been obvious to an ordinarily skilled artisan to use a coupler as taught by Lindenblad to match the impedance of a transmitter with the impedance of an amateur radio antenna design, as taught by McCoy or Orr, “to maximize power transfer and minimize reflections.”

Appx15. The Board further found that such a combination, by virtue of the choice of the McCoy/Orr antenna designs and their characteristic impedances that match the impedance of the air (at least in certain locations), would result in an apparatus that teaches claim 1's requirement that the coupler match the transmitter impedance to the characteristic impedance of the air. Appx14–15. The Board also found the level of skill in the art to be “relatively high.” Appx15.

Satius requested rehearing, which the Board denied. Appx20–26. In response to Satius's argument that a range of antenna input impedances are disclosed in McCoy and Orr and that there is a range of characteristic impedances for the air, the Board noted that its decision identified 100 ohms as a typical characteristic air impedance in the '385 patent specification and identified 100 ohms as an input impedance for multiple antennas taught by McCoy and Orr. Appx21–22. The Board also observed that claim 1 does not recite a particular location limitation associated with “the air having a characteristic impedance,” and thus the coupler must only “match[] ... to the characteristic impedance of the air” at a location. Appx22–23. Finally, the Board reiterated its reasoning that it would have been obvious to combine Lindenblat with either McCoy or Orr “to (1) maximize power transfer, and (2) minimize reflections,” for all locations, including locations in which the characteristic impedance of the air is the same as the impedance of the quad loop antennas taught by McCoy and Orr. Appx23–25.

III. SUMMARY OF THE ARGUMENT

The Board properly construed the Matching Limitation of claim 1 based on its plain and ordinary meaning. Satus did not offer or request a specific construction of the “matching” limitation before the Board, simply arguing instead that the prior art did not teach the limitation. Satus has thus forfeited the claim construction arguments that are the basis of its appeal to this Court.

Even if Satus has not forfeited those arguments, they are wrong. The argument that the Board applied a construction in its decision that was inconsistent with a construction in a prior reexamination decision is misplaced because the Board never construed the term in the prior reexamination. Furthermore, Satus’s proposed construction improperly seeks to import functional limitations from the ’385 patent specification into an apparatus claim.

Under the proper claim construction, the Board correctly found that claim 1 would have been obvious over Lindenblad in combination with McCoy or Orr. All of the Board’s findings as to the teachings of the prior art are supported by substantial evidence, and Satus does not challenge them on appeal. Satus’s only assertion of error in the Board’s obviousness findings relies upon its incorrect claim construction.

IV. ARGUMENT

A. Standard of Review

Satius has the burden to show that the Board committed reversible error. *In re Watts*, 354 F.3d 1362, 1369 (Fed. Cir. 2004). This Court upholds fact findings made by the Board that are supported by substantial evidence, 5 U.S.C. § 706(2)(E), and reviews the Board’s legal conclusions *de novo*, *In re Gartside*, 203 F.3d 1305, 1315-16 (Fed. Cir. 2000). Substantial evidence is “such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938). Where “two different, inconsistent conclusions may reasonably be drawn from the evidence in record, an agency’s decision to favor one conclusion over the other is the epitome of a decision that must be sustained upon review for substantial evidence.” *In re Jolley*, 308 F.3d 1317, 1329 (Fed. Cir. 2002).

This Court reviews the Board’s claim constructions *de novo* and any underlying factual determinations for substantial evidence. *Kamstrup A/S v. Axioma Metering UAB*, 43 F.4th 1374, 1380–81 (Fed. Cir. 2022).

Although the ultimate determination of obviousness is a legal conclusion, it is based on underlying factual findings. *Gartside*, 203 F.3d at 1316. What a prior-art reference teaches is one of the questions of fact underlying obviousness. *In re Urbanski*, 809 F.3d 1237, 1241 (Fed. Cir. 2016).

B. The Board properly construed the Matching Limitation to have its plain and ordinary meaning, and Satius’s arguments for a narrower construction are forfeited and lack merit.

Claim 1 of the ’385 patent simply requires that “said coupler match[] the output impedance of the transmitter to the characteristic impedance of the air.” Appx47 (6:40–41). In the context of evaluating the prior art, the Board rightly concluded that this limitation, under its plain and ordinary meaning, merely requires that the coupler of the communications apparatus be capable of matching the output impedance of the transmitter to the characteristic impedance of the air at some location. Appx14. Satius’s arguments for a narrower construction lack merit and are forfeit.

1. Satius’s argument for a narrower construction of the Matching Limitation lacks merit.

Even if not forfeited, Satius’s arguments for a narrower construction of the Matching Limitation are meritless. Satius relies on *Advanced Software Design Corp. v. Fiserv, Inc.*, 641 F.3d 1368, 1374 (Fed. Cir. 2011), to attempt to support its argument for a limiting construction of the Matching Limitation to include the environment in which the device is intended to be used. Br. 18–20. But that decision actually supports the Board’s construction. In *Advanced Software*, this Court concluded that “the claims at issue ... contain preambles that define the environment in which an accused infringer must act or describe *capabilities* that an accused *device* must have.” *Id.* (emphases added). Claim 1 is an apparatus

claim, so the preamble helps define the capability that the coupler must have—not the environment where a method of using the coupler must occur.

Furthermore, the Court in *Advanced Software* did not suggest that, in construing preambles, claims should be interpreted to incorporate teachings from the specification. Satus’s argument that claim 1 should be construed to include the specification’s disclosure that “[t]he primary winding is designed to match the most common characteristic impedance of the air where the wireless transmitter/receiver will be used,” (Br. 18), thus improperly attempts to import limitations from the specification into the claim. See *IQRIS Techs. LLC v. Point Blank Enters., Inc.*, 130 F.4th 998, 1004 (Fed. Cir. 2025); *Apple Inc. v. Wi-LAN Inc.*, 25 F.4th 960, 967 (Fed. Cir. 2022).

Satus’s attempt to import a limitation from the specification is particularly problematic here because claim 1 is an apparatus claim. “[A]pparatus claims cover what a device *is*, not what a device *does*.” *Hewlett-Packard Co. v. Bausch & Lomb, Inc.*, 909 F.2d 1464, 1468 (Fed. Cir. 1990) (emphases in original). Although impedance of the coupler’s primary winding is a physical attribute, Satus’s proposed construction attempts to define the numerical value for that attribute by reference to an unrecited functional limitation—i.e., where the communications apparatus will most commonly be used for transmission. This Court has explained that “[w]here the function is not recited in the claim itself by

the patentee, we do not import such a limitation.” *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001). Thus, “[a]bsent an express limitation to the contrary, any use of a device that meets all of the limitations of an apparatus claim written in structural terms infringes [or teaches] that apparatus claim.” *See Paragon Sols., LLC v. Timex Corp.*, 566 F.3d 1075, 1091 (Fed. Cir. 2009). “Construing a non-functional term in an apparatus claim” based “on the use to which an ... apparatus is later put ... is inconsistent with the notice function central to the patent system.” *Id.* Satius’s attempt to make infringement and invalidity turn on an intent of the designer not reflected in the language of the claim is therefore improper.

Finally, construing the Matching Limitation as defining a capability of the coupler is consistent with the ’385 patent’s specification. The patent teaches that the air-core transformer used for the coupler has a fixed structure—i.e., it does not have variable inductance values for different operating conditions. Appx46 (3:41–46, 4:41–59). The patent also teaches that the characteristic impedance of the air varies over time and depends on the transmission frequency F_A as well as the location of the transmitter. Appx46 (3:24–32, 4:25–27, 30–31); Appx38 (Fig. 1). Given the specification’s teachings about the fixed value of the coupler’s impedances and the variable value of the air’s impedance, one of ordinary skill in the art would understand the plain language of the Matching Limitation to simply

require that the coupler is *capable* of “matching the output impedance of the transmitter to the characteristic impedance of the air” for some location. Appx14.

2. Satus has forfeited its claim construction arguments.

Satus’s arguments on appeal all revolve around the proper construction of the Matching Limitation. Specifically, Satus argues that claim 1 requires the coupler to be “intentionally ‘designed to match’ the most common impedance ‘where the wireless transmitter/receiver will be used.’” *See, e.g.*, Br. i, 4. But before the Board, Satus did not put forward a specific construction for the Matching Limitation in its Appeal Brief, Reply Brief, or Request for Rehearing. *See* Appx3478–3491; Appx3484 (e.g., relying on “the plain language of the claim[.]”); Appx3516–3524; Appx3561–3570.

Satus has thus forfeited any arguments as to the proper claim construction of the Matching Limitation. “[A] party waives an argument that it failed to present to the PTAB because it deprives the court of the benefit of the PTAB’s informed judgment.” *In re Nuvasive Inc.*, 842 F.3d 1376, 1380 (Fed. Cir. 2016) (quotation and brackets omitted); *see also Samsung Elecs. Co. Ltd. v. Infobridge Pte. Ltd.*, 929 F.3d 1363, 1370 (Fed. Cir. 2019) (citing additional cases); *In re Google Tech. Holdings LLC*, 980 F.3d 858, 862 (Fed. Cir. 2020) (suggesting “failure to make the timely assertion of a right” is better described as forfeiture than waiver). Forfeiture still applies when a party argued for the proper construction of a claim

term before the Board, but its claim construction arguments on appeal to this Court “differ[] meaningfully” from those made before the Board. *IOENGINE, LLC v. Ingenico Inc.*, 100 F.4th 1395, 1402 (Fed. Cir. 2024).

Satius has similarly forfeited any argument that the Board failed to apply the construction of the Matching Limitation that the Board had allegedly adopted during a prior reexamination of the ’385 patent (No. 90/014,378). Br. 14–15. Because Satius never put forward a specific construction of the Matching Limitation before the Board, *see supra*, it also never argued that the Board had failed to apply a claim construction that it had previously adopted.

Even if Satius had raised the argument that the Board had already construed the Matching Limitation in a prior reexamination, it is incorrect. Satius argues that, in the prior reexamination decision, the Board construed the Matching Limitation when it stated that “the ’385 Patent does require that the primary winding be ‘designed to match the most common characteristic impedance of the air where the wireless transmitter/receiver will be used’ which is a modification contemplated nowhere [in the double patenting references at issue].” Br. 14 (quoting Appx3343–3344) (emphases added by Satius omitted). But the cited portion of the Board’s decision merely quotes a paragraph of Satius’s Appeal Brief in that proceeding that the Board found persuasive in reversing the Examiner’s double patenting rejection. Appx3343–3344. The Board’s

supporting reasoning did not turn on a construction of the claims; it turned on whether certain statements in the original prosecution history for the '385 patent could be construed as an admission that “(i) a coupler for matching the impedance of an electrical line is equivalent to or interchangeable with (ii) a coupler for matching the impedance of the air, without any modifications.” Appx3342. In addition, the quoted paragraph of Satus’s appeal brief in turn quotes from the '385 specification, not the claim language itself. *Compare* Appx3343–3344 with Appx 46 (4:29–32). The Board neither adopted Satus’s argument verbatim nor relied upon it for a construction of the Matching Limitation. Appx3343–3344. Satus’s argument that it nevertheless preserved this claim construction argument, Br. 17, is based on the same misunderstanding—equating the Board’s quotation of a relevant argument from Satus’s brief to a Board determination to adopt Satus’s language *in haec verba* as a construction of the claim limitation.

Satus’s arguments that prosecution disclaimer should apply to the “narrower construction” it relied upon during the reexaminations, Br. 15–18, are inapposite for similar reasons. Satus has never offered a specific claim construction for the Matching Limitation, much less a clear articulation of how such a construction is “narrower” than the plain language of the claim. For prosecution disclaimer to apply, the patentee’s disavowal must be “unequivocal[.]” and this Court has thus “declined to apply the doctrine ... where

the alleged disavowal of claim scope is ambiguous.” *Omega Eng’g, Inc, v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003).

C. Under the plain and ordinary meaning of the Matching Limitation, substantial evidence supports the Board’s findings that claim 1 would have been obvious over Lindenblad in combination with either McCoy or Orr.

Satius does not challenge the Board’s findings that: (1) Lindenblad discloses all the elements of claim 1 except “matching ... to the characteristic impedance of the air” (Appx8–11); (2) McCoy teaches the use of 100-ohm impedance antennas with an intermediate transformer to match the antenna to the transmitter impedance (Appx12); (3) Orr teaches the use of 105, 120, and 135 ohm impedance antennas with an intermediate transformer to match the antennas to the transmitter impedance (Appx12–14); and (4) the ’385 patent teaches that the characteristic impedance of the air “can be anywhere from one ohm up to 100 to 200 ohms” (Appx11).

In view of those teachings, the Board correctly found that the combination of Lindenblad with either McCoy or Orr would render claim 1 obvious. Appx14–15. In particular, because the combination would include a coupler that matches the transmission impedance to the antenna impedance of 100 or 105 ohms, that coupler would also match the transmission impedance to the characteristic impedance of the air at a time and location where the characteristic impedance of

the air was 100 or 105 ohms (both values falling within the typical air impedance values specified in the '385 patent). *Id.*

Thus, the Board's findings are entirely consistent with this Court's instruction: "[A] prior art reference may anticipate or render obvious an apparatus claim . . . if the reference discloses an apparatus that is reasonably capable of operating so as to meet the claim limitations, even if it does not meet the claim limitations in all modes of operation." *ParkerVision, Inc. v. Qualcomm Inc.*, 903 F.3d 1354, 1361 (Fed. Cir. 2018).

V. CONCLUSION

For all these reasons, this Court should affirm the Board's decision that claim 1 of the '385 patent is unpatentable as obvious over Lindenblad in combination with either McCoy or Orr.

August 15, 2025

Respectfully submitted,

/s/ Peter J. Sawert

AMY J. NELSON
Acting Solicitor

ROBERT J. MCMANUS
Acting Deputy Solicitor

PETER J. SAWERT
OMAR AMIN
Associate Solicitors

Mail Stop 8, P.O. Box 1450
Alexandria, Virginia 22313
(571) 272-9035

*Attorneys for the Director of the United
States Patent and Trademark Office*