

NOTE: This disposition is nonprecedential.

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

VIRNETX INC.,
Appellant

v.

APPLE INC.,
Appellee

2015-1934, 2015-1935

Appeals from the United States Patent and Trade-
mark Office, Patent Trial and Appeal Board in Nos.
IPR2014-00237, IPR2014-00238.

Decided: December 9, 2016

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Before O'MALLEY, MAYER, and WALLACH, *Circuit Judges*.

Opinion for the court filed by *Circuit Judge WALLACH*.

Dissenting opinion filed by *Circuit Judge O'MALLEY*.

WALLACH, *Circuit Judge*.

In separate petitions, Appellee Apple Inc. ("Apple") sought inter partes review of claims 1–11, 14–25, and 28–30 of U.S. Patent No. 8,504,697 ("the '697 patent") before the U.S. Patent and Trademark Office's Patent Trial and Appeal Board ("PTAB"). The PTAB instituted reviews of the subject claims and, in separate final written decisions, found the subject claims anticipated by or obvious over various prior art references. *See Apple Inc. v. VirnetX Inc. (VirnetX I)*, No. IPR2014-00237, 2015 WL 2251195 (P.T.A.B. May 11, 2015); *Apple Inc. v. VirnetX Inc. (VirnetX II)*, No. IPR2014-00238, 2015 WL 2251196 (P.T.A.B. May 11, 2015).

Appellant VirnetX Inc. ("VirnetX"), the assignee of the '697 patent, appeals. We affirm, resolving the subject appeals on the grounds discussed by the PTAB in *VirnetX II*.

DISCUSSION

I. Subject Matter Jurisdiction and Standard of Review

We possess subject matter jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A) (2012). "We review the PTAB's factual findings for substantial evidence and its legal conclusions de novo." *Redline Detection, LLC v. Star Envirotech, Inc.*, 811 F.3d 435, 449 (Fed. Cir. 2015) (citation omitted). "Substantial evidence is more than a mere scintilla" of evidence, *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938), but "less than the weight of the evidence," *Consolo v. Fed. Mar. Comm'n*, 383 U.S. 607, 620 (1966).

II. The PTAB Properly Found Claims 1–11, 14–25, and 28–30 of the '697 Patent Invalid

VirnetX challenges various aspects of *VirnetX II*. In particular, VirnetX alleges that the PTAB (1) misconstrued various limitations of claims 1, 3, and 16–17 of the '697 patent, Appellant's Br. 36–52; (2) made unpatentability findings in the absence of supporting expert evidence, *id.* at 30–36; and (3) failed to apply the proper legal standard in its anticipation analysis and otherwise did not support its anticipation and obviousness findings with substantial evidence, *id.* at 61–69. After briefly discussing the '697 patent's contents, we address the arguments in turn.

A. The '697 Patent

A brief review of Internet communications will provide the context necessary to understand the invention claimed in the '697 patent. Communications over the Internet generally follow the Transmission Control Protocol/Internet Protocol, under which each computer connected to the Internet possesses a unique Internet Protocol ("IP") address (e.g., 123.345.6.7) that allows other computers to identify that computer. A domain name server ("DNS") generally links an IP address to a particular domain name (e.g., www.pbs.org).

Entitled "System and Method Employing an Agile Network Protocol for Secure Communications Using Secure Domain Names," the '697 patent "provides key technologies for implementing a secure virtual Internet by using a new agile network protocol that is built on top of [an] existing" IP address. '697 patent col. 6 ll. 23–25. As relevant here, the '697 patent recites the use of a proxy DNS to establish a secure network. *Id.* col. 39 l. 29–col. 42 l. 16. Under the protocol disclosed by the '697 patent, a first device requests a connection to a second device using the domain name of that second device, after which the proxy DNS receives the request and looks up the IP

address of the second device. *Id.* col. 40 ll. 4–30. Before returning an IP address to the first device, the proxy DNS determines whether the first device is requesting access to a secure domain name and has sufficient security privileges before returning an IP address to the first device. *Id.* col. 40 ll. 32–38, col. 41 ll. 6–16, col. 41 l. 47–col. 42 l. 16. If it does, the proxy DNS initiates a secure connection to create a virtual private network (“VPN”) between the first and second devices. *Id.* col. 40 ll. 31–49. When the proxy DNS establishes the VPN, the proxy DNS does not reveal the actual IP address of the target device, thus providing the secure communication that the invention claims. *Id.* col. 40 ll. 1–20.

The instant appeals concern claims 1–11, 14–25, and 28–30 of the ’697 patent. Independent claim 1 is representative and recites

[a] method of connecting a first network device and a second network device, the method comprising:

intercepting, from the first network device, a request to look up an . . . [IP] address of the second network device based on a domain name associated with the second network device;

determining, in response to the request, whether the second network device is available for a secure communications service; and

initiating a secure communication link between the first network device and the second network device based on a determination that the second network device is available for the secure communications service;

wherein the secure communications service uses the secure communication link to communicate at least one of video data and audio data between the first network device and the second network device.

Id. col. 56 ll. 11–27. Dependent claims 2–11 and 14–15 depend directly or indirectly from claim 1 and provide additional limitations to the method disclosed in claim 1. *See id.* col. 56 ll. 28–53 (claims 2–11), col. 56 l. 65–col. 57 l. 3 (claims 14–15). Independent claim 16 covers a system configured to perform the method of claim 1. *See id.* col. 57 ll. 4–21. Dependent claims 17–25 and 28–30 depend directly or indirectly from claim 16 and provide additional limitations to the system disclosed in claim 16. *See id.* col. 57 l. 21–col. 58 l. 10 (claims 17–25), col. 58 ll. 21–31 (claims 28–30).

B. The Construction of the Subject Claims

We begin with the construction of various claims in the '697 patent. VirnetX challenges the PTAB's construction of three limitations in the subject claims: "secure communication link" in claims 1 and 16, Appellant's Br. 36–48; "determining . . . whether the second network device is available" in the same claims, *id.* at 49–52, 64–65; and "virtual private network communication link" in claims 3 and 17, *id.* at 48–49.

Two separate reasons counsel against construing the disputed limitations. First, in challenging the PTAB's conclusion in *VirnetX II* that the subject claims are invalid, VirnetX does not dispute that the relevant prior art references disclose, teach, or suggest "secure communication link" and "virtual private network communication link." *See* Appellant's Br. 61–69. As a result, the proper construction of these limitations has no bearing on our review of the PTAB's anticipation and obviousness findings in *VirnetX II*. Accordingly, we will not construe them. *Cf. Hoffer v. Microsoft Corp.*, 405 F.3d 1326, 1329

(Fed. Cir. 2005) (“We review only the construction of the ‘whereby’ clause, for the ‘interactive’ limitation therein suffices to support the district court’s finding of noninfringement.”).

Second, as to “determining . . . whether the second network device is available” in claims 1 and 16, VirnetX has waived its arguments on the construction of this limitation. The waiver doctrine “preclude[s] a party from adopting a new claim construction position on appeal.” *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1346 (Fed. Cir. 2001) (citations omitted). In its Patent Owner Response in IPR2014-00238, VirnetX noted its disagreement with the PTAB’s construction of the subject limitation in IPR2014-00237.¹ J.A. 10296–300. However, for purposes of IPR2014-00238, VirnetX concluded that the subject “claim language is plain on its face[] and . . . does not require construction.” J.A. 10299–300. In *VirnetX II*, the PTAB acknowledged that VirnetX disputed the PTAB’s construction of the limitation in IPR2014-00237, but “decline[d] to construe the term” in IPR2014-00238 because VirnetX did “not specify how the construction of the term . . . is relevant in the present proceeding.” 2015 WL 2251196, at *3. On appeal, VirnetX now specifies how the construction of the disputed limitation purportedly bears on the issues before us. *See* Appellant’s Br. 64–65. Because VirnetX did not present these arguments to the PTAB, they are waived. *See Interactive Gift*, 256 F.3d at 1346.

¹ As stated above, the PTAB issued *VirnetX I* in IPR2014-00237 and *VirnetX II* in IPR2014-00238.

C. The PTAB May Make Factual Findings Absent Expert Testimony

We next address VirnetX’s contention that the PTAB unlawfully made various factual findings in its anticipation and obviousness inquiries. According to VirnetX, the PTAB cannot “make factual findings regarding what [a person having ordinary skill in the art (‘PHOSITA’)] would have understood with respect to the [prior art] references in the absence of any supporting expert testimony” except in cases involving “simple” technology. Appellant’s Br. 31, 34. And because “the technology involved is undisputedly complex,” VirnetX avers that the PTAB could not have made “unpatentability findings in the absence of any supporting expert evidence.” *Id.* at 31.

VirnetX’s argument ignores governing law. In *Belden Inc. v. Berk-Tek LLC*, we held that “[n]o rule requires . . . an expert [to] guid[e] the [PTAB] as to how it should read prior art.” 805 F.3d 1064, 1079 (Fed. Cir. 2015). PTAB “members, because of expertise, may more often find it easier to understand and soundly explain the teachings and suggestions of prior art without expert assistance.” *Id.* Thus, to the extent that VirnetX contends that the PTAB *must* consider expert testimony, no authority supports that proposition.

Nevertheless, “what the [PTAB] can find without an expert depends on the prior art involved in a particular case.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1320 (Fed. Cir. 2016) (internal quotation marks, brackets, and citation omitted). If the PTAB finds “that the technology in a particular case is sufficiently complex that expert testimony is *essential*,” it may rely upon that evidence. *Id.* (emphasis added). But even if the record contains such testimony, the PTAB must weigh that testimony against other record evidence in reaching its conclusion, and it may give that testimony less weight, so long as it supports its decision with substantial evidence.

See id.; *see also Trs. of Columbia Univ. v. Illumina, Inc.*, 620 F. App'x 916, 922 (Fed. Cir. 2015) (“The PTAB [is] entitled to weigh the credibility of the witnesses in light of their qualifications and evaluate their assertions accordingly.” (citations omitted)). Thus, even if the record contains expert testimony, the law does not require the PTAB to rely upon it.

Finally, VirnetX alleges that, “in contested proceedings,” the PTAB may not “improperly substitute[] its own analysis of the [prior art] references” for the expert’s. Appellant’s Br. 33. We disagree. Although “it is impermissible for the [PTAB] to base its factual findings on its expertise, rather than on evidence in the record,”² the PTAB’s “expertise appropriately plays a role in interpreting record evidence.” *Brand v. Miller*, 487 F.3d 862, 869 (Fed. Cir. 2007). And to fulfill its duties, the PTAB must “make the necessary findings” based on a review of the complete “administrative record,” as well as provide “a full and reasoned explanation” in support of its decision. *In re Lee*, 277 F.3d 1338, 1342 (Fed. Cir. 2002) (citations

² At various points, the dissent alleges that the record contains no evidence to support the PTAB’s findings. *See* Dissent at 3 (arguing that the PTAB failed to “point to the actual evidence in the record to support its conclusions”). At others, it alleges that the record contains “inadequate competent evidence.” *Id.* at 4. As explained below in Section II.D, the record contains substantial evidence to support the PTAB’s findings. The dissent essentially objects to the weight that the PTAB afforded to one aspect of the record—i.e., the expert testimony. *See generally id.* (discussing the relevance of expert testimony). The weighing of that evidence against other valid evidence simply is not a role of this court. *See In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016) (“We may not reweigh th[e] evidence on appeal.”).

omitted). VirnetX's view of the law would require the PTAB to abandon these duties.

D. The PTAB Properly Found the Subject Claims Anticipated by, or Obvious over, the Prior Art

We next address the PTAB's conclusions that the subject claims are anticipated by, or would have been obvious over, various prior art references. VirnetX challenges both the PTAB's anticipation and obviousness findings, so we address them in turn.

1. Anticipation

"A person shall be entitled to a patent unless," *inter alia*, "the invention was described in . . . a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent" 35 U.S.C. § 102(e) (2006).³ A prior art reference anticipates a patent's claim under § 102(e) "when the four corners of [that] . . . document describe every element of the claimed invention, either expressly or inherently, such that a [PHOSITA] could practice the invention without undue experimentation." *Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1356 (Fed. Cir. 2010) (internal quotation marks and citation omitted). "Anticipation is a question of fact that we review for substantial evidence." *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1341 (Fed. Cir. 2016) (citation omitted).

The PTAB found that U.S. Patent No. 5,898,830 ("Wesinger") anticipates claims 1–3, 8–11, 14–17, 22–25, and

³ Congress amended § 102 when it passed the Leahy-Smith America Invents Act ("AIA"). Pub. L. No. 112-29, § 3(b)(1), 125 Stat. 284, 285–87 (2011). However, because the application that led to the '697 patent was filed before March 16, 2013, the pre-AIA § 102 applies. *Id.* § 3(n)(1), 125 Stat. at 293.

28–30 of the '697 patent. *VirnetX II*, 2015 WL 2251196, at *3–6. Entitled “Firewall Providing Enhanced Network Security and User Transparency,” Wesinger generally “provides a firewall that achieves maximum network security and maximum user convenience.” Wesinger, Abstract.

VirnetX challenges the PTAB’s anticipation findings as to claims 1, 8–9, and 22–23, grouping its arguments into two categories. The first concerns the PTAB’s findings as to claim 1 and the second concerns the PTAB’s findings as to claims 8–9 and 22–23. Appellant’s Br. 62–68. We address them in turn.

a. Claim 1

Claim 1 recites in relevant part “determining, in response to the request, whether the second network device is available for a secure communications service.” '697 patent col. 56 ll. 16–18. VirnetX avers that the PTAB erred in finding that Wesinger discloses this limitation. Appellant’s Br. 64–67.

As an initial matter, VirnetX contends that the PTAB “employed a ‘substantial difference’ test,” rather than “conduct[ing] a proper anticipation inquiry,” when it found that Wesinger anticipates the disputed limitation. *Id.* at 62, 63. The PTAB decision belies VirnetX’s argument. Although the PTAB stated that it did “not discern a substantial difference between” Wesinger and the disputed limitation, *VirnetX II*, 2015 WL 2251196, at *4, it neither stated that a “substantial difference” test controlled its inquiry, nor repeated “substantial difference” in the remainder of its anticipation analysis, *see id.* at *3–6. We will not find legal error based upon an isolated statement stripped from its context.

VirnetX next argues that substantial evidence does not support the PTAB’s finding that Wesinger discloses the disputed limitation. According to VirnetX, the PTAB

improperly premised its finding on the assertion that a PHOSITA “would have understood that if a connection with a virtual host is determined to be *allowed* if all rules are satisfied (as Wesinger discloses), then the virtual host would be determined to be ‘*available*’ for the connection,” as claim 1 recites. Appellant’s Br. 65 (emphases added) (internal quotation marks, brackets, and citation omitted). We disagree.

For a reference to anticipate, it “need not satisfy an *ipsissimis verbis* test.” *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009) (citation omitted). Wesinger discloses that “[i]f all the rules are satisfied, then the connection [with the virtual host] is *allowed*” and that, “[o]nce the connection has been *allowed*, the virtual host process . . . performs . . . connection processing,” Wesinger col. 16 ll. 66–67, col. 17 ll. 1–3 (emphases added), whereas the disputed limitation in claim 1 recites “determining . . . whether the second network device is *available*,” ’697 patent col. 56 ll. 16–17 (emphasis added). The PTAB found that “allowed” in Wesinger discloses “available” in claim 1 for at least three reasons, one of which we find adequate to support the conclusion. *See VirnetX II*, 2015 WL 2251196, at *4–5. Specifically, the PTAB found that various passages in the specification equate “allowed” in Wesinger with “available” in claim 1, such that Wesinger discloses the disputed limitation. *See id.* at *5. VirnetX does not contest this aspect of the PTAB’s analysis. Appellant’s Br. 64–67.

Substantial evidence supports the PTAB’s finding. For example, one embodiment in the ’697 patent’s specification discloses that “DNS proxy . . . determines whether the user has sufficient security privileges to access the site. If so, DNS proxy . . . request[s] that a [VPN] be created between user computer . . . and secure target site” ’697 patent col. 40 ll. 36–40. Other embodiments similarly demonstrate that “available” encompasses “allowed.” *See id.* col. 41 ll. 14–32 (explaining an

embodiment in which a check is made “to determine whether the user is authorized to connect to the secure host” by “reference to an internally stored list” and “if the user has sufficient security privileges, then . . . a secure VPN is established between the user’s computer and the secure target site”), 47–51 (explaining an embodiment in which a “[c]lient has permission to access target computer” and “the client’s DNS request would be . . . forward[ed] . . . to gatekeeper” which “would establish a VPN between the client and the requested target”), 57–61 (explaining an embodiment in which a “[c]lient does not have permission to access target computer” and the “gatekeeper would reject the request”). Thus, because the subject patent’s specification does not disclose “an embodiment . . . in which the availability of the second network device is determined by other methods or criteria,” *VirnetX II*, 2015 2251196, at *5, substantial evidence supports the PTAB’s finding that “available” means “allowed” and, thus, that Wesinger discloses the disputed limitation.

VirnetX argues further that Wesinger does not anticipate the disputed limitation because Wesinger operates in a manner different from the disputed limitation. Appellant’s Br. 65–67. The disputed limitation in claim 1 requires that “determining . . . whether the second network device is available” occurs “in response to the request” to “look up an [IP] address of the second network device based on a domain name associated with the second network device.” ’697 patent col. 56 ll. 13–17. By contrast, VirnetX avers that Wesinger “discloses two types of requests”—first, a “DNS query (*i.e.*, a request to look up an IP address)” and, second, a “connection request” that triggers a determination to allow or deny connection. Appellant’s Br. 65, 66 (internal quotation marks and citations omitted). VirnetX alleges that Wesinger does not anticipate the disputed limitation because the second step in Wesinger does not occur in response to

a request to look up an IP address based on a domain name, as the disputed limitation requires. *See id.* at 66–67.

Substantial evidence supports the PTAB’s finding that the second step in Wesinger occurs in response to a request to look up an IP address. For example, Wesinger discloses that, in response to a “connection request” for a domain name, the DNS “in effect says to the requestor ‘Use virtual host X.X.X.X.,’ where X.X.X.X. represents an IP address.” Wesinger col. 10 ll. 58–61. As the PTAB explained, this passage in “Wesinger explicitly discloses that, responsive to the ‘connection request,’ an IP address . . . of a network device is provided based on a domain name . . . that is included in the ‘connection request.’” *VirnetX II*, 2015 WL 2251196, at *3 (internal citations omitted). VirnetX does not challenge this aspect of the PTAB’s finding. *See* Appellant’s Br. 66–67. Thus, the record supports the PTAB’s finding that Wesinger discloses the disputed limitation.

b. Claims 8–9 and 22–23

Claims 8 and 22 require that “at least one of the first network device and the second network device” recited in claims 1 and 16 “is a mobile device,” and claims 9 and 23 further require that the “mobile device” be a “notebook computer.” ’697 patent col. 56 ll. 43–47 (claims 8–9), col. 58 ll. 1–5 (claims 22–23). VirnetX argues that substantial evidence does not support the PTAB’s finding that Wesinger discloses a “notebook computer.” Appellant’s Br. 67–68. According to VirnetX, the PTAB acknowledged that Wesinger discloses only a “computer,” but nevertheless “proceeded to speculate—without any evidence whatsoever”—that a PHOSITA would have found that Wesinger also discloses a “notebook computer.” *Id.* at 68.

“[T]he disclosure of a small genus may anticipate the species of that genus even if the species are not them-

selves recited.” *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1380 (Fed. Cir. 2001) (citation omitted). Whether a small genus anticipates a species within that genus “depends on the factual aspects of the specific disclosure and the particular products at issue.” *Sanofi-Synthelabo v. Apotex, Inc.*, 550 F.3d 1075, 1083 (Fed. Cir. 2008) (citation omitted). “[H]ow [a PHOSITA] would understand the relative size of a genus or species in a particular technology is” a factual question “of critical importance.” *OSRAM Sylvania, Inc. v. Am. Induction Techs., Inc.*, 701 F.3d 698, 706 (Fed. Cir. 2012).

Substantial evidence supports the PTAB’s finding that Wesinger’s disclosure of the genus “computer” encompasses the “notebook computer” species. Wesinger undisputedly discloses a “computer.” See, e.g., Wesinger col. 14 ll. 7–8; see also *id.* col. 14 ll. 21–23 (explaining that the software supporting the claimed firewall could run on, inter alia, “a super-minicomputer”). The PTAB reasoned that, at the time of the invention (i.e., when the inventor filed the application leading to Wesinger in 1996), a PHOSITA “would have understood that a ‘notebook computer’ is a ‘computer’ and immediately would have envisioned Wesinger as describing both desktop and notebook computers as both types of computers would have been used to connect to networks.” *VirnetX II*, 2015 WL 2251196, at *6; see *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc) (describing “the time of the invention” as “the effective filing date of the patent application” (citations omitted)). In reaching that conclusion, the PTAB permissibly relied upon its expertise and the experience of its members to resolve the relatively simple question of whether Wesinger’s “computer” disclosure encompasses a “notebook computer.” See *Belden*, 805 F.3d at 1079. In so doing, the PTAB did not address more complex questions about computer technology whose resolution would benefit from essential expert testimony. See *Synopsys*, 814 F.3d at 1320. Thus, substantial evi-

dence supports the PTAB's finding that Wesinger anticipates claims 8–9 and 22–23.

2. Obviousness

Finally, we turn to the PTAB's obviousness findings. A patent claim is invalid “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a [PHOSITA] to which said subject matter pertains.” 35 U.S.C. § 103(a) (2006).⁴ Obviousness is a question of law based on underlying findings of fact, *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000), including (1) “the scope and content of the prior art,” (2) “differences between the prior art and the claims at issue,” (3) “the level of ordinary skill in the pertinent art,” and (4) the presence of secondary considerations of nonobviousness such “as commercial success, long felt but unsolved needs, failure of others,” and unexpected results. *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17 (1966); see *United States v. Adams*, 383 U.S. 49, 50–52 (1966).

The PTAB found that claims 4–7 and 18–21 would have been obvious over a combination of two prior art references—Wesinger and M. Handley et al., *SIP: Session Initiation Protocol* (Network Working Grp. Request for Comments: 2543, March 1999) (“RFC 2543”) (J.A. 2566). *VirnetX II*, 2015 WL 2251196, at *6–8. Dependent claims 4–7 depend directly or indirectly from claim 1 and provide additional limitations to the method disclosed in claim 1. See '697 patent col. 56 ll. 33–42. Dependent claims 18–21

⁴ Congress amended § 103 when it passed the AIA. Pub. L. No. 112-29, § 3(c), 125 Stat. at 287. However, because the application that led to the '697 patent was filed before March 16, 2013, the pre-AIA § 103 applies. *Id.* § 3(n)(1), 125 Stat. at 293.

depend directly or indirectly from claim 16 and provide additional limitations to the method disclosed in claim 16. *See id.* col. 57 ll. 23–32.

Instead of addressing the PTAB’s particular findings as to the combination of Wesinger and RFC 2543, VirnetX argues that it presented expert testimony on the prior art references and that, rather than accepting “this uncontroverted expert testimony, the [PTAB] reached the opposite conclusion.” Appellant’s Br. 69. VirnetX argues anew that the PTAB may not make factual findings “in the absence of any supporting record expert testimony.” *Id.*

VirnetX’s arguments do not demonstrate a lack of substantial evidence in support of the PTAB’s obviousness findings. As stated above in Section II.C, the PTAB may make factual findings absent expert testimony. Here, the PTAB examined Wesinger and RFC 2543 and found that the references do not teach away from one another, citing various aspects of Wesinger and RFC 2543 to support its conclusion. *See VirnetX II*, 2015 WL 2251196, at *6–8; *see also Warsaw*, 832 F.3d at 1333 (“A reference teaches away when a [PHOSITA], upon reading the reference, would be discouraged from following the path set out in the reference.” (internal quotation marks, brackets, and citation omitted)). Because VirnetX does not contest the PTAB’s specific findings, we decline to review them. *See Carducci v. Regan*, 714 F.2d 171, 177 (D.C. Cir. 1983) (“The premise of our adversarial system is that appellate courts do not sit as self-directed boards of legal inquiry and research, but essentially as arbiters of legal questions presented and argued by the parties before them.”).

CONCLUSION

The PTAB found the subject claims of the ’697 patent invalid for other reasons. *See generally VirnetX I*, 2015 WL 2251195. However, because we affirm the PTAB’s conclusions in *VirnetX II*, we do not address the PTAB’s determinations in *VirnetX I*. *See Gleave*, 560 F.3d at 1338

(declining to address alternative grounds of invalidity when the court upholds one such ground). Thus, for the foregoing reasons, the Final Written Decisions of the U.S. Patent and Trademark Office's Patent Trial and Appeal Board are

AFFIRMED

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
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O'MALLEY, *Circuit Judge*, dissenting.

Because the Board based its factual findings on an inadequate record, I dissent from today's judgments. Although there is no per se requirement that the Board rely on expert testimony to reach a finding of invalidity, this court has long recognized that "expert testimony regarding matters beyond the comprehension of laypersons is sometimes essential," particularly in cases involving complex technology." *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1240 n.5 (Fed. Cir. 2010) (quoting *Centricut, LLC v. Esab Grp., Inc.*, 390 F.3d 1361, 1369–70 (Fed. Cir. 2004)); see also *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d

1324, 1330 (Fed. Cir. 2009) (“If the relevant technology were complex, the court might require expert opinions.”); *Proveris Sci. Corp. v. Innovasystems, Inc.*, 536 F.3d 1256, 1267 (Fed. Cir. 2008) (affirming the district court’s requirement of expert testimony to prove invalidity where “th[e] subject matter [wa]s sufficiently complex to fall beyond the grasp of an ordinary layperson”).

This matter is not, as Apple suggests, the exceptional case in which “the references and the invention are easily understandable,” such that “Board members, because of expertise, may . . . find it easier to understand and soundly explain the teachings and suggestions of prior art without expert assistance.” *Belden v. Berk-Tek LLC*, 805 F.3d 1064, 1079 (Fed. Cir. 2015) (quoting *Wyers*, 616 F.3d at 1242). *Belden*, for example, involved only “a simple point in a mechanical field and one very close piece of prior art.” *Id.* at 1074. Here, the claims at issue cover more complex technology (establishing secure communications between multiple network devices for video/audio data transmission) and the Board’s invalidity finding was premised on combinations of multiple pieces of prior art.

Indeed, Apple itself submitted over *four hundred pages* of expert testimony below in support of its invalidity contentions, apparently believing such a detailed record was necessary. It was only once its own expert’s testimony was proven unreliable that Apple switched gears and claimed that it had no obligation to present expert testimony. Apple first contends that the Board actually did rely on expert testimony to support its conclusions because it cited to admissions from VirnetX’s expert to support its conclusions. That argument is a nonstarter. Apple provides only a handful of examples on this point, covering a *single* factual finding, relevant to only one aspect of one of the two proceedings before us, a point Apple’s counsel conceded at oral argument. Oral Argument at 20:49–20:58, *available at* <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2015-1934.mp3> (“The

Board specifically referred to VirnetX's expert on the issue of teaching away. . . . On some other issues, the Board found that VirnetX's expert was not credible."). The Board's opinions, of course, go significantly farther than that single issue.

Apple next contends that the Board was free to reach conclusions about what one of skill in the art would glean from the multiple prior art references at issue in the absence of expert testimony because it could rely on its own expertise to assess those references. That argument also fails. While it is certainly true, as the majority notes, that the Board's expertise "plays a role in interpreting record evidence," it may not act as a substitute for such evidence. Maj. Op. at 8 (quoting *Brand v. Miller*, 487 F.3d 862, 869 (Fed. Cir. 2007)). Where, as here, the technology at issue is complex, there are multiple prior art references that must be combined to support the Board's invalidity conclusions, and there is substantial dispute regarding what one of skill in the art—at the relevant time frame—would have gleaned from those prior art references, the Board must point to actual evidence in the record to support its conclusions. It is telling that the Board's conclusions precisely follow the conclusions laid out in the lengthy expert testimony the Board claimed to ignore.

In particular, this case bears a striking resemblance to *Brand*, where the Board "rejected as unconvincing the only relevant testimony," but nevertheless found that "one skilled in the art . . . would have recognized" how certain elements depicted in the prior art could have been arranged to perform a claimed method. *Brand*, 487 F.3d at 870. Here, despite disclaiming any reliance on the only supporting expert testimony, the Board made findings as to what the prior art implies, suggests, and teaches towards (or away from), in addition to how certain terms or combinations of features "would have been understood by one of ordinary skill in the art." *Apple Inc. v. VirnetX Inc.*, No. IPR2014-00238, 2014 WL 1995380 at *3, 7–8, 14

(P.T.A.B. May 14, 2014); *Apple Inc. v. VirnetX Inc.*, No. IPR2014-00237, 2014 WL 1995379 at *15–16, 19–20 (P.T.A.B. May 14, 2014). As in *Brand*, “the detailed nature of the findings that the Board found necessary to make demonstrates the inappropriateness of its approach”—it appears to have simply “substituted its own expertise for record evidence.” *Brand*, 487 F.3d at 870. Allowing the Board to continue this practice—disclaiming reliance on the only supporting expert testimony yet reaching the exact same conclusions propounded therein—would only exacerbate the trend towards a “haze of so-called expertise” that this court and the Supreme Court have admonished against. *Brand*, 487 F.3d at 869 (quoting *Baltimore & Ohio R.R. Co.*, 393 U.S. 87, 92 (1968)). Because there was inadequate competent evidence on the record to support the Board’s judgments, I would reverse.