NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

APPLE INC.,
Appellant

v.

MPH TECHNOLOGIES OY,
Appellee

2021-1355, 2021-1356

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. IPR2019-00819, IPR2019-00820.

Decided: September 8, 2022

BRIAN ROBERT MATSUI, Morrison & Foerster LLP, Washington, DC, argued for appellant. Also represented by SETH W. LLOYD, JOSEPH R. PALMORE; RICHARD HUNG, San Francisco, CA; BITA RAHEBI, Los Angeles, CA.

BRIAN ERIK HAAN, Lee Sheikh & Haan LLC, Chicago, IL, argued for appellee. Also represented by ASHLEY E. LAVALLEY, CHRISTOPHER LEE; JAMES CARMICHAEL, STEPHEN TERRY SCHREINER, Carmichael IP, PLLC, Tysons Corner, VA.

Before LOURIE, HUGHES, and CUNNINGHAM, *Circuit Judges*.

CUNNINGHAM, *Circuit Judge.*

Apple Inc. appeals the final written decisions issued in two Patent Trial and Appeal Board *inter partes* reviews concerning U.S. Patent No. 7,620,810 and U.S. Patent No. 7,937,581 (collectively, the "Challenged Patents"), both owned by MPH Technologies Oy. *Apple Inc. v. MPH Techs. Oy*, IPR2019-00819, 2020 WL 5735595 (P.T.A.B. Sept. 24, 2020) (*Decision I*); *Apple Inc. v. MPH Techs. Oy*, IPR2019-00820, 2020 WL 5735601 (P.T.A.B. Sept. 24, 2020) (*Decision II*). Because the Board adopted an erroneous claim construction of "encrypted" messages in both decisions, we *vacate* the Board's unpatentability determinations based on that construction and *remand* for further consideration. Because we further hold that the Board properly found that Apple's petition failed to demonstrate the unpatentability of dependent claims 6–8 of the '581 patent, we *affirm* as to those claims.

I. BACKGROUND

A. The Challenged Patents

The Challenged Patents are both entitled "Method and Network for Ensuring Secure Forwarding of Messages." They share a specification in all aspects relevant to this appeal. Each is directed to a method of facilitating a secure connection in a telecommunication network. *See, e.g.*, '810 Patent Abstract; '581 Patent Abstract. Each describes the prior art IP security protocols ("IPSec") as "provid[ing] the capability to secure communications between arbitrary hosts." '810 Patent, col. 1 ll. 57–58; '581 Patent, col. 1 ll. 59–60. The patents explain that "IPSec is intended to work with static network topology, where hosts are fixed to certain subnetworks" and can be "problematic" if used with

mobile hosts. '810 Patent, col. 4 ll. 10–54; '581 Patent, col. 4 ll. 13–65.

The '810 patent has seven claims. Claim 1 requires:

> 1. A method for ensuring secure forwarding of a message in a telecommunication network, having at least one mobile terminal and another terminal and a security gateway therebetween, the method comprising:
>
> a) establishing a secure connection between a first address of the mobile terminal and an address of the security gateway, the secure connection defined by at least the addresses of the mobile terminal and the security gateway,
>
> b) the mobile terminal changing from the first address to a second address,
>
> c) while at the second address, the mobile terminal sending a request message to the address of the security gateway to request the security gateway to change the secure connection to be defined between the second address and the address of the security gateway,
>
> in response to the request message from the mobile terminal, the security gateway changing an address definition of the secure connection from the first address to the second address, the mobile terminal sending a secure message in the secure connection from the second address of the mobile terminal to the other terminal via the security gateway,
>
> the secure connection being established by forming a Security Association (SA) using

> IPSec protocols, and the *request message and/or a reply message being encrypted* and/or authenticated by using the same SA already established.

'810 Patent, col. 10 l. 48–col. 11 l. 8 (emphasis added). Claim 7, the '810 patent's only other independent claim, is similar to claim 1 but does not require a "request message and/or a reply message being encrypted and/or authenticated." *Id.* col. 12 ll. 1–22.

The '581 patent is a continuation of the '810 patent. It includes nine claims, several of which are at issue in this appeal. Claim 1 of the '581 patent requires:

> 1. A method for ensuring secure forwarding of a message in a telecommunication network, having at least one mobile terminal and another terminal and a security gateway therebetween, the method comprising:
>
> a) establishing a secure connection having a first address of the mobile terminal as a first end-point and a gateway address of the security gateway as a second end-point,
>
> b) the mobile terminal changing from the first address to a second address,
>
> c) while at the second address, the mobile terminal sending a request message to the gateway address of the security gateway to request the security gateway to change the secure connection to be defined between the second address and the gateway address of the security gateway,
>
> in response to the request message from the mobile terminal, the security gateway changing an address definition of the

> secure connection from the first address to the second address, and
>
> the mobile terminal sending a secure message in the secure connection from the second address of the mobile terminal to the other terminal via the security gateway.

'581 Patent, col. 10 l. 50–col. 11 l. 3. Relevant here, claim 4 further requires an "encrypted and/or authenticated" request or reply message, and dependent claims 5–8 add additional limitations to claims 1 and 5:

> 4. The method of claim 1, wherein the *request message and/or a reply message is encrypted* and/or authenticated.
>
> 5. The method of claim 1 wherein the method further comprises the security gateway sending back a reply message to the mobile terminal at the second address to confirm the address change.
>
> 6. The method of claim 5, wherein the mobile terminal and the other terminal form an end-to-end connection whereby the secure connection is an IPSec transport connection or IPSec tunnel connection.
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> 7. The method of claim 5, wherein a tunneling protocol is used for the secure connection between the mobile terminal and the security gateway.
>
> 8. The method of claim 5, wherein the other terminal is a mobile terminal.

Id. col. 11 ll. 9–23 (emphasis added).

B. Procedural History

In 2018, MPH sued Apple for infringement of eight patents in the Northern District of California. *MPH Techs. Oy v. Apple Inc.*, No. 4:18-cv-05935-PJH (N.D. Cal.); J.A. 3.

Apple then filed multiple IPR petitions, two of which are at issue in this appeal. J.A. 154–229, 3258–329.

For IPR 2019-00819, the Board instituted review of the '810 patent on three grounds, each based on obviousness under 35 U.S.C. § 103(a).[1] *Decision I* at *3. Ground 1 challenged claims 1, 4–5, and 7 based on U.S. Patent No. 6,904,466 to Ishiyama et al. ("Ishiyama") and U.S. Patent No. 7,028,337 to Murakawa ("Murakawa"). *Id.* Ground 2 challenged claims 2 and 3 based on Ishiyama, Murakawa, and U.S. Patent No. 6,976,177 to Ahonen ("Ahonen"). *Id.* Ground 3 challenged claim 6 based on Ishiyama, Murakawa, and U.S. Patent No. 6,954,790 to Forslöw ("Forslöw"). *Id.*

For IPR 2019-00820, the Board instituted IPR as to the '581 patent on three grounds. *Decision II* at *3. Ground 1 challenged claims 1–2, 4, 6–7, and 9 based on Ishiyama and Murakawa. *Id.* Ground 2 challenged claims 3 and 5 based on Ishiyama, Murakawa, and Ahonen. *Id.* Ground 3 challenged claim 8 based on Ishiyama, Murakawa, and Forslöw. *Id.*

In IPR 2019-00819, the Board agreed with Apple that Ishiyama and Murakawa rendered unpatentable claim 7 of the '810 patent. *Decision I* at *22. In IPR 2019-00820, the Board agreed that Ishiyama and Murakawa rendered unpatentable claims 1, 2, and 9 of the '581 patent, and that Ishiyama, Murakawa, and Ahonen rendered unpatentable claims 3 and 5 of the '581 patent. *Decision II* at *27.

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[1] Congress amended § 103. *See* Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 3(c), 125 Stat. 284, 287–88 (2011) ("AIA"). Because the applications that led to the Challenged Patents were filed before March 16, 2013, the pre-AIA § 103(a) applies. *See* AIA § 3(n), 125 Stat. at 293.

Relevant to this appeal, the Board's interpretation of an "encrypted" request and/or reply message led it to conclude that Apple failed to demonstrate that claims 1–6 of the '810 patent and claim 4 of the '581 patent would have been obvious. *Decision I* at *8, 22; *Decision II* at *18–20. In its petitions, Apple argued that all terms should receive their ordinary and customary meaning. J.A. 169, 3273. MPH proposed a construction of "security gateway," but the Board did not base its decision on that claim term. *Decision I* at *4–5; *Decision II* at *4. Thus, the Board determined that "no express claim construction [was] necessary." *Decision I* at *5; *Decision II* at *4. The Board then interpreted the "plain words" of "request message and/or a reply message being encrypted" to require "that the message is encrypted—not that a portion of the message is encrypted." *Decision I* at *8; *Decision II* at *19. Based on its interpretation, the Board concluded that Ishiyama could not meet this limitation because its request message "includ[ed] the outer packet, and that packet is unencrypted." *Decision I* at *8–9; *Decision II* at *18–19.

The Board also concluded that Apple failed to meet its burden as to claims 6–8 of the '581 patent because Grounds 1 and 3 in IPR 2019-00820 did not address the intervening limitations of claim 5, from which claims 6–8 depend. *Decision II* at *20, 27. The Board accepted that the combination of Ishiyama and Murakawa rendered claim 1 of the '581 patent obvious. *Id.* at *6, 11. The Board further accepted that adding Ahonen to that combination taught the additional limitation of dependent claim 5, i.e., "the security gateway sending back a reply message to the mobile terminal at the second address to confirm the address change." *Id.* at *26–27. Because Apple did not include Ahonen in Ground 1 addressing claims 6 and 7 or Ground 3 addressing claim 8, the Board held that Apple did not carry its burden as to those claims. *Id.* at *20, 27.

Apple timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II. DISCUSSION

Apple presents two arguments on appeal. First, Apple argues that the Board adopted an erroneous claim construction of "request message and/or a reply message being encrypted" that excludes messages sent using packets with unencrypted address information. Appellant's Br. 15–17, 18–29. Second, Apple argues that the Board should have considered Apple's arguments for the unpatentability of '581 patent claim 5 in evaluating its arguments regarding claims 6–8. Appellant's Br. 17–18, 37–46. We address each argument in turn.

A. Claim Construction

"We review the Board's claim construction de novo and any underlying factual findings for substantial evidence." *Kaken Pharm. Co. v. Iancu*, 952 F.3d 1346, 1350 (Fed. Cir. 2020) (citing *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 331–33 (2015)). "The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history." *Thorner v. Sony Comput. Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc)).

Apple contends the Board erroneously construed "encrypted" to exclude packets with unencrypted address information. Appellant's Br. 20. According to Apple, "encrypted" messages *must* rely on packets with unencrypted addressing information, and the Challenged Patents teach that encrypted messages use such packets. Appellant's Br. 25–26. MPH argues that the claims require the request message to "cause the changing of the address definition," and that "Apple admitted below that it is the outer header of Ishiyama's packet," which is unencrypted, "*that alone is responsible for changing the address definition* to the second address." Appellee's Br. 32 (emphasis in original). We agree with Apple that the Board's

construction of an "encrypted" request and/or reply message is erroneous and contradicts the intrinsic record.

Before addressing the substantive claim construction dispute, we first address certain preliminary arguments raised by MPH. MPH argues that the Board did not issue a claim construction at all, but instead made a factual finding that the Ishiyama reference fails to teach an encrypted request message. Appellee's Br. 14, 30–31, 40. MPH also argues that Apple waived its claim construction arguments by not presenting them to the Board. Appellee's Br. 34.

We agree with Apple that the Board performed a claim construction. The Board stated that "the *plain words of the claim* state that the message is encrypted—not that a portion of the message is encrypted. . . . Simply put, claim 1 requires that the request message (not just a portion thereof) is encrypted . . . ." *Decision I* at *8 (emphasis added); *see also Decision II* at *19 (same regarding claim 4). In doing so, the Board "establish[ed] the scope and boundaries of the subject matter that is patented." *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1350 (Fed. Cir. 2001); *see also HTC Corp. v. Cellular Commc'ns Equip., LLC*, 877 F.3d 1361, 1367 (Fed. Cir. 2017) ("Despite no express construction of [claim term] below, Board findings establishing the scope of the patented subject matter may fall within the ambit of claim construction."). This is not an "application of the claim terms 'encrypted' and 'request message' to prior art," as MPH contends, Appellee's Br. 45–46, but a construction as to what the claims mean.

We also reject MPH's argument that Apple waived or forfeited[2] any claim construction arguments by not

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[2] While MPH argues Apple "waived" its claim construction arguments, Appellee's Br. 34, we interpret MPH to argue Apple forfeited its arguments. *See In re Google*

presenting them to the Board. Appellee's Br. 34. Neither Apple nor MPH proposed construing "encrypted," and the Board did not suggest a construction in its initial determination. J.A. 10, 66, 346–47, 3452–53. Instead, the Board appears to have created a dispute as to the meaning of "encrypted" during its questioning at oral argument. J.A. 742:18–20 ("[I]f the outer portion [of the packet] is not encrypted, then why wouldn't only a portion of the request message be encrypted?"); *see also id.* at 742:21–748:2. We decline to find forfeiture where neither party disputed the construction of a term and the Board nevertheless issued a *sua sponte* construction in its final written decision that diverged from the parties' understanding of the claim. *See, e.g.*, *Lifestyle Enter., Inc. v. United States*, 751 F.3d 1371, 1377 (Fed. Cir. 2014) ("[A] party may raise on appeal any issue that was . . . actually decided below."); *Hollmer v. Harari*, 681 F.3d 1351, 1356 n.3 (Fed. Cir. 2012) (declining to find party waived arguments regarding applicability of earlier decision where Board "sua sponte" applied that decision in its ruling without briefing or comment); *see also Qualcomm Inc. v. Intel Corp.*, 6 F.4th 1256, 1263 (Fed. Cir. 2021) ("[U]nlike with disputed terms, it is unreasonable to expect parties to brief or argue agreed-upon matters of claim construction.").

"When construing claim terms, we first look to, and primarily rely on, the intrinsic evidence, including the claims themselves, the specification, and the prosecution history of the patent, which is usually dispositive." *Sunovion Pharms., Inc. v. Teva Pharms. USA, Inc.*, 731 F.3d 1271,

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Tech. Holdings LLC, 980 F.3d 858, 862 (Fed. Cir. 2020) ("[F]orfeiture is the failure to make the timely assertion of a right"). We recognize that our precedent has "not always been precise" in distinguishing waiver and forfeiture, and we do not fault a party that, understandably, has done just the same. *Id.* at 862–63.

1276 (Fed. Cir. 2013). "The specification is always highly relevant to the claim construction analysis and is, in fact, the single best guide to the meaning of a disputed term." *Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016) (cleaned up); *Phillips*, 415 F.3d at 1315 ("[T]he specification . . . is the single best guide to the meaning of a disputed term.").

Here, the claims require that a "request message and/or a reply message" is "encrypted." '810 Patent, col. 10 l. 48–col. 11 l. 8; '581 Patent, col. 11 ll. 9–10. The Board placed significant emphasis on the patents' statement that "signal[ ] 10*a* . . .*can be encrypted* and/or authenticated." *Decision I* at *8 (emphasis added); *Decision II* at *19 (emphasis added). But this statement alone does not speak to whether the patents consider signals (or messages) transmitted using packets with certain unencrypted addressing information to be "encrypted." '810 Patent, col. 9, l. 66–col. 10 l. 5; '581 Patent, col. 9 l. 63–col. 10 l. 2. The very next sentence from the specifications states that "encryption . . . is preferably performed by using IPSec," suggesting IPSec protocols inform when a message is or is not encrypted. '810 Patent, col. 10 ll. 5–8; '581 Patent, col. 10 ll. 2–5. Consistent with this discussion, claim 1 of the '810 patent requires that the message is encrypted "by using the same [Security Association] already established," where that Security Association is established "using IPSec protocols." '810 Patent, col. 10 l. 48–col. 11 l. 8; *see also Hockerson-Halberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369, 1374 (Fed. Cir. 1999) ("Proper claim construction, however, demands interpretation of the entire claim in context, not a single element in isolation."). Thus, we turn to the specifications' discussion of IPSec to determine when messages are encrypted.

Mirroring the claims' requirement of "encrypted and/or authenticated," the specifications discuss two protocols used within IPSec to provide security: "Authentication Header (AH)" and "Encapsulating Security Payload

(ESP)," both of which "operat[e] by adding a protocol header." '810 Patent, col. 2 ll. 11–17; '581 Patent, col. 2 ll. 13–19. Both AH and ESP support "transport mode"—which "provides protection primarily for upper layer protocols and extends to the payload of an IP packet"—and "tunnel mode"—which "provides protection to the entire IP packet." '810 Patent, col. 3 ll. 4–19; '581 Patent, col. 3 ll. 6–22. Tunnel mode is generally used to send messages "through more than two components," such that packets are "tunnelled [sic] through external networks." '810 Patent, col. 3 ll. 16–19, col. 3 ll. 24–27; '581 Patent, col. 3 ll. 19–22, col. 3 ll. 27–30. The specifications describe that initial ESP fields are added to an "original, or inner, packet," and "the entire packet plus security fields" is "treated as the payload of a new outer IP packet with a new outer IP header." '810 Patent, col. 3 ll. 28–33; '581 Patent, col. 3 ll. 31–36. The resulting packet is described as "IP | ESP | IP | payload," where the outermost "IP" applies to the "new larger packet" and "may have totally different source and destination addresses," while the inner packet—"IP | payload"—is protected by the ESP fields. '810 Patent, col. 3 ll. 31–42; '581 Patent, col. 3 ll. 34–45. With this arrangement, the "inner IP packet" can be tunneled so that "no routers along the way are able to examine the inner IP packet," while "intermediate routers" examine "only the outer IP header." '810 Patent, col. 3 ll. 31–33, col. 3 ll. 55–57; '581 Patent, col. 3 ll. 34–36, col. 3 ll. 58–60.

Accordingly, the specifications contemplate that "encrypted" messages can be sent using outer packets with certain unencrypted addressing information, contrary to the Board's construction. As discussed in both patents, the outer packet's "IP" information is not protected by ESP fields, allowing intermediate routers to examine that information. Messages are still secure because the ESP fields protect the inner packet's IP information and payload.

Consistent with this analysis, MPH appears to agree that a message with certain unencrypted addressing

information can meet the claims. First, MPH did not raise or dispute the construction of the term "encrypted" to the Board. *Decision I* at *4; *Decision II* at *4. Instead, MPH argued to the Board that the unencrypted "outer header *itself*" cannot serve as the "request message." Appellee's Br. 14–15 (emphasis added); *see also id.* at 31(arguing the same before us). The Board agreed with Apple and concluded that "Ishiyama's entire transmitted packet (i.e., the encapsulated packet plus the outer packet, which has the changed source address) is the claimed request message." *Decision I* at *7; *Decision II* at *8. Second, at oral argument on appeal, MPH's counsel twice refused to concede that a message sent using a packet with unencrypted addressing information could not infringe the claims. Oral Arg. at 22:01–23:00, 28:50–29:21, *available at* https://oralarguments.cafc.uscourts.gov/default.aspx?fl=21-1355_12072021.mp3; *see 01 Communique Lab'y, Inc. v. Citrix Sys., Inc.*, 889 F.3d 735, 743 (Fed. Cir. 2018) ("[C]laim terms must be 'construed the same way for both invalidity and infringement.'").

We hold that the Board adopted an erroneous claim construction of "request message and/or a reply message being encrypted" within claim 1 of the '810 patent and claim 4 of the '581 patent that excludes "encrypted" messages because those messages are sent using packets with certain unencrypted addressing information. The Challenged Patents contemplate that a message can still be considered "encrypted" if its packet has unencrypted "outer IP header" information. We vacate the portions of the Board's final written decisions relying on that erroneous claim construction and remand for further proceedings.[3]

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[3] Apple alternatively argues that the Board's decision should be remanded because the Board's *sua sponte* claim construction violated the Administrative Procedure

B. Apple's Petition

Next, we address Apple's argument that the Board erred in declining to consider its unpatentability arguments for dependent claims 6–8 of the '581 patent under Grounds 1 and 3, despite finding claim 5 of that patent unpatentable under Ground 2. Appellant's Br. 41.

Apple argues that where a challenger proves a claim unpatentable, courts can only sustain dependent claims based on "the language of the dependent claims themselves." Appellant's Br. 38. Because the Board found claim 5 of the '581 patent to be unpatentable, Apple urges that the Board only needed to consider prior art to the extent necessary to address the remaining limitations added in dependent claims 6–8. Appellant's Br. 39.

MPH responds that Ground 1 of Apple's petition relies solely on Ishiyama in view of Murakawa to address claims 6–7 and omits the Ahonen reference that Apple relied upon to address claim 5. Appellee's Br. 52. Similarly, Ground 3 of Apple's petition relies on Ishiyama, Murakawa, and Forslöw to address claim 8, but, again, omits the Ahonen reference. *Id.* Because claims 6–8 depend from claim 5, MPH argues that the Board correctly found that Apple failed to carry its burden to address all of the relevant limitations by not discussing Ahonen.[4] Appellee's Br. 53–54; *see*

Act. Appellant's Br. 29–37. Because we vacate the portions of the Board's decision relying on its erroneous claim construction and remand for additional proceedings, we do not reach this alternative argument.

[4] MPH argues that we can nevertheless affirm the Board's determination as to claims 4–6 of the '810 patent because Apple relied on Ahonen to meet the intervening limitations in claim 3 and did not include Ahonen in its grounds challenging those claims. Appellee's Br. 57–58.

Koninklijke Philips N.V. v. Google LLC, 948 F.3d 1330, 1335–37 (Fed. Cir. 2020).

We agree with MPH that the Board did not err in denying Apple's petitions as to claims 6–8 of the '581 patent. As the Supreme Court has held, "in an inter partes review the petitioner is master of its complaint and normally entitled to judgment on . . . the *claims it raises*, not just those the decisionmaker might wish to address." *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1355 (2018) (emphasis added); *see also Intuitive Surgical, Inc. v. Ethicon LLC*, 25 F.4th 1035, 1041 (Fed. Cir. 2022) ("[A]s the master of its own petition, Intuitive could have made its challenges more pointed and specific . . . ."). This holding is consistent with the statutory framework that requires a petition to identify "the grounds on which the challenge to each claim is based." 35 U.S.C. § 312(a)(3); *see also* 37 C.F.R. § 42.104(b) (requiring petitioner to identify "the patents or printed publications relied upon for each ground" and "where each element of the claim is found in the prior art patents or printed publications relied upon").

The Board is not limited by the "exact language of the petition," but it does not "enjoy[] a license to depart from the petition and institute a different inter partes review of his own design." *Koninklijke Philips*, 948 F.3d at 1336 (quoting *SAS*, 138 S. Ct. at 1356); *see also Sirona Dental Sys. GmbH v. Institut Straumann AG*, 892 F.3d 1349, 1358 (Fed. Cir. 2018) (finding "no error" in Board's decision "not to decide grounds of unpatentability not raised in the petition"). In *Koninklijke Philips*, Google's petition included

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The Board did not reach this issue because it found Apple did not demonstrate claim 1 to be unpatentable. *Decision I* at *9, 22. Because we vacate the portions of the Board's decisions based on its construction of an "encrypted" request or reply message in claim 1, the Board should decide whether to consider this issue on remand.

two grounds: (1) anticipation based on Synchronized Multimedia Integration Language 1.0 Specification ("SMIL 1.0"), and (2) obviousness based on "SMIL 1.0 in light of the *general knowledge* of the [skilled artisan] regarding distributed multimedia presentation systems as of the priority date." 948 F.3d at 1333–34. Google relied on a prior art reference referred to as "Hua" to demonstrate the state of the art. *Id.* at 1334. The Board instituted on *three* grounds: the two identified in Google's petition and a third presenting obviousness based on SMIL 1.0 *and Hua*. *Id.* at 1334. Although we found it proper for the Board to institute Ground 2 based on SMIL 1.0 and the "general knowledge" of a person of skill in the art, we held the Board erred in instituting a ground based on SMIL 1.0 and Hua "because Google did not advance such a combination of references in its petition." *Id.* at 1337.

Here, we agree the Board properly declined to consider Ahonen in Grounds 1 and 3 of the '581 patent's IPR. *See Decision II* at *20, 27. Apple only raised Ahonen in Ground 2, which challenged claims 3 and 5 of the '581 patent. *Id.* at *3. Even though claims 6–8 depend from claim 5, Apple did not include Ahonen in Grounds 1 and 3 challenging those claims, nor did it address or reference Ahonen in its substantive analysis. J.A. 3312–16, 3323–26. The Board did not err by declining to consider arguments that Apple did not make. *See Koninklijke Philips*, 948 F.3d at 1337.

Apple contends the Board exalted "form over substance" by requiring Apple to include Ahonen in Grounds 1 and 3, Appellant's Br. 46, but these requirements have a practical impact as well. For example, Apple's Ground 3 relies on Ishiyama, Murakawa, and Forslöw. J.A. 3323–26. Apple presented no argument as to why a skilled artisan would be inclined to combine the teachings of Ishiyama, Murakawa, Forslöw, *and Ahonen*. J.A. 3323, 3326. We have previously reversed Board decisions that found a motivation to combine where the petitioner presented only threadbare arguments to support its combination, let alone

where a party entirely failed to address one of the references it sought to combine. *See, e.g.*, *TQ Delta, LLC v. Cisco Sys., Inc.*, 942 F.3d 1352, 1359 (Fed. Cir. 2019) ("[A] conclusory assertion with no explanation is inadequate to support a finding that there would have been a motivation to combine.").

Apple cites several cases for the general proposition that where a parent claim is invalid, its dependent claims may be similarly invalid. Appellant's Br. 38–39. Those cases are distinguishable because they do not address the situation at hand, i.e., where a petitioner did not address all of a claim's limitations in its petition. In *Ormco Corp. v. Align Technology, Inc.*, we explained that invalidating one claim can inform the patentability of other claims that lack "patentably significant" differences. 498 F.3d 1307, 1320 (Fed. Cir. 2007). In *Soverain Software LLC v. Victoria's Secret Direct Brand Management, LLC*, we applied collateral estoppel regarding the invalidity of a dependent claim because "transmitting a hypertext statement *over the internet*, rather than *over a generic network*" did not materially alter the invalidity analysis. 778 F.3d 1311, 1319–20 (Fed. Cir. 2015) (emphases added). And in *MaxLinear, Inc. v. CF CRESPE LLC*, we explained that collateral estoppel often "requires the invalidation of related claims that present identical issues of patentability." 880 F.3d 1373, 1374, 1377 (Fed. Cir. 2018). But these cases do not involve a petitioner who did not address each of a dependent claim's intervening limitations in a single ground.

Apple's citation to *Soverain Software LLC v. Newegg Inc.,* 728 F.3d 1332, 1335 (Fed. Cir. 2013), is similarly inapposite. *See* Appellant's Br. 40–41. There, we explained that if the parties do not "separately argue" or distinguish a dependent claim and the independent claim it incorporates, "the claims rise or fall together." *Newegg*, 728 F.3d at 1335. By contrast, here *Apple* separately argued the patentability of claims 6–8 in Grounds 1 and 3 from claim 5

in Ground 2, such that we cannot say the claims of Grounds 1, 2, and 3 necessarily rise and fall together.

CONCLUSION

We *vacate* the Board's patentability determinations for claims 1–6 of the '810 patent and claim 4 of the '581 patent based on its erroneous claim construction of "encrypted." We *affirm* the Board's patentability determination that Apple failed to meet its burden as to claims 6–8 of the '581 patent. We *remand* to the Board for further proceedings consistent with this opinion.

AFFIRMED-IN-PART, VACATED-IN-PART, AND REMANDED

COSTS

No costs.