

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GEN DIGITAL INC.,
Petitioner,

v.

KAJEET, INC.,
Patent Owner.

IPR2022-00001
Patent 8,667,559 B1

Before KARL D. EASTHOM, JULIET MITCHELL DIRBA, and
IFTIKHAR AHMED, *Administrative Patent Judges*.

DIRBA, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining Some Challenged Claims Unpatentable
Denying/Dismissing Patent Owner's Revised Motion to Amend
35 U.S.C. § 318(a)

On April 21, 2002, we instituted an *inter partes* review of claims 1, 2, 5–15, 18–21, and 27–29 of U.S. Patent No. 8,667,559 B1 (Ex. 1001, “the ’559 patent”). Paper 20 (“Inst. Dec.”). Having considered the full record at trial, we determine that challenged claims 1, 5–15, 18–21, and 27–29 of the ’559 patent are unpatentable and that claim 2 is not unpatentable. We dismiss the Revised Motion to Amend as to substitute claim 32 (which was contingently proposed to replace claim 2), and we otherwise deny that motion.

I. BACKGROUND

A. History of this Proceeding

On October 1, 2021, Gen Digital Inc., formerly known as NortonLifeLock Inc.,¹ (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1, 2, 5–15, 18–21, and 27–29 of the ’559 patent (Paper 1, “Pet.”), and in support, Petitioner relied upon a declaration from Vijay K. Madisetti, Ph.D. (*see* Ex. 1003). During the preliminary proceeding, Kajeet, Inc. (“Patent Owner”) filed a preliminary response (Paper 13, “Prelim. Resp.”), Petitioner filed a pre-institution reply (Paper 16), and Patent Owner filed a pre-institution sur-reply (Paper 18). On that record, we determined that Petitioner had demonstrated a reasonable likelihood that it would prevail in establishing the unpatentability of at least one challenged claim, and we instituted an *inter partes* review of all challenged claims on all asserted grounds. Inst. Dec. 34.

¹ The Petition identifies NortonLifeLock Inc. as Petitioner (*see* Pet. 1), but during trial, Petitioner filed an updated mandatory notice stating that it changed its name to Gen Digital Inc. (*see* Paper 37).

During trial, Patent Owner filed a Response (Paper 26, “PO Resp.”), and in support, Patent Owner submitted testimony from Chetan Sharma (*see* Ex. 2015).² Petitioner then filed a Reply (Paper 30, “Pet. Reply”), which relied upon a supplemental declaration from Dr. Madisetti (*see* Ex. 1016). Finally, Patent Owner filed a Sur-reply. Paper 38 (“PO Sur-reply”). Petitioner deposed Mr. Sharma and filed the corresponding transcript. *See* Ex. 1017. Patent Owner did not submit cross-examination testimony from Dr. Madisetti.

In addition, Patent Owner filed a Contingent Motion to Amend proposing substitute claims 31–46 to replace original claims 1–12 and 27–30, respectively. Paper 27 (“MTA”). Petitioner filed an Opposition to the Motion to Amend (Paper 31, “MTA Opp.”), which relies on Dr. Madisetti’s supplemental declaration (*see* Ex. 1016). We then issued Preliminary Guidance on Patent Owner’s Motion to Amend (Paper 32, “PG”), pursuant to Patent Owner’s request (*see* MTA 2).

After receiving our Preliminary Guidance, Patent Owner filed a Revised Contingent Motion to Amend in which it proposes revised substitute claims 31, 32, and 35–45 for original claims 1, 2, 5–12, and 27–29, respectively. Paper 39 (“RMTA” or “Revised Motion”). Patent Owner’s Revised Motion relies upon a declaration from Stuart Lipoff. *See* Ex. 2029. Petitioner opposed Patent Owner’s Revised Motion (Paper 43,

² The Response cites to Exhibit 2016 throughout, but we understand most of these to be typographical errors intended to reference Exhibit 2015 (Mr. Sharma’s declaration). We have corrected these citations in this Decision.

“RMTA Opp.”), Patent Owner filed a reply (Paper 48, “RMTA Reply”), and Petitioner filed a sur-reply (Paper 50, “RMTA Sur-reply”).

An oral hearing in this proceeding was held on February 23, 2023, and a transcript of the hearing is included in the record. Paper 51 (“Tr.”).

B. Related Matters

The parties indicate that the ’559 patent is or has been asserted in several district court lawsuits including: *Kajeet, Inc. v. NortonLifeLock Inc.*, Case No. 1:20-cv-01339-MN (D. Del.); *Kajeet, Inc. v. Gryphon Online Safety, Inc.*, Civil Action No. 1:19-cv-02370-MN (D. Del.); *Kajeet, Inc. v. Infowise Pty., Ltd.*, Case No. 6:21-cv00704-ADA (W.D. Tex.); and *Kajeet, Inc. v. Trend Micro, Inc.*, Case No. 6:21-cv-00389-ADA (W.D. Tex.). Pet. 1–2; Paper 3 (Patent Owner’s Mandatory Notices), 2; Paper 34 (Patent Owner’s Updated Mandatory Notices), 2.

The parties identify no related Board proceedings. *See* Pet. 1–2; Paper 3, 2. We note, however, a third-party filed a petition challenging US 7,899,438 B2, which is related to the ’559 patent, in *Trend Micro, Inc. v. Kajeet, Inc.*, IPR2023-00178 (filed Nov. 10, 2022). The Board has not yet issued a decision on institution in that proceeding.

C. The Grounds

We instituted trial on the following grounds of unpatentability:

Claim(s) Challenged	35 U.S.C. § ³	Reference(s)/Basis
1, 2, 5–12, 27–29	103	Putzolu ⁴
2, 7, 8	103	Putzolu, Rothman ⁵
13–15, 18–21	103	Bhat ⁶

Inst. Dec. 6, 34.

D. Summary of the '559 Patent

The '559 patent is titled “Feature Management of a Communication Device,” and the application that led to this patent was filed on March 6, 2013, claiming the benefit of applications filed as early as June 28, 2007. Ex. 1001, codes (22), (54), (63). It is directed to “the real-time management of a device, and more particularly to the establishment and enforcement of policies or rules associated with the feature or functions that may be performed with the device.” *Id.* at code (57), 1:47–50; *see also id.* at 4:11–12 (“The present invention is directed to the real-time management of a device in general . . .”).

Figure 2 of the '559 patent (reproduced below) depicts the components of an exemplary feature management system.

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 285–88 (2011), revised 35 U.S.C. § 103 effective March 16, 2013. We refer to the pre-AIA version of § 103, but our findings would be the same if we had applied the current version of the statute.

⁴ US 6,578,076 B1, issued June 10, 2003 (Ex. 1005).

⁵ US 7,826,835 B2, filed Dec. 16, 2004, issued Nov. 2, 2010 (Ex. 1007).

⁶ US 2005/0021978 A1, published Jan. 27, 2005 (Ex. 1006).

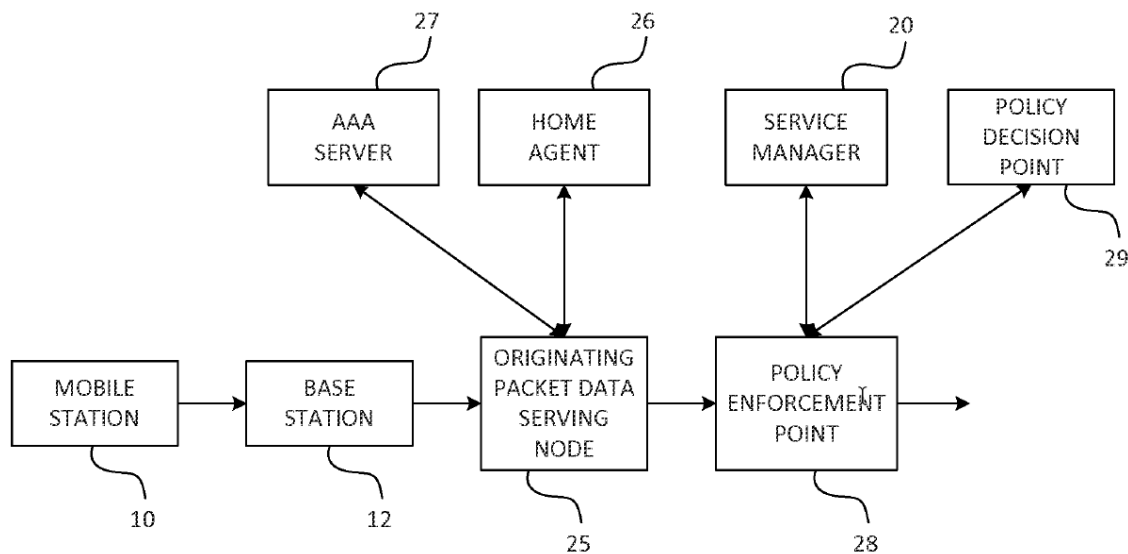


Figure 2 (above) includes mobile station 10, base station 12, originating packet data serving node (“O-PDSN”) 25, policy enforcement point (“PEP”) 28, and policy decision point (“PDP”) 29. Ex. 1001, 8:19–47.

Mobile station 10 originates a session by establishing a connection with base station 12, which connects to O-PDSN 25. *Id.* at 8:21–25. After validating mobile station 10, O-PDSN 25 obtains an IP address for the data session and routes mobile station 10 to the appropriate PEP 28, which operates in conjunction with an associated PDP 29. *Id.* at 8:30–39, 8:48–49. The Specification clarifies that PEP 28 and PDP 29 are both logical elements that can be physically housed in another device. *Id.* at 8:40–45, 8:53–55.

The ’559 patent states that a request may be initiated either by mobile station 10 (such as when a user seeks to download content) or by another device that seeks to communicate with mobile station 10 (such as when a text message is sent to the user). Ex. 1001, 8:60–9:2. If the user is a valid subscriber, PEP 28 will enforce the policies associated with that subscriber. *Id.* at 9:18–20. The Specification clarifies that PDP 29 “maintains or stores a list of policies that have been established to control the features and

functions of the mobile station 10 and decides, based on those policies, to either accept or reject the service request” (*id.* at 8:55–59), and PEP 28 is responsible for enforcing the decision of PDP 29 (*id.* at 8:45–47). *See also id.* at 9:23–29 (providing examples of restrictions based on content type, URL, and/or time-of-day). “If all of the policies pass, then the session or transaction associated with the service request is permitted to continue.” *Id.* at 9:44–46. Otherwise, PEP 28 will take an action, such as terminating the session or transaction. *Id.* at 9:30–35.

E. Challenged Claims

Of the challenged claims, claims 1, 13, and 27 are independent. Independent claims 1 and 13 are illustrative:

1. [1pre] A non-transitory computer readable storage medium comprising instructions that, when executed on a computing device configured to perform a function on a communication network managed by a service provider, cause the computing device to at least:

[1a] send to a server a request to communicate with a remote computing device over the communication network;

[1b] receive in real-time from the server a response indicative of a decision granting or denying the request, the decision being based on one or more policies that are stored at the server and based at least in part on input from an administrator; and

[1c] enforce the response by enabling the requested communication with the remote computing device over the communication network when the decision grants the request and by disabling the requested communication when the response denies the request, the requested communication being enabled or disabled without accessing the one or more policies by the computing device.

Ex. 1001, 16:2–22 (references added in brackets).

13. [13pre] A computing device configured to execute a function using a communication network managed by a service provider, the computing device comprising a memory bearing instructions that, when executed on the computing device, cause the computing device to at least:

[13a] process a request to run a function on the computing device, the function comprising enabling a current communication with a remote computing device over the communication network;

[13b] access a decision stored on the computing device, the decision having been received from a server and being based on a policy that is stored at the server and that determines whether the function is permitted to run on the computing device, the determination being based on a previous communication with the computing device, the policy being managed by an administrator;

[13c] receive from the server an update to the decision;

[13d] determine whether the request is granted or denied based on the decision and the update; and

[13e] enable or disable the communication with the remote computing device over the communication network based on the determination.

Id. at 17:15–36 (references added in brackets).

II. ANALYSIS

A. Legal Standards

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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 person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The legal question of obviousness is resolved on the basis of

underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when in evidence, objective evidence of obviousness or nonobviousness.⁷ *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966). One seeking to establish obviousness based on more than one reference also must articulate sufficient reasoning with rational underpinnings to combine teachings. *See KSR*, 550 U.S. at 418.

In an *inter partes* review, the petitioner has the burden of proving unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e). That burden never shifts to the patentee. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

B. The Level of Ordinary Skill in the Art

Our reviewing court has explained that “the level of skill in the art is a prism or lens through which a judge, jury, or the Board views the prior art and the claimed invention.” *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (citing *Al-Site Corp. v. VSI International, Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999)). “This reference point prevents these factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness.” *Id.*

Petitioner asserts that the level of ordinary skill in the art corresponds to: (1) “a bachelor’s degree in computer science or a similar degree such as computer engineering,” with (2) “two years of experience in the

⁷ The record does not include allegations or evidence of objective indicia of nonobviousness.

development of computer software systems.” Pet. 5 (citing Ex. 1003 ¶¶ 23–24). Petitioner further asserts that an ordinary artisan could also have more formal education and less technical experience, or less formal education and more technical experience. *Id.* For purposes of the Institution Decision, we adopted Petitioner’s proposal. Inst. Dec. 21. Patent Owner “does not object” to this articulation for purposes of this proceeding. PO Resp. 9.

In this Decision, we again adopt the level of ordinary skill proposed by Petitioner. We are satisfied that it generally comports with the level of skill necessary to understand and implement the teachings of the ’559 patent and the asserted prior art. *Accord* Inst. Dec. 20–21.

C. Claim Construction

We interpret claim terms using “the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b) (2021). Under the principles set forth by our reviewing court, the “words of a claim ‘are generally given their ordinary and customary meaning,’” as would be understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “The inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation.” *Id.* at 1313. But we do not consider the meaning of the term in a vacuum—rather, “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which

the disputed term appears, but in the context of the entire patent, including the specification.” *Id.*

Below, we address the construction of the term “computing device.” We determine that no other terms or phrases need to be construed to resolve the disputes in this proceeding. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

1. “computing device”

During the preliminary proceeding, Patent Owner argued that the term “computing device” (which is recited in each independent claim) is a user-level device (such as a mobile phone) rather than a network-level device (such as a router). Inst. Dec. 22–23 (citing Prelim. Resp. 17). In the Institution Decision, we preliminarily rejected that construction. *Id.* at 23–24. At trial, Patent Owner maintains that the claimed “computing device” is “a user device, such as a mobile phone, computer, tablet, gaming system, and the like.” PO Resp. 12. In support, Patent Owner points to the Specification, the claims, the prosecution history, and Mr. Sharma’s testimony and responds to the analysis provided in the Institution Decision. *Id.* at 12–20. Petitioner responds that Patent Owner’s construction is incorrect and submits that the term should be given its plain and ordinary meaning. Pet. Reply 2–6. Patent Owner did not address the construction of this term in its Sur-reply.

Having considered the parties' arguments and the evidence, we conclude that the claim term "computing device" is not limited to "a user device," as Patent Owner contends. Instead, we determine that this term should have its plain and ordinary meaning, which encompasses both user-level devices and network-level devices.

The term "computing device" is often used in the electrical arts and has a well-understood meaning in that context. As the Institution Decision stated, this meaning encompasses "both user-level and network-level devices" (Inst. Dec. 23), and neither party disagreed with this finding or submitted evidence to contradict it. In fact, Dr. Madisetti (Petitioner's expert) testifies that the ordinary meaning of this term in this field "encompass[es] any device that performs a 'computing function,'" including user-level and network-level devices. Ex. 1016 ¶¶ 13–15. Mr. Sharma (Patent Owner's expert) also agrees that this term generally can include a network-level device (Ex. 1017, 29:21–30:3), even though he testifies that the '559 patent limits its scope to user-level devices (Ex. 2015 ¶ 32). Thus, we find that, in this field, a "computing device" is a generally understood and broad term that encompasses both user-level and network-level devices. This provides us with "an objective baseline from which to begin claim interpretation." *Phillips*, 415 F.3d at 1313.

We next turn to the intrinsic record of the '559 patent, and we determine that it provides no basis for construing the term "computing device" to exclude network-level devices. In fact, the intrinsic record provides no additional context regarding the meaning of this term. The Specification does not use the term "computing device" outside of the claims (*accord* Inst. Dec. 23), and it provides no definition (explicit or implicit) for

this term. *See* Ex. 1001; *see also* Ex. 1017, 34:1–5 (Mr. Sharma agreeing that no explicit definition is provided). The claims include no language to indicate that a computing device must be a user-level device, or that network-level devices are excluded from the scope of this term. *See* Ex. 1001, 16:2–18:65. We also discern no definition, or relevant disclaimer or disavowal, for this term in the prosecution history. *See* Ex. 1002 (applicant’s response to an office action during prosecution); *see also* Ex. 2005 (office action); Ex. 2006 (Bales reference discussed in excerpt); Ex. 2007 (notice of allowance).⁸

Patent Owner presents various arguments to support its proposal that the scope of this term should be limited to user-level devices (*see* PO Resp. 12–20), but all are unavailing. First, Patent Owner argues that the “computing device” must be a user-level device because the Specification consistently describes systems that control the functions of user-level devices (*see id.* at 12–14 (citing Ex. 2015 ¶¶ 32–34)), but this argument is premised on the erroneous assumption that the claimed “computing device” must be the *object* of the control described rather than what *performs* it. This assumption is in tension with the claims, which specifically state that the “computing device” is what “enforce[s]” the policies. *E.g.*, Ex. 1001, 16:5–6, 16:14–18 (claim 1). Patent Owner’s only support for its assumption is an argument that “the computing device [must be] separate from the communication network being used by it” because the claims recite “a

⁸ The full prosecution history is not in evidence, but Exhibits 2005 and 1002, respectively, include the only office action and substantive response entered during prosecution of the application that issued as the ’559 patent. Neither party introduced the prosecution history of any related applications.

computing device configured to perform a function *on a communication network*” or “*using a communication network*” (PO Resp. 13; *see also* Ex. 2015 ¶ 32), but we disagree with this argument. This claim language does not indicate that the computing device is separate from the communication network: a device can perform a function on (or using) a network so long as it is connected to that network, whether or not it is part of that network.

Second, Patent Owner argues that dependent claim 2 (and other dependent claims) “lose their meaning” if a “computing device” can be either a user-level or a network-level device (PO Resp. 14), but this is incorrect. Claim 1 recites a computing device generally, and dependent claim 2 limits the scope of this invention by requiring that “the computing device is a mobile phone.”

Third, Patent Owner argues that the Institution Decision relied on a passage from the Specification that discussed a “communication device”—not a “computing device”—and Patent Owner submits that these terms have different meanings. PO Resp. 14–17 (citing Inst. Dec. 23; Ex. 1001, 2:12–18, 5:41–45, 6:18–34, 6:41–46; Ex. 2015 ¶¶ 35–36; Ex. 2016). But, even assuming *arguendo* that “communication device” and “computing device” have different meanings, this does not show that a “computing device” cannot be a network-level device. Moreover, the cited portion of the Specification specifically states that a “communication device” could either be a user device, such as “a PDA,” or “a network device” (Ex. 1001, 6:24–34), which indicates that an ordinary artisan would have understood the term “device” as broadly including user-level and network-level devices.

Fourth, Patent Owner argues that its proposed construction is consistent with the Specification, contrary to the Board’s analysis in the Institution Decision. PO Resp. 17 (citing Inst. Dec. 24; Ex. 1001, 8:40–47; Ex. 2015 ¶ 37). We disagree. Patent Owner’s proposal is inconsistent with the Specification because it would exclude the disclosed embodiments. As the Institution Decision explained, “Patent Owner’s proposed construction would require a user-level device, such as a mobile phone, to . . . ‘enforce [a] response by enabling the requested communication . . . when the decision grants the request’” (as recited by element 1e); however, the Specification states that PEP 28, a network-level device, does so. Inst. Dec. 24 (quoting Ex. 1001, 8:40–47, 16:15–22). Indeed, as explained below in connection with the Revised Motion, the Specification does not describe any user-level device that performs this enforcing limitation. *See infra* § III.C.4 (analyzing written description support for a user-level computing device, which is required by the proposed substitute claims). Patent Owner argues that the Specification does not include any “statements of disavowal or that strictly define the PEP component as being . . . limited” to network-level devices (PO Resp. 17), but this misses the mark. The problem is that, if we adopted Patent Owner’s proposed construction, the embodiments in the Specification would not fall within the scope of the claims, and “[s]uch an interpretation is rarely, if ever correct.” *Vitronics*, 90 F.3d at 1583.

Fifth, Patent Owner argues that its proposed construction is supported by the prosecution history (*see* PO Resp. 17–20 (citing Ex. 1002, 10–11; Ex. 2006; Ex. 2007)), but we disagree. During prosecution, the applicant argued that claim 1 was distinguishable from the cited reference, Bales (Ex. 2006), because it did “not describe a distributed architecture where

policy decisions are performed at the server level and those policies are enforced on the phone itself.” Ex. 1002, 10; *see also id.* at 11 (arguing that Bales does not disclose “a device that enforces the response from the server”). From this, Patent Owner contends that the claims must “utilize a distributed architecture arrangement which . . . confine[s] the ‘computing device’ to being a user-level device rather than a network level device.” PO Resp. 19–20. But the applicant’s remarks do not comment on whether any particular device is a user-level or network-level device; rather they seek to distinguish the claims as requiring one device to enforce a policy decision that was made by a different device. *See* Ex. 1002, 10–11. Thus, the applicant’s comments do not limit the scope of the term “computing device” to be only user-level devices. *See also Phillips*, 415 F.3d at 1317 (“[B]ecause the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.”).

Finally, we note that we have considered Mr. Sharma’s testimony, but his analysis suffers from the same deficiencies as Patent Owner’s arguments and thus fails to sufficiently explain and support his conclusion on this point. *See* Ex. 2015 ¶¶ 32–40. Moreover, Mr. Sharma testifies that the term “communication device” is “broader” than the term “computing device” because a “communication device . . . might not do any computing,” and we find this to lack credibility. *Id.* ¶ 36; Ex. 1017, 34:9–35:12. This testimony is premised on Mr. Sharma’s assumption that a “computing” device must have “much more processing and intelligence on that device beyond just transmitting data” (Ex. 1007, 34:25–35:1), but this assumption is neither

substantiated nor justified. Consequently, we assign little weight to Mr. Sharma’s testimony that the term “computing device” means a user device. *See also Phillips*, 415 F.3d at 1318 (stating that “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court”).

In sum, having reviewed the parties’ arguments and evidence, we conclude that an ordinary artisan would understand the term “computing device” in the context of the ’559 patent to have its plain and ordinary meaning. We conclude that this term can include network-level devices, and we reject Patent Owner’s proposal to the contrary.

2. other terms/phrases

The parties address two other claim construction issues, but we need not provide a construction for either.

The Petition proposes a construction for the claim phrase “the decision being based on one or more policies that are stored at the server,” as recited in claim 1, and related phrases in claims 13 and 17. Pet. 11–12. Specifically, Petitioner contends that this limitation requires that the decision “results from the server applying the policy [or one or more policies] to the request sent by the computing device.” *Id.* at 11. In the Institution Decision, we preliminarily determined that no construction of this phrase was required for this proceeding. *See* Inst. Dec. 22. At trial, Patent Owner agrees that “no construction of this [phrase] is necessary” (PO Resp. 11–12), and Petitioner did not respond to our assessment that construction of this phrase is unnecessary here (*see* Pet. Reply). We determine that construction of this

phrase is unnecessary for this proceeding, as our Decision would be unchanged by adopting or rejecting Petitioner’s proposed construction of it.

In the Response, Patent Owner references a construction for the term “request,” but expressly “elects not to present argument for adoption of this construction.” PO Resp. 21; *see id.* at 21 n.13 (indicating that claim construction is being identified to be consistent with co-pending district court litigation). Accordingly, we determine that any proposed construction for this term was waived for purposes of this proceeding.⁹

D. Summary of the Prior Art

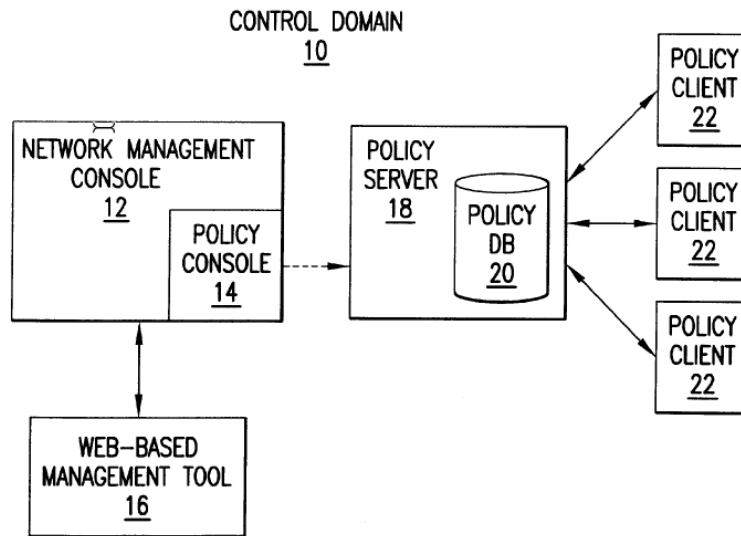
1. Putzolu (Ex. 1005)

Putzolu relates to an automated policy-based network management (PBNM) system that includes one or more policy decision points (PDPs), which store and implement policies, and one or more policy enforcement points (PEPs), which “are responsible for enforcing the policy decision.” Ex. 1005, 1:28–43. Putzolu uses a client-server paradigm for its PBNM system and refers to PDPs as “policy servers” and PEPs as “policy clients.” *Id.* at 2:40–52; *see also id.* at 3:18–28. In Putzolu, a policy client “typically

⁹ Patent Owner’s attempt to “reserve[] the right to present such argument later in this proceeding” (PO Resp. 21) is unavailing because Patent Owner was required to present its arguments for patentability in its Response. *See* Paper 21 (Scheduling Order), 9 (cautioning Patent Owner that “any arguments not raised in the response may be deemed waived”); Patent Trial and Appeal Board Consolidated Trial Practice Guide 52 (Nov. 2019), *available at* <https://www.uspto.gov/TrialPracticeGuideConsolidated> (“Trial Practice Guide”); *see also In re NuVasive, Inc.*, 842 F.3d 1376, 1380–82 (Fed. Cir. 2016) (holding that argument raised in the preliminary response but not raised in a patent owner response was waived). Any arguments for patentability not raised in the Response are waived or forfeited.

resides at a network device responsible for data forwarding, such as a LAN switch, a router, or a firewall.” *Id.* at 3:29–31; *see also id.* at 2:46–48.

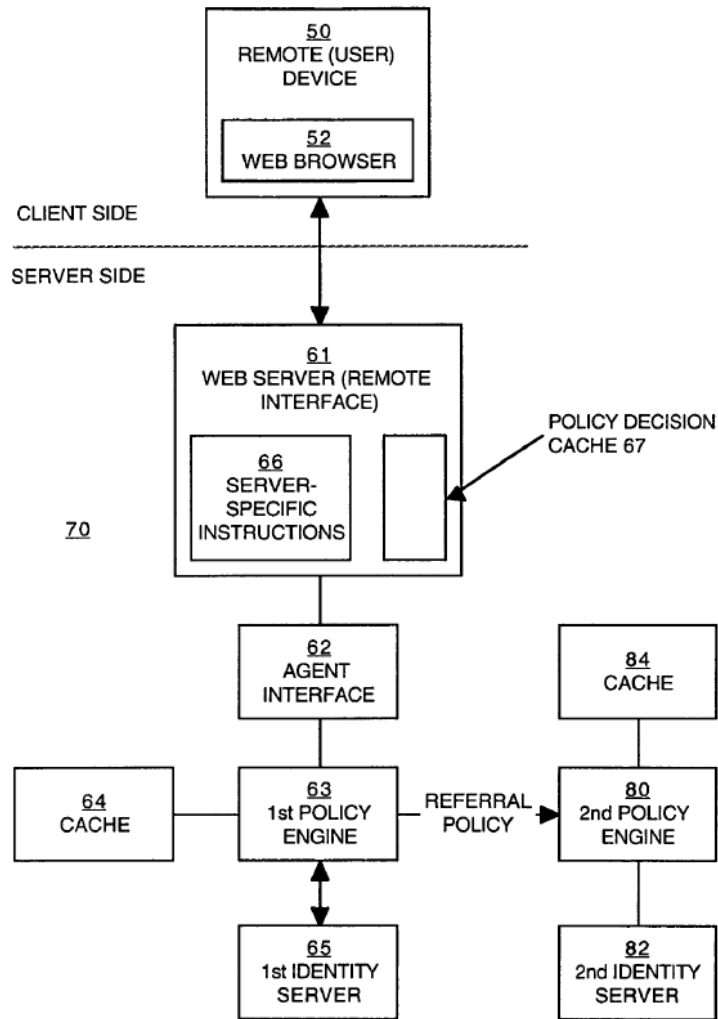
Figure 1, reproduced below, provides an exemplary architecture of Putzolu’s PBNM system. Ex. 1005, 2:9–11.



As shown above, Figure 1 depicts control domain 10, which includes network management console 12 (which includes policy console 14), web-based management tool 16, policy server 18 (which includes policy database 20), and three associated policy clients 22. *Id.* at 2:53–3:28. In operation, “policy client 22 receives a request for access to a resource under its control, [and] it simply sends a query to policy server 18.” *Id.* at 3:34–36. “Policy server 18 determines whether to allow the access,” using policy specification information in its policy database 20, “and communicates the decision to policy client 22.” *Id.* at 3:4–9, 3:38–39. “Based on the response from policy server 18, policy client 22 enforces the decision by either allowing or disallowing the request.” *Id.* at 3:24–28.

2. *Bhat (Ex. 1006)*

Bhat relates to access control policies. Ex. 1006 ¶¶ 2, 9. In Figure 3, reproduced below, Bhat shows the architecture of an exemplary system.



As shown above, Figure 3 includes remote device 50 (which includes web browser 52), web server 61 (which includes server-specific instructions 66 and policy decision cache 67), and policy engines 63, 80. *Id.* ¶¶ 48–51.

In Bhat, “when a user makes an initial request for access to a resource, the server-specific instructions module 66 . . . intercepts the user’s initial request and communicates with the first policy engine 63 to determine if the resource is subject to a policy (e.g., an access control policy).” Ex. 1006

¶ 55. If so, the request is referred to policy engine 63 “so that a determination can be made regarding whether or not access to the resource should be granted,” and “either first policy engine 63 or second policy engine 80 will perform the policy evaluation and return a policy decision to Web server 61 for enforcement.” *Id.* ¶¶ 55–56. Web server 61 then “uses the resultant policy decision to enforce the policy decision” and stores the policy decision in policy decision cache 67. *Id.* ¶¶ 57–58. “Because the policy decision is stored at Web server 61, a subsequent request by the same user for the same resource can be evaluated by Web server 61” without contacting the policy engine. *Id.* ¶ 58. In addition, Bhat describes techniques for updating the policy decisions stored on web server 61. *E.g.*, *id.* ¶¶ 74, 76.

3. Rothman (Ex. 1007)

Rothman relates to “control[ling] and monitor[ing] a number of features associated with a mobile telephone,” and describes an exemplary embodiment where a company disables a mobile phone’s camera when the phone enters the company’s building. Ex. 1007, code (57), 2:18–38. In operation, a mobile phone receives a control command (*id.* at 2:52–57), and if the command alters a feature (e.g., by disabling a camera), then the feature is altered (*id.* at 3:18–30). *See also id.* at Fig. 1. Rothman specifically states that the mobile phone may be a “policy management capable mobile phone, which allows the modification of [sic—or] alteration of certain features” (*id.* at 4:32–35), and the phone may include feature controller 430 capable of altering the behavior of the phone’s features (*id.* at 6:27–29, 3:57–61).

4. *Putzolu and Bhat are Analogous Art*

Patent Owner contends that Putzolu and Bhat cannot be considered in the obviousness analysis because neither is analogous art to the '559 patent. PO Resp. 55–59. Petitioner disagrees. Pet. 43–44, 62; Pet. Reply 6–11. Having reviewed the parties' arguments and the evidence of record, we conclude that both Putzolu and Bhat are analogous art.

“Two separate tests define the scope of analogous prior art:

(1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.” *Donner Tech., LLC v. Pro Stage Gear, LLC*, 979 F.3d 1353, 1359 (Fed. Cir. 2020) (quoting *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004)). The field of endeavor is determined “by reference to explanations of the invention's subject matter in the patent application, including the embodiments, function, and structure of the claimed invention.” *Bigio*, 381 F.3d at 1325. In order to determine whether a reference is reasonably pertinent, “[t]he problems to which the claimed invention and reference at issue relate must be identified and compared from the perspective of a person having ordinary skill in the art.” *Donner*, 979 F.3d at 1360.

We find that Putzolu and Bhat are both from the same field of endeavor as the '559 patent. According to Petitioner, “the appropriate field of endeavor is directed towards the management of devices in general,” and both Putzolu and Bhat fall within this field. Pet. Reply 8–9; *see also* Pet. 43 (citing Ex. 1001, 1:47–50; Ex. 1005, 1:6–8), 62 (citing Ex. 1001, 1:47–50; Ex. 1006 ¶¶ 9–10). In addition, Petitioner contends that Putzolu and Bhat

qualify as analogous art under Patent Owner’s “narrow definition.” Pet. Reply 9–10 (citing PO Resp. 56 (arguing that “[t]he ’559 Patent is addressed to ‘the establishment and enforcement of policies or rules associated with the feature or functions that may be performed with the device, such as making and receiving calls, exchanging data, playing games and music, sending and receiving email, accessing web sites, and paying for goods and services’” (quoting Ex. 1001, code (57))). We agree.

The Specification of the ’559 patent states that it “is directed to the real-time management of a device, and more particularly to the establishment and enforcement of policies or rules associated with the feature or functions that may be performed with the device,” such as “exchanging data.” Ex. 1001, 1:47–52; *see also id.* at code (54), 4:11–12 (“The present invention is directed to the real-time management of a device in general”). It provides an example embodiment that uses a policy enforcement point (PEP 28) to enforce those policies and a policy decision point (PDP 29) to maintain a list of policies applicable to a device (mobile station 10) and to make a policy decision. *Id.* at Fig. 2, 8:19–9:46. Putzolu is similarly directed to establishing and enforcing policies that dictate when devices can perform a function (specifically, accessing network resources), and its exemplary system also includes a policy client (a type of PEP), which enforces policies, and a policy server (a type of PDP), which maintains policies and makes policy decisions. *E.g.*, Ex. 1005, 1:6–43, 2:28–39, 3:18–27. Bhat also implements policies that determine when devices can perform a function (specifically, accessing resources), and its exemplary system includes a web server (acting as a PEP), which enforces policies, and a

policy engine (acting as a PDP), which maintains policies and makes policy decisions. *E.g.*, Ex. 1006 ¶¶ 4–5, 49, 51.

Patent Owner’s contrary arguments (*see* PO Resp. 56–59) are unavailing. Patent Owner does not clearly define the field of endeavor for the ’559 patent, but to the extent Patent Owner argues that it is controlling user devices to regulate payment for goods and services (*id.* at 56–57 (citing Ex. 1001, 1:51–58, 3:54–59; 4:38–44; 12:48–52; Ex. 2015 ¶ 52)), we disagree. The Specification notes that the payment for goods and services is a reason *why* it establishes and enforces policies for devices (*e.g.*, Ex. 1001, 1:58–62), but the field of endeavor is not limited by the particular problem solved by the patent. Moreover, we disagree with Patent Owner’s argument that Putzolu simply manages a network and is not concerned with the control of the devices using that network. *See* PO Resp. 57–58 (citing Ex. 1005, code (57), 1:6–9, 1:12–18, 2:29–34, 6:29–34; Ex. 2015 ¶¶ 51–53). Putzolu establishes and enforces policies for devices. *E.g.*, Ex. 1005, 4:8–18, 4:49–54. Although Putzolu does so because it wants to manage access to the resources residing on its network (*e.g.*, Ex. 1005, 1:11–2:6), its field of endeavor is also not limited to its particular problem or purpose. Patent Owner’s argument regarding Bhat (*see* PO Resp. 58–59 (citing Ex. 1006 ¶ 4; Ex. 2015 ¶¶ 78–79)) is also unavailing because it suffers from the same error as Patent Owner’s arguments regarding Putzolu and is also insufficiently explained.

We have considered Mr. Sharma’s testimony, but assign it little weight on these issues. *See* Ex. 2015 ¶¶ 51–55. Mr. Sharma appears to assume that the field of endeavor for the ’559 patent is limited to policies implemented by a “non-network, user device[]” (*id.* ¶¶ 51–52; *see also id.*

¶ 79), but Mr. Sharma does not provide support for this assumption. Also, Mr. Sharma testifies that the terms “PEP” and “PDP” are “generic computing terms” (like the term “server”) that are “applicable to computing applications” generally (*id.* ¶ 54), but this testimony lacks credibility. Unlike the term “server,” the terms “PEP” and “PDP” are not generic terms used throughout the electrical and computing arts. As a result, the fact that all three references describe PEPs and PDPs further supports our finding that they are within the same field of endeavor.

In sum, having considered the parties’ arguments and evidence, we find that Putzolu and Bhat are both from the same field of endeavor as the ’559 patent. Thus, Putzolu and Bhat are both analogous art.

E. Obviousness Ground Based on Putzolu Alone

Petitioner contends that the subject matter of independent claims 1 and 27 and dependent claims 2, 5–12, 28, and 29 would have been obvious over Putzolu. Pet. 21–44.

Patent Owner contends that Putzolu fails to teach or suggest the claimed “computing device” (PO Resp. 40–41), sending “a request to communicate,” as required by element 1a (*id.* at 35–40), and enabling and disabling a requested communication “without accessing the one or more policies by the computing device,” as required by element 1c (*id.* at 32–35). Patent Owner also separately addresses dependent claim 2. *Id.* at 41–42.

1. Independent Claim 1

[1pre] A non-transitory computer readable storage medium comprising instructions that, when executed on a computing device configured to perform a function on a communication

network managed by a service provider, cause the computing device to at least: . . .

Petitioner contends that, to the extent the preamble is limiting, Putzolu discloses it. Pet. 21–24. Petitioner submits that Putzolu discloses a policy-based network management (PBNM) system, such as control domain 10, that includes policy server 18 and policy clients 22. *Id.* at 21–22 (citing Ex. 1005, 2:29–34, 2:53–59, 3:1–2, 3:18–19, 3:29–31). Petitioner asserts that Putzolu’s policy client 22 is a policy enforcement point that receives a request for access to a controlled resource, sends a query to policy server 18, and enforces the decision of policy server 18. *Id.* at 22–23 (citing Ex. 1005, 3:18–21, 3:26–28, 3:31–39). Petitioner contends that policy client 22 resides on a computing device. *Id.* at 22–23 (citing Ex. 1003 ¶¶ 79–80); *see also* Ex. 1005, 3:29–31 (*quoted in* Pet. 22). Petitioner further contends that an ordinary artisan would have understood that the computing device includes instructions stored in a computer readable medium and that a service provider manages the network. *Id.* at 23–24 (citing Ex. 1003 ¶¶ 83–85; Ex. 1005, 2:28–50).

Patent Owner disagrees, arguing that Putzolu’s policy client 22 does not teach the claimed “computing device” because Putzolu does not disclose that policy client 22 is a user device. PO Resp. 40–41 (citing *id.* at 12–21 (advocating a particular construction of “computing device”)).

Having considered the parties’ arguments and evidence, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that Putzolu teaches the preamble of claim 1.¹⁰ In particular, we agree with

¹⁰ We need not decide whether the preamble is limiting because Petitioner has shown that Putzolu teaches it. *See Vivid Techs.*, 200 F.3d at 803.

Petitioner that Putzolu’s policy client 22 is a “computing device” as claimed. *See, e.g.*, Ex. 1005, 3:18–41. Patent Owner’s contrary arguments (*see* PO Resp. 40–41) are unavailing because they are premised on its erroneous claim construction. *Supra* § II.C.1 (addressing construction of this term). In addition, we find that a person of ordinary skill in the art would have understood Putzolu’s policy client 22 to be implemented on a device that includes a non-transitory computer readable storage medium comprising instructions that, when executed, perform the operations attributed to Putzolu’s policy client. *See* Ex. 1003 ¶¶ 83–84, 86.¹¹ We also find that an ordinary artisan would have understood Putzolu’s network to be managed by a service provider. *See, e.g.*, Ex. 1005, 2:48–50; Ex. 1003 ¶ 85.

[1a] send to a server a request to communicate with a remote computing device over the communication network

Petitioner contends that Putzolu discloses element 1a. Pet. 24–25. Petitioner quotes from Putzolu, which states that policy client 22 receives “a request for use of a network resource” (e.g., a database server, host, switch, router, or firewall) and “simply sends a query to policy server 18 using an appropriate protocol.” *Id.* (quoting Ex. 1005, 3:21–22, 3:34–38; citing *id.* at 1:13–15). Petitioner contends that an ordinary artisan would understand “that access to ‘network resources’ would include a request to communicate with a remote computing device located on the communication network,”

¹¹ Patent Owner argues that we should give little to no weight to Dr. Madisetti’s declaration. PO Resp. 50–55. We have considered these arguments, and we have credited (and relied upon) only the portions of the declaration that we determine are entitled to weight.

such as a query to communicate with a database server. *Id.* at 25 (citing Ex. 1005, 3:34–38, 4:34–41, 6:2–12; Ex. 1003 ¶¶ 90–91).

Patent Owner contends that the query from policy client 22 to policy server 18 is not “a request to communicate,” as the claim requires. PO Resp. 35–40. Patent Owner argues that the query instead reserves bandwidth in network communication devices. *Id.* at 35–36 (citing Ex. 1005, 5:48–49, 6:1–2). In support, Patent Owner points to Putzolu’s description of Request Queries, which identify “the bandwidth requirements and the requesting user’s identity,” but not the destination address. *Id.* at 36–37 (quoting Ex. 1005, 6:3–4; citing *id.* at 5:43–46, 5:57–6:26; Ex. 2015 ¶¶ 58, 60). Patent Owner further argues that “policy client 22 sends its Request Query in response to ‘a request for access to a resource under its control,’ not in response to requests for communication with remote devices.” *Id.* at 37–38 (quoting Ex. 1005, 3:34–38; citing *id.* at 4:31–41, 5:48–49, 6:34–40, 7:62–67, 8:20–22; Ex. 2015 ¶ 64). According to Patent Owner, “Putzolu teaches a system that reserves network bandwidth before ‘request[s] to communicate with a remote computing device over the communication network’ are issued, which pre-populates network equipment with policies before they are needed.” *Id.* at 38–39 (alteration in original) (citing Ex. 1005, 6:6–8, 8:4–6). As for the Petition’s assertion that Putzolu describes a query for a requested communication with a database server, Patent Owner asserts that Petitioner relies on Dr. Madisetti, who mirrors the Petition’s statements and “ignores that the communication protocol disclosed involves ‘request[s for] reservation of bandwidth for a

data stream.’” *Id.* at 39–40 (emphasis omitted; alteration Patent Owner’s) (quoting Ex. 1005, 4:31–41; citing Pet. 25).¹²

Petitioner responds that Putzolu’s disclosure is not limited to bandwidth reservation requests, as confirmed by Patent Owner’s expert, Mr. Sharma. Pet. Reply 14 (citing Ex. 1017, 97:2–6). According to Petitioner, Putzolu also describes requests for access to a corporate database and to join a multicast group, and an ordinary artisan would have understood these to be requests to communicate with a remote computing device (namely, the corporate database or the devices in the multicast group) via the communication network. *Id.* at 14–15 (citing Ex. 1005, 2:34–39, 2:48–50, 4:34–37, 6:42–47; Ex. 1016 ¶ 77). Also, Petitioner argues that Putzolu’s queries do identify the destination of the request, despite Patent Owner’s argument to the contrary, as confirmed by Mr. Sharma. *Id.* at 16 (citing Ex. 1005, 4:40–41; Ex. 1016 ¶¶ 80–81; Ex. 1017, 99:5–14).

In its Sur-reply, Patent Owner argues that Petitioner focuses on the requests *received* by policy client 22 (from elsewhere in the network) rather than the queries *sent* by policy client 22 (to policy server 18), despite the fact that Petitioner must show that the latter includes a request to communicate. PO Sur-reply 2–5. Patent Owner submits that, as a result, Petitioner fails to sufficiently prove its case. *Id.* at 6. Finally, as to whether the query identifies the destination of the requested communication, Patent Owner argues that Petitioner takes Mr. Sharma’s testimony out of context and that

¹² Patent Owner also asserts that Petitioner’s contention “distorts claim language too far from the understanding developed during the ’559 [p]atent’s prosecution history” (PO Resp. 39), but fails to sufficiently explain or substantiate this contention. *See also id.* at 21 & n.13 (declining to advocate construction of “request”).

Putzolu contradicts Petitioner's position. *Id.* at 5–7 (citing Ex. 1005, 6:2–4; Ex. 1017, 98:23–99:22).¹³

Having considered the parties' arguments and evidence, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that Putzolu teaches or suggests element 1a. In particular, Putzolu's policy client 22 sends a query to policy server 18 (*e.g.*, Ex. 1005, 3:34–38), and we are persuaded that Putzolu teaches (or at least suggests) that this query includes “a request to communicate with a remote computing device over the communication network” for the reasons explained below.

According to Putzolu, policy client 22 receives “a request for access to a resource under its control,” such as a corporate database. Ex. 1005, 3:34–35; *see id.* at 1:13–15, 4:32–34. Policy client 22 is responsible for determining “whether or not to admit such a request” based on the network's policies, but it “outsource[s] such decisions to policy server 18.” *Id.* at 3:21–26. As a result, when policy client 22 receives the request, “it simply sends a query to policy server 18,” which “determines whether to allow the access[] and communicates the decision to policy client 22.” *Id.* at 3:34–39.

To further illustrate its operation, Putzolu provides an example system that implements policies to restrict bandwidth usage on a corporate internet. Ex. 1005, 4:32–34. Putzolu explains that, if an application wants to access a corporate database in this system, a “request propagates from the application through the network towards the source of the desired data stream (*i.e.*, the database server) . . . [and] must be accepted by each intermediate device on

¹³ Patent Owner cited to Exhibit 1007, but we understand this to be a typographical error intended to reference Mr. Sharma's cross-examination testimony. We have corrected our citation accordingly.

this path.” *Id.* at 4:34–43. Before accepting the request, each of those devices “must . . . take into account any established policy restrictions,” which may “depend[] on factors such as requester identity, time of day, identity of the source or sink of the traffic.” *Id.* at 4:49–54. Each of those devices is a policy client 22, and Putzolu indicates that each “sends a query with relevant information to policy server 18” so that it can “determine whether to accept the request.” *Id.* at 4:55–65. *But see id.* at 6:20–21 (describing an embodiment where the server provides policy information to the client “to be forwarded to [the] next device in [the] path”).

Based on this disclosure, we find that Putzolu discloses a query (sent from policy client 22 to policy server 18) that includes a request for the application to communicate with the corporate database over the corporate internet. In particular, policy client 22 receives the request to communicate from the application and must decide whether to accept that request (Ex. 1005, 4:34–54), but policy client 22 outsources the policy decision to policy server 18 (*id.* at 3:24–28). To that end, policy client 22 sends a query “with relevant information” to policy server 18 (*id.* at 4:55–57), and an ordinary artisan would have understood this “relevant information” to include the information necessary for policy server 18 to determine whether the request complies with existing policies. Putzolu states that the policies can include restrictions on the “requester identity” and the “identity of the source or sink of the traffic” (Ex. 1005, 4:49–57), and if so, policy server 18 would need an identification of the communication requested (e.g., the requester and the destination). Further, in the alternative, we find that these passages of Putzolu at least suggest identifying the requested communication in the query.

We disagree with Patent Owner’s contention that Putzolu’s query identifies the source of a requested communication (e.g., the application making the request) but not its destination (e.g., the corporate database). *See* PO Resp. 37; PO Sur-reply 5–7. As we just explained, Putzolu indicates that its query includes both (*see* Ex. 1005, 4:32–65), as both experts agree (*see also* Ex. 1016 ¶¶ 80–81 (testifying that an ordinary artisan would understand Putzolu to consider both the source and destination of the communication); Ex. 1017, 98:23–99:22 (testifying that “the request identifies the database server that the communication is desired with” and indicating that Putzolu’s “policy server receives that request”)). Although Putzolu also states that the query from policy client 22 “includes objects that describe the bandwidth requirements and the requesting user’s identity” (Ex. 1005, 6:2–4 (*quoted in* PO Sur-reply 6–7)), this does not indicate that Putzolu’s queries are limited to this information.

As for Patent Owner’s argument that Petitioner conflates the requests *received* by policy client 22 with the queries *sent* by it (*see* PO Sur-reply 2–5), we agree that Petitioner must show that the latter satisfies element 1a (and that some of Petitioner’s arguments discuss the former), but we do not agree that Petitioner fails to prove its case as a result. The Petition clearly contends that the queries sent from policy client 22 to policy server 18 satisfy element 1a (*see* Pet. 24–25), and as explained above, we are persuaded that those queries include the claimed request to communicate. In addition, we are persuaded that Petitioner’s discussion of the requests received by policy client 22 is appropriate given Putzolu’s disclosure. In particular, Putzolu teaches that the queries sent by policy client 22 are dictated by (and a direct result of) the requests received by it. *E.g.*,

Ex. 1005, 3:34–38 (“[W]hen policy client 22 receives a request for access to a resource under its control, it simply sends a query to policy server 18”); Ex. 1016 ¶ 76 (“An ordinary artisan would have understood that when Putzolu’s policy client receives the request from the endpoint device, policy client 22 itself then sends the request query to policy server 18.”). Although Petitioner could have been more clear and precise, we determine that its explanation adequately conveys its contentions and the support for them.

Patent Owner’s remaining arguments are also unavailing. Patent Owner attempts to distinguish Putzolu’s query as a request for bandwidth rather than a request to communicate (*see* PO Resp. 36–38), but there are two independent flaws with this argument. First, Putzolu requests bandwidth and permission for a requested communication (*see* Ex. 1005, 5:67–6:4), and Patent Owner fails to sufficiently explain its argument that including a bandwidth request somehow distinguishes the claims. *Cf.* Ex. 2015 ¶¶ 58–59 (Mr. Sharma testifying that the query “solicits a response regarding *network access* and bandwidth usage” (emphasis added)). Second, Putzolu is not limited to requests for bandwidth, as confirmed by Patent Owner’s expert. Ex. 1017, 97:2–6; *see* Ex. 1005, 3:37–38 (noting that later discussion provides an example), 4:32–34 (stating that the example illustrates operation); *see also* Pet. Reply 14–15. Similarly, we have considered Putzolu’s Request Query (*see* Ex. 1005, 5:57–6:17 (*cited in* PO Resp. 36–37)), but this is an exemplary protocol that does not diminish Putzolu’s other teachings. As a result, it does not affect our findings on this claim element.

Next, Patent Owner attempts to distinguish Putzolu's "request for access to a resource" from the claim's "request for communication with a remote device" (*see* PO Resp. 37–40 (quoting Ex. 1005, 3:34–38)), but the former teaches the latter: a request to access a resource is a request to communicate with the device associated with the resource. *See, e.g.*, Ex. 1016 ¶ 77. Patent Owner relies on Putzolu's discussion of triggering conditions and contends that Putzolu's system reserves bandwidth *before* requests to communicate are issued (*see* PO Resp. 38–39 (citing Ex. 1005, 6:6–8, 7:62–67, 8:4–6, 8:20–22)), but the cited discussion does not undermine the disclosure of Putzolu that we discuss above. In particular, this portion of Putzolu describes "a policy rule directed to ensuring that a particular user (i.e., John Doe) *is always able to access* an inventory database resident on an SAP server." Ex. 1005, 7:55–60 (emphasis added); *see also id.* at 8:3–7 (explaining that, with such a policy, other users' reservations will be preempted if necessary). Even if Putzolu "pre-populates network equipment" with *this particular kind of* policy, as Patent Owner contends, this does not undermine Putzolu's other disclosure of a query sent to request a communication. *See, e.g.*, Ex. 1005, 4:34–65.

[1b] receive in real-time from the server a response indicative of a decision granting or denying the request, the decision being based on one or more policies that are stored at the server and based at least in part on input from an administrator

Petitioner contends that Putzolu teaches element 1b. Pet. 25–28. Petitioner argues that Putzolu's policy server 18 receives the query from policy client 22, determines whether to accept the request (based on information stored in policy database 20), and communicates the decision to

policy client 22 in real-time. *Id.* at 26–27 (citing Ex. 1005, 3:7–9, 3:34–39, 4:57–61, 5:16–22, 9:14–20). According to Petitioner, an ordinary artisan would have recognized that “Putzolu disclosed that the policy server can either send a response indicative of the decision, or the decision itself, to the policy client,” and these two alternatives were simply design choices for which the artisan would have had a reasonable expectation of success. *Id.* at 27–28 (citing Ex. 1005, 3:26–27, 3:38–40; Ex. 1003 ¶¶ 98–100). Petitioner also asserts that the policy information stored at Putzolu’s policy database is configured based on input from an administrator. *Id.* at 28 (citing Ex. 1005, 2:59–61, 3:12–15).

Other than the arguments addressed above, Patent Owner does not dispute these contentions. *See* PO Resp. 40 n.15.

We are persuaded that Petitioner has shown, by a preponderance of the evidence, that Putzolu teaches element 1b. After receiving a query from policy client 22, “[p]olicy server 18 uses information stored in policy database 20 . . . to determine whether to accept the request, and then sends a response to policy client 22.” Ex. 1005, 4:57–61; *see also id.* at 3:34–38. Policy database 20 is stored on policy server 18 and “contain[s] policy specification information for established policies.” *Id.* at 3:7–9; *see also id.* at Fig. 1. Putzolu also teaches that the policies in policy database 20 are based on an administrator’s input. *See id.* at 2:59–61, 3:12–15.

[1c] enforce the response by enabling the requested communication with the remote computing device over the communication network when the decision grants the request and by disabling the requested communication when the response denies the request, the requested communication

being enabled or disabled without accessing the one or more policies by the computing device

Petitioner contends that Putzolu renders element 1c obvious. Pet. 29–32. Petitioner submits that, after receiving the response indicative of a decision (or the decision itself) from policy server 18, policy client 22 enforces the decision. *Id.* at 29 (citing Ex. 1005, 3:26–28, 4:57–62); *see also id.* at 32 (arguing in the alternative that it would have been obvious to enforce the decision or a response indicative of it). According to Petitioner, Putzolu discloses that this enforcement includes enabling or disabling the requested communication. *Id.* at 30 (citing Ex. 1005, 1:13–15, 4:35–37, 4:61–62, 5:16–22, 10:54–67, 11:10–13). Petitioner further contends that an ordinary artisan “would recognize that the policies for enabling or disabling requested communications are not accessed by, or stored on, the policy client when the requested communication is enabled or disabled.” *Id.* at 30–32 (citing Ex. 1003 ¶¶ 107–111; Ex. 1005, 3:24–28, 3:31–34, 4:55–65, Fig. 1).

Patent Owner contends that Putzolu does not teach enabling or disabling the requested communication “without accessing the one or more policies by the computing device,” as required by the claim. PO Resp. 32–35. According to Patent Owner, “Putzolu expressly discloses that policy servers 18 send policies to policy clients 22 in their request responses,” as shown by Putzolu’s Request Responses, which “provide policy objects to policy clients 22.” *Id.* at 33 (citing Ex. 1005, 5:57–6:26; Ex. 2015 ¶¶ 62–65). Patent Owner submits that Putzolu’s policy objects are important to its disclosure because they obviate the need for certain queries and because they are “included when the reservation request is forwarded along the path to the

sender.” *Id.* at 34 (quoting Ex. 1005, 6:4–8; citing *id.* at 3:40–41, 8:61–65; Ex. 2015 ¶¶ 55, 62–64).

In its Reply, Petitioner argues that Patent Owner’s argument is contradicted by Putzolu’s disclosure and its own expert’s testimony on cross examination. Pet. Reply 18 (citing Ex. 1005, 3:24–28; Ex. 1016 ¶¶ 57–66; Ex. 1017, 102:2–16, 103:3–19). In its Sur-reply, Patent Owner argues that Putzolu “plainly establishes that policies are stored at policy clients 18 [sic] as policy objects” (PO Sur-reply 7–9 (citing Ex. 1005, 3:7–9, 3:18–20, 3:47–49, 6:4–8, 6:13–21, 8:12–14, 9:2–4, Fig. 1)), and Patent Owner contends that Mr. Sharma was “mistaken” and “corrected his testimony” on redirect (*id.* at 10 (citing Ex. 1017, 101:19–104:11, 151:12–17)). According to Patent Owner, “Mr. Sharma’s mistaken testimony should not be given undue weight given Putzolu’s robust disclosure showing that policy objects from the policy server 18 are received and installed . . . by the policy clients.” *Id.* at 10–11.

Having considered the parties’ arguments and evidence, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that Putzolu teaches element 1c. Putzolu’s policy client 22 enforces the response received from policy server 18 by enabling or disabling the requested communication. Ex. 1005, 3:26–28 (“Based on the response from policy server 18, policy client 22 enforces the decision by either allowing or disallowing the request.”); *see also, e.g., id.* at 4:57–62. We also find that Putzolu’s policy client 22 does so without accessing the policies stored in policy database 20. *See id.* at 3:24–28 (“[P]olicy client 22 is configured to outsource such decisions to policy server 18.”), 3:31–34 (“[P]olicy client 22

can be configured with a relatively-simple structure because it off-loads policy-interpretation tasks to policy server 18.”), Fig. 1.

Patent Owner does not disagree with these findings, but instead argues that element 1c is not satisfied because Putzolu’s policy server 18 sends a “policy object” with its decision. *See* PO Resp. 32–35; PO Sur-reply 7–11. This argument is unavailing. Putzolu describes an embodiment where policy client 22 receives and stores a “policy object” for use in making future policy decisions (Ex. 1005, 6:4–8, 6:18–21; *see also id.* at 4:38–41), but the policy object is not the same as the policy stored on policy server 18. As a result, even when policy client 22 assesses the policy object, it does not access “*the* one or more policies” stored at the server and upon which the server’s decision is based, as specified by element 1c. Ex. 1001, 16:11–13, 16:19–22 (emphasis added).

We find that the “policy object” is derived from (but different than) the policy. First, Putzolu states that “policy objects” are included in some responses from policy server 18 to policy client 22, but it does not indicate that this “policy object” is the policy itself. *See* Ex. 1005, 6:4–8, 6:20–21. Second, Putzolu seeks to “outsource” and “off-load” policy decisions to policy server 18 so that policy client 22 can have “a relatively-simple structure,” indicating that the policy object received by policy client 22 is a derivative of the policy rather than the policy itself. *Id.* at 3:24–28, 3:31–34; *see also, e.g., id.* at 2:40–48. Third, both parties’ experts testified that the “policy object” is not the same as the “policy,” and we credit their testimony on this point. *See* Ex. 1017, 102:9–103:19; Ex. 1016 ¶¶ 57–66. In fact, during cross examination, Patent Owner’s expert (Mr. Sharma) admitted this very point:

Q: And the – that policy is never transmitted by the policy server; right?

A: That’s correct.

Ex. 1017, 102:14–16.

Q: But that policy object isn’t the policy itself; is that correct?

A: That’s correct. And if you take other pieces that we just discussed where the decision is being sent to policy client.

Id. at 103:15–19.

We have considered the evidence cited by Patent Owner, but find it less persuasive. *See* PO Sur-reply 7–11.¹⁴ Although policy server 18 “applies an object-based representation and exchange of information,” this does not lead us to believe that the “policy object” is a *copy* of the policy, as Patent Owner concludes, rather simply an object with data *related* to it. Ex. 1001, 3:47–49; *see* PO Sur-reply 8–9. Also, in two instances, Putzolu states that a “policy” is installed on a router or PEP (*see* PO Sur-reply 9 (citing Ex. 1005, 8:12–14, 9:2–4)), but this description relates to a different embodiment of Putzolu. *See* Ex. 1005, 7:21–32 (describing embodiment “such that policies are synthesized, installed and removed in an automated fashion, essentially on an as-needed basis”); *see also id.* at 7:55–9:11. Even in this embodiment, the policy server does not transmit to the routers the same policy that is stored in its database; instead, the policy server generates policy information and installs it on appropriate devices. *See id.* at 7:55–

¹⁴ Although the Response shows that a policy object is sent to policy client 22, it does not substantiate its assumption that this is the same as the policy stored on the policy server 22. *See* PO Resp. 32–35. Mr. Sharma’s declaration also does not directly address this issue. *See* Ex. 2015 ¶¶ 61–65.

8:19. Finally, we do not agree with Patent Owner’s arguments that Mr. Sharma’s cross examination testimony was “mistaken and, likely, muddled.” PO Sur-reply 10–11. We have considered Mr. Sharma’s testimony in context (*see* Ex. 1017, 101:19–104:11), and we do not agree that “Mr. Sharma corrected his testimony” on redirect (*see id.* at 150:11–151:17). On redirect, Mr. Sharma first reiterated his earlier testimony (*id.* at 150:11–17), Patent Owner’s counsel next pointed him to his declaration (*id.* at 150:18–151:17), and Mr. Sharma then simply stated that “policies” are stored on the policy client (*id.* at 151:12–17). Mr. Sharma did not explain or reconcile this testimony with his earlier testimony or Putzolu’s disclosure. In addition, this testimony was elicited on redirect in response to leading questions (to which Petitioner objected), and as a result, we find it to be less credible than Mr. Sharma’s other testimony. Thus, we find that the portion of the deposition relied upon by Patent Owner (*id.* at 151:12–17) to be far less credible than Mr. Sharma’s cross examination testimony (*id.* at 102:14–16, 103:15–19).

Conclusion

For the reasons provided above, we are persuaded that each limitation of independent claim 1 is either taught or suggested by Putzolu. We are also persuaded that an ordinarily skilled artisan would have found it obvious, in view of Putzolu’s teachings, to arrive at the subject matter recited in claim 1. Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 1 would have been obvious over Putzolu.

2. *Independent Claim 27*

Independent claim 27 recites substantially similar subject matter to that recited in independent claim 1. *Compare* Ex. 1001, 16:2–22 (reciting a “non-transitory computer readable storage medium comprising instructions that . . . cause [a] computing device to” perform various steps), *with id.* at 18:38–53 (reciting a “method” with substantially similar steps). Petitioner relies on the same analysis for both claims 1 and 27 (*see* Pet. 21–32), and Patent Owner also argues these claims together (*see* PO Resp. 30–41).

For the reasons explained above in connection with claim 1, we are persuaded that Petitioner has shown, by a preponderance of the evidence that the subject matter of independent claim 27 would have been obvious over Putzolu. Patent Owner’s contrary arguments are not persuasive for the reasons we explained above. *Supra* § II.E.1.

3. *Dependent Claim 2*

Claim 2 depends from claim 1 and further recites that “the computing device is a mobile phone.” Ex. 1001, 16:23–24. Petitioner contends that Putzolu renders this claim obvious because it would have been obvious to install policy client 22 on a mobile phone. Pet. 32–33 (citing Ex. 1005, 3:29–34; Ex. 1003 ¶¶ 117–120); Pet. Reply 19. Patent Owner disagrees. PO Resp. 41 (citing Ex. 2015 ¶ 66); PO Sur-reply 11–15.

Having considered the parties’ arguments and the evidence of record, we are not persuaded that the subject matter of claim 2 would have been obvious over Putzolu.

First, we find that Putzolu does not disclose (expressly or inherently) installing policy client 22 on a mobile phone. Putzolu teaches that a policy

client “typically resides at a network device responsible for data forwarding, such as a LAN switch, a router, or a firewall.” Ex. 1005, 3:29–34.

According to Dr. Madisetti, this statement discloses a mobile phone because an ordinary artisan “would have understood that one type of ‘network device’ would be a mobile phone as a mobile phone can communicate with remote computing devices over a communication network.” Ex. 1003

¶¶ 116–117 (*cited in* Pet. 33). We do not agree with Dr. Madisetti’s reasoning, and so we assign his conclusion little weight. In particular, even if a mobile phone could be considered to be a “network device” in the abstract, Putzolu specifically refers to network devices “responsible for data forwarding, such as a LAN switch, a router, or a firewall.” Ex. 1005, 3:29–34. Mr. Sharma testifies, and we agree, that a mobile phone is not such a device. Ex. 2015 ¶ 66 (*cited in* PO Resp. 41–42). Petitioner also argues that policy client 22 “could be” installed on a mobile device (Pet. 32–33; Pet. Reply 19), but even if an ordinary artisan *could* have modified Putzolu in this manner, that does not show that Putzolu discloses the modification.

Next, we find that Putzolu does not suggest installing policy client 22 on a mobile phone. Petitioner does not appear to advance such a contention, but rather argues that the subject matter would have been obvious in light of Putzolu. *See* Pet. 32–33. To that end, Petitioner provides the following rationale for the proposed modification to Putzolu:

A [person of ordinary skill in the art] would have been motivated to manage certain features of a mobile phone using policies to limit the unauthorized use of the mobile phone by incorporating the policy client 22 onto the mobile phone. Indeed, the Background section of the ’559 patent admits that it was well-known at the time of the alleged invention to “establish some measure of parental or administrative control

over an account” for prepaid and postpaid mobile phones such as to limit the amount of data a child can download. A [person of ordinary skill in the art] would have understood that the policy-based network management system of Putzolu could be applied to achieve such parental or administrative control over a mobile phone.

Id. at 33 (citing Ex. 1003 ¶¶ 119–120; Ex. 1001, 3:47–59). Petitioner also asserts that “[n]othing in Putzolu suggests that implementing the policy management systems and methods it describes by housing the policy client on a mobile phone would have been more difficult than on another type of network device.” *Id.* (citing Ex. 1003 ¶ 118).

We are not persuaded by Petitioner’s rationale. In particular, even if we assume that it was “known to establish some measure of parental or administrative control over an account” for a mobile phone used by a child or employee, and that such control was needed, as Petitioner argues (Ex. 1001, 3:47–59; *see* Pet. 33), we are not persuaded this would have motivated an ordinary artisan to modify Putzolu.

Putzolu is directed to a different problem. Its policy clients manage shared resources, rather than devices dedicated to a particular user (*see, e.g.*, Ex. 1005, 1:11–32), and policy clients 22 are each responsible for controlling access to some of those resources (*e.g., id.* at 3:18–23, 3:34–38). Putzolu includes no reference to installing a policy client on an end-user device (such as a mobile phone), and it is unclear how (or why) an ordinary artisan would have done so. In particular, we discern no reason why a mobile phone would be shared or would have a need to manage similar requests for access.

Moreover, the rationale articulated by Petitioner, which refers to controlling a mobile phone *account*, has no apparent relationship to

Putzolu’s disclosure, and neither Petitioner nor its expert persuasively connect these dots. *See* Pet. 33; Ex. 1003 ¶¶ 117–120. Rather, the articulated rationale appears to identify a problem and simply contend that an ordinary artisan “could” have solved it by modifying Putzolu. *See id.* But the fact that an ordinary artisan *could* have performed the proposed modification does not show the requisite motivation to do so. *See Polaris Indus., Inc. v. ArcticCat, Inc.*, 882 F.3d 1056, 1068 (Fed. Cir. 2018) (faulting the Board for “focus[ing] on what a skilled artisan would have been able to do, rather than what a skilled artisan would have been motivated to do at the time of the invention”); *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367–68 (Fed. Cir. 2016) (“It was [Petitioner’s] burden to demonstrate both that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” (internal quotation marks omitted)); *see also KSR*, 550 U.S. at 421 (“A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning.”).

Accordingly, we are not persuaded that a person of ordinary skill in the art would have modified Putzolu as proposed. As a result, we determine that Petitioner has not shown, by a preponderance of the evidence, that the subject matter of claim 2 would have been obvious.

4. *Dependent Claims 5–12, 28, and 29*

Claims 5–12 depend from independent claim 1 (Ex. 1001, 16:47–17:14), and claims 28 and 29 depend from independent claim 27 (*id.* at

18:54–65). Petitioner contends that these claims are rendered obvious by Putzolu because Putzolu teaches and/or suggests each claim’s additionally-recited limitations. Pet. 34–43. Patent Owner does not dispute these contentions. *See* PO Resp. Having considered the record, we are persuaded that Petitioner has shown that each limitation of claims 5–12, 28, and 29 is taught or suggested by Putzolu.

As for claim 5, we are persuaded by Petitioner’s undisputed arguments that Putzolu teaches that the communication accesses content from a database server. *See* Pet. 34 (citing Ex. 1005, 1:13–15, 4:34–41; Ex. 1003 ¶ 123).

As for claim 6, we are persuaded by Petitioner’s undisputed arguments that Putzolu describes a time-based policy. *See* Pet. 35–36 (citing Ex. 1005, 4:49–54, 6:40–46; Ex. 1003 ¶ 126).

As for claims 7, 8, and 9, we are persuaded by Petitioner’s undisputed arguments that Putzolu’s policy client is one of many policy clients associated with the same plan and corporate entity, each policy client is associated with one or more policies, and these policies are accessible and customizable by the administrator via a website. *See* Pet. 35–38 (citing Ex. 1005, 2:59–61, 2:65–67, 3:18–19, 3:42–45, 4:32–34, 6:8–12; Ex. 1003 ¶¶ 129–131, 134, 137).

As for claim 10, we are persuaded by Petitioner’s undisputed arguments that Putzolu teaches (or at least suggests) policies that block requests based on the source and destination of the requested communication. *See* Pet. 38–39 (citing Ex. 1005, 4:49–54, 6:40–46; Ex. 1003 ¶¶ 140–142).

As for claim 11, we are persuaded by Petitioner's undisputed arguments that Putzolu's policies control content sent and received by the computing device. *See* Pet. 40–41 (citing Ex. 1005, 2:34–39, 4:49–54, 6:42–46; Ex. 1003 ¶¶ 145–146).

As for claim 12, we are persuaded by Petitioner's undisputed arguments that Putzolu teaches (or at least suggests) notifying the computing device when the server's response denies the request. *See* Pet. 41–42 (citing Ex. 1005, 4:55–65; Ex. 1003 ¶¶ 149–150).

As for claims 28 and 29, we are persuaded by Petitioner's undisputed arguments that Putzolu teaches that the decision indicates a relative priority that may degrade the request and affect the amount of bandwidth available. Pet. 42–43 (citing Ex. 1005, 5:16–40; Ex. 1003 ¶¶ 153, 156).

Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claims 5–12, 28, and 29 would have been obvious over Putzolu.

F. Obviousness Ground Based on Putzolu and Rothman

1. Claim 2

Petitioner contends that the subject matter of claim 2 would have been obvious over Putzolu and Rothman. Pet. 44–45, 47–49; Pet. Reply 20–22. Patent Owner argues that Petitioner fails to show that a person of ordinary skill in the art would have been motivated to combine Putzolu and Rothman. PO Resp. 43–44; PO Sur-reply 11–15.

Having considered the parties' arguments and the evidence of record, we are not persuaded that the subject matter of claim 2 would have been obvious over Putzolu and Rothman. Claim 2 requires that the computing

device recited in independent claim 1 be “a mobile phone.” Ex. 1001, 16:23–24. As explained above, we find that Putzolu does not teach, suggest, or alone render obvious this subject matter. *See supra* § II.E.3 (addressing claim 2 in Putzolu-only ground). Although we agree with Petitioner that Rothman discloses a mobile phone (*see* Pet. 44–45), we are not persuaded by Petitioner’s rationales for combining Putzolu with Rothman’s mobile phone (*see* Pet. 47–49).

Petitioner provides the following rationale to combine Putzolu and Rothman:

Putzolu motivated [persons of ordinary skill in the art] to apply a client-server distributed architecture for policy-based access management in order to reduce the workflow and complexity of network management for administrators and reduce memory requirements on individual devices. Rothman further encourages the receipt of authorization commands (e.g., decisions) from a remote device where an administrator wishes to limit mobile device access based on the device’s functionality and the user’s level of authorization.

Pet. 48–49 (citing Ex. 1003 ¶ 173). These arguments are also not persuasive. Petitioner asserts that Putzolu has one benefit and Rothman has another, but fails to persuasively show that either of these alleged benefits relate to the proposed combination. In other words, even if we agreed with Petitioner’s assessment of the references, we would not be persuaded that this motivates their combination.

Moreover, having reviewed these references, we find that they neither suggest the proposed combination nor lend themselves to it. Putzolu’s policy clients 22 control access to certain shared network resources, such as database servers, routers, and firewalls. *E.g.*, Ex. 1005, 1:11–32, 3:18–23, 3:34–38. Each policy client 22 receives a request for access, sends a query

to policy server 18, and enforces the decision returned by policy server 18. *E.g., id.* at 3:18–41. Rothman also relates to policies and limiting what a device can do, but that it does so in a fundamentally different way. In particular, Rothman’s control software on a mobile phone (feature controller 430) waits to receive a control command from a different entity and then limits the phone’s features in response. *E.g., Ex. 1007, 2:18–25, 2:52–59, 6:57–61, Fig. 1.* As a result, adding Putzolu’s policy client 22 to Rothman’s mobile phone would not serve the objectives of, or solve problems identified by, either reference.

In addition, Petitioner contends that an ordinary artisan would have been motivated to move Putzolu’s policy client to a mobile phone in order to control a mobile phone account (Pet. 47–48), but for the same reasons as we explained above, we are not persuaded by this rationale. *See supra* § II.E.3. Petitioner also contends that an ordinary artisan “would have understood that implementing the policy-based management system of Putzolu to govern a mobile phone would have been no more than the combination of prior art devices . . . according to known methods . . . to yield a predictable result” (Pet. 47–48 (citing Ex. 1003 ¶ 171)), but this generalized assertion is not persuasive on these facts. Petitioner further argues that both Putzolu and Rothman “relate to similar technology, policy-based management of computing devices” and are in the same field of endeavor. *Id.* at 47; *see also id.* at 44. Although we agree that the references are in the same field of endeavor, we are not persuaded that this would have motivated an ordinary artisan to combine them. Petitioner next contends that an ordinary artisan “could” have made the proposed combination and would have reasonably expected success (*id.* at 48), but this does not explain *why* an ordinary artisan

would have done so. *See Polaris*, 882 F.3d at 1068; *Intelligent Bio-Sys.*, 821 F.3d at 1367–68.

Accordingly, we are not persuaded that a person of ordinary skill in the art would have combined Putzolu and Rothman to yield the subject matter recited by claim 2. As a result, we determine that Petitioner has not shown, by a preponderance of the evidence, that claim 2 would have been obvious.

2. *Claims 7 and 8*

Petitioner contends that the subject matter of claims 7 and 8 would have been obvious over Putzolu and Rothman. Pet. 46–49. We have already found claims 7 and 8 to be unpatentable (*see supra* § II.E.4), so we need not (and do not) address whether Petitioner has shown these claims to be unpatentable based on this ground. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner “is entitled to a final written decision addressing all of the claims it has challenged”); *Boston Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App’x 984, 990 (Fed. Cir. 2020) (non-precedential) (recognizing that the “Board need not address issues that are not necessary to the resolution of the proceeding” and, thus, agreeing that the Board has “discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

G. *Obviousness Ground Based on Bhat Alone*

Petitioner contends that the subject matter of independent claim 13 and dependent claims 14, 15, and 18–21 would have been obvious over Bhat. Pet. 49–62. Patent Owner argues that Bhat fails to teach or suggest certain limitations of independent claim 13. PO Resp. 44–50.

1. Independent Claim 13

[13pre] A computing device configured to execute a function using a communication network managed by a service provider, the computing device comprising a memory bearing instructions that, when executed on the computing device, cause the computing device to at least: . . .

Petitioner contends that, to the extent the preamble is limiting, Bhat renders it obvious. Pet. 49–51. Petitioner asserts that Bhat’s web server 61 teaches the recited “computing device.” *Id.* According to Petitioner, web server 61 is a policy enforcement point on a communication network and includes a memory with executable instructions (i.e., server-specific instructions module 66). *Id.* at 49–50 (citing Ex. 1006 ¶¶ 49–50, Fig. 3; Ex. 1003 ¶¶ 175–177). Petitioner further contends that Bhat discloses that the communication network can be managed by a service provider. *Id.* at 50–51 (citing Ex. 1006 ¶ 30).

Patent Owner does not dispute these contentions, other than to argue that Bhat’s web server 61 does not qualify as a “computing device,” and that Bhat does not disclose enforcement at an end user device. PO Resp. 49 (referencing similar argument presented for claim 1 in the Putzolu ground).

Having considered the parties’ arguments and evidence, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that Bhat teaches (or at least suggests) the preamble of claim 13.¹⁵ We agree with Petitioner that Bhat’s web server 61 teaches the claimed “computing device.” *See, e.g.*, Ex. 1006 ¶ 49. Patent Owner’s contrary argument (*see* PO Resp. 49) is unavailing because it is premised on its erroneous claim

¹⁵ We need not decide whether the preamble is limiting because Bhat teaches or suggests it. *See Vivid Techs.*, 200 F.3d at 803.

construction. *Supra* § II.C.1 (addressing construction of this term). In addition, Bhat teaches that web server 61 is configured to execute a function using a communication network and includes a memory with executable instructions. Ex. 1006 ¶¶ 49–50, Fig. 3. Bhat also teaches (or at least suggests) that the network is managed by a service provider. *Id.* ¶ 30.

[13a] process a request to run a function on the computing device, the function comprising enabling a current communication with a remote computing device over the communication network

Petitioner contends that Bhat renders element 13a obvious. Pet. 51–52. According to Petitioner, Bhat’s web server 61 receives a request to access a resource over the communication network (from remote device 50) and enforces the appropriate policies (by, for example, allowing remote device 50 to access the resource), and an ordinary artisan “would appreciate that providing access to a resource would include enabling a current communication with the remote computing device over the communication network.” *Id.* (citing Ex. 1006 ¶¶ 26, 41, 49, 55, 57; Ex. 1003 ¶¶ 181–182).

Patent Owner argues that Bhat fails to teach or suggest element 13a. PO Resp. 46–47. According to Patent Owner, Petitioner maps the claimed “remote computing device” to Bhat’s user device 50 (*id.* at 44–46 (citing Pet. 49, 52)), but the *only* communication between web server 61 and user device 50 “is the one in which ‘the Web server [61] receives requests from the remote device [50] to access resources over the communication network’” (*id.* at 46 (citing Ex. 2015 ¶ 84; Pet. 51). *See also id.* at 47 (arguing that “[n]o communications back to the remote (user) device 50 by web server 61 [are] disclosed”) (citing Ex. 2015 ¶ 82). Relatedly, Patent

Owner argues that the decision identified by Petitioner for element 13b does not correspond to “whether the function is permitted to run” on web server 61, as would be required (*id.* at 48), and that Bhat fails to teach or suggest element 13e because “policies and updates are not applied to enable or disable communications between web server 61 [and] remote (user) device 50” (*id.* at 44–45, 47).¹⁶

Petitioner replies that Patent Owner’s argument “relies on an overly narrow interpretation of Petitioner’s argument.” Pet. Reply 22. Petitioner contends that “an ordinary artisan would have understood that accessing the ‘resource’ would constitute a communication with a ‘remote computing device.’” *Id.* at 22–23 (citing Ex. 1016 ¶¶ 126–127; Ex. 1006 ¶¶ 37, 50, 55, 99, Fig. 3; Ex. 1017, 47:7–12, 48:1–4). Petitioner further contends that an ordinary artisan would have understood Bhat to disclose that web server 61 also “processes a request to run a function,” as claimed, where “[t]he ‘function’ is the directing of the communication from Web server 61 to the resource if permitted,” which constitutes enabling the communication, as required. *Id.* at 23–25 (citing Ex. 1006 ¶¶ 55, 61; Ex. 1016 ¶¶ 132, 135; Ex. 1017, 129:12–21).

In its Sur-reply, Patent Owner contends that Petitioner’s Reply presents a new theory, which is untimely and improper. PO Sur-reply 15–18 (citing Pet. 51–52; Inst. Dec. 33). In particular, according to Patent Owner, Petitioner adds a contention that Bhat’s resource teaches the “remote

¹⁶ We address elements 13b and 13e in more detail below, but given the presentation and content of Patent Owner’s arguments regarding these elements, we have considered those arguments (and Petitioner’s responses to them) in the context of element 13a as well.

computing device,” but the resource “is part of Web server 61” and “is distinct from the user device . . . identified in the Petition’s original [unpatentability] theory.” *Id.* at 16–17 (citing Ex. 1006, Fig. 4). Also, Patent Owner contends that Petitioner “fails to provide particularized reasoning showing how this new [unpatentability] theory teaches all elements . . . recited in claim 13.” *Id.* at 18. Finally, Patent Owner submits that the Institution Decision rejected this ground and that “Petitioner’s Reply identifies no error or oversight in the Board’s analysis.” *Id.* at 15 (quoting Inst. Dec. 33; Pet. Reply 22–25).

Having considered the parties’ arguments and evidence, we are persuaded that Petitioner has shown, by a preponderance of the evidence, that Bhat teaches or suggests element 13a.

We begin by evaluating whether the Reply’s argument (regarding the mapping of Bhat’s resource to the “remote computing device”) is proper or improper. *See* PO Sur-reply 15–18. This question turns on whether the Reply’s arguments in this regard are an elaboration of the Petition’s contentions or whether they are new and different from those contentions. *See* 37 C.F.R. § 42.23(b) (“A reply may only respond to arguments raised in the . . . patent owner response[] or decision on institution.”); Trial Practice Guide 73–74 (providing additional explanation regarding the proper scope of a reply). Having reviewed the record, we are persuaded that this Reply argument is a proper elaboration of the Petition’s contentions and is responsive to Patent Owner’s argument. For the “communication with a remote computing device over the communication network” (recited in elements 13a and 13e), the Petition clearly points to Bhat’s teaching that remote device 50 requests access to a resource. *See* Pet. 51–52, 56–57.

Although the Petition’s specific mapping for the “remote computing device” is less clear—at one point, it points to remote device 50 (*id.* at 52), and at another, it points to the resource (*id.* at 56)—we are persuaded that the Petition is best understood as including two alternative contentions, where each of these endpoints (i.e., remote device 50 and the resource) are alleged to be the “remote computing device.” Also, even though the Petition could have put a finer point on it, we persuaded that Patent Owner was sufficiently put on notice of this alternative contention. *Compare* PO Resp. 44–45 (arguing that Bhat fails to teach element 13e because the Petition maps the “remote computing device” to the user device 50), *with* Pet. 56 (beginning the discussion of element 13e by discussing “a remote computing device (*such as a resource*)” (emphasis added)).¹⁷ As a result, we do not agree with Patent Owner’s argument that this Reply argument is improper. *See* PO Sur-reply 15–18.

Turning to the merits, we are persuaded by Petitioner’s contentions that Bhat teaches the requirements of element 13a. In particular, Bhat’s web server 61 receives, from remote device 50, a request to access a resource (*e.g.*, Ex. 1006 ¶ 55), and web server 61 determines whether access to the resource will be allowed (*e.g.*, *id.* ¶¶ 26, 41, 57). Both Petitioner’s expert and Patent Owner’s expert agree that an ordinary artisan would understand

¹⁷ Patent Owner vaguely contends that the theory is “undeveloped,” but advances only a conclusory assertion that the Reply “fails to explain” particular claim limitations. *See* PO Sur-reply 18. We disagree for the reasons explained in connection with those limitations. Moreover, at the oral hearing, we invited Patent Owner to specifically identify what (if any) limitations would not be met under Petitioner’s mapping, and Patent Owner’s only argument was that Bhat’s web server and resource are co-located. *See* Tr. 64:7–66:25. We address that argument below.

that, if the access is allowed, Bhat web server 61 “perform[s] the function of forwarding the user’s request” to the requested resource. Ex. 1017, 129:12–21; *see* Ex. 1016 ¶ 132 (“The ‘function’ is the directing of the communication from Web server 61 to the resource, if permitted.”). From this, we are persuaded that Bhat’s web server 61 “process[es] a request to run a function,” as required by the claim, where the “function” is the forwarding of the user’s request to the resource, and this function enables a communication with the resource over the communication network.¹⁸

Moreover, we find that Bhat’s resource teaches (or at least suggests) the claimed “remote computing device.” Neither party has proposed a construction for the term “remote,” but even if we were to conclude that the claimed “remote computing device” must be separate from the “computing device,” as Patent Owner appears to contend (*see* PO Sur-reply 16, 18; Tr. 64:17–65:3), we would be persuaded that Bhat teaches (or at least suggests) that the resource is a separate computing device because Bhat teaches that the “resource resid[es] on (*or [is] under the control of*) a Web server.” Ex. 1006 ¶ 10 (emphasis added) (*quoted in* PO Resp. 45); *see also*, *e.g.*, *id.* ¶¶ 42, 99; Pet. Reply 23–25 (arguing that Bhat teaches that the resource can be separate from web server 61).

Patent Owner’s other arguments are unavailing. The arguments presented in the Response are premised on an assumption that the Petition only mapped the “remote computing device” to Bhat’s remote device 50 (*see* PO Resp. 44–48), but as explained above, we are persuaded that the Petition

¹⁸ *Accord* Inst. Dec. 33 (“In Petitioner’s analysis, the function run on the computing device is enabling communication with a remote computing device.”).

fairly includes an alternative contention mapping the “remote computing device” to Bhat’s resource. In addition, Patent Owner’s arguments appear to be premised on an assumption that “communication” recited in the independent claims must be between the “computing device” and the “remote computing device” (*see* PO Resp. 46–47), but as the Institution Decision explained in connection with claim 1, the claim language “does not specify that the computing device originates the request or attempts to communicate with the remote device” (Inst. Dec. 30; *see also id.* at 32). Patent Owner neither responded to this analysis nor justified any contrary assumption. Also, we disagree with Patent Owner’s argument that Petitioner fails to sufficiently explain its contentions (*see* PO Sur-reply 18), as demonstrated in our analysis of each element of claim 13.

We further disagree with Patent Owner’s characterization of the Institution Decision. PO Sur-reply 15 (quoting Inst. Dec. 33). The Board neither rejected the Bhat ground nor found a failure to show a reasonable likelihood of success.¹⁹ *See* Inst. Dec. 33. Instead, the Board “question[ed] whether Bhat discloses processing a request to run a function on Web server 16 or that the policy decisions in Bhat determine whether Web server 16 is permitted to run the function of enabling communication with a remote computing device,” and we specifically “invite[d] the parties to further

¹⁹ Because the Board determined that Petitioner had shown a reasonable likelihood that claim 1 was unpatentable over Putzolu, we did not need to determine whether Petitioner had shown a reasonable likelihood of success on this claim. *See* Inst. Dec. 32; 37 C.F.R. § 42.108(a) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”).

address this issue at trial.” Inst. Dec. 33. Patent Owner opted not to accept our invitation (*compare* Prelim. Resp. 53–54, *with* PO Resp. 48 (repeating arguments verbatim)), but Petitioner provided additional explanation along with supporting evidence (*see* Pet. Reply 23–24). Petitioner’s additional explanation elucidates the Petition’s contentions, and upon review of the full record, we are persuaded by the Petition’s contentions.

[13b] access a decision stored on the computing device, the decision having been received from a server and being based on a policy that is stored at the server and that determines whether the function is permitted to run on the computing device, the determination being based on a previous communication with the computing device, the policy being managed by an administrator

Petitioner contends that Bhat teaches element 13b. Pet. 52–54. Petitioner argues that Bhat’s web server 61 evaluates the request using a “stored (cached) policy decision,” located on web server 61. *Id.* at 53 (emphasis omitted) (quoting Ex. 1006 ¶ 105; citing Ex. 1003 ¶ 185). According to Petitioner, this policy decision was received from policy engine 63 or 80 (which teaches the claimed “server”), was based on a policy stored at that policy engine and based on a previous communication with web server 61, and determines whether the requested function is permitted to run. *Id.* at 53–54 (citing Ex. 1006 ¶¶ 51, 56, 58, 62, Ex. 1003 ¶ 186). Petitioner submits that, based on Bhat’s disclosure, an ordinary artisan would have understood that an administrator would manage the policies. *Id.* at 54 (citing Ex. 1006 ¶¶ 26, 29–30; Ex. 1003 ¶ 187).

Patent Owner argues that the stored decision accessed by web server 61 does not “correspond to ‘whether the function is permitted to run on the

computing device’ as required by Claim 13.” PO Resp. 48 (emphasis omitted) (citing Ex. 2015 ¶¶ 86–88). According to Patent Owner, “[t]he decision disclosed in Bhat merely enables or disables access by the remote (user) device 50 to a network resource.” *Id.* (emphasis omitted).

We are persuaded that Petitioner has shown, by a preponderance of the evidence, that Bhat teaches element 13b. Bhat’s web server 61 receives an initial request for access to a resource, receives a corresponding policy decision from policy engine 63, and stores the policy decision. Ex. 1006 ¶¶ 98–103. Bhat states that after “another request (from the same user) for the resource is received,” web server 61 “evaluates the request locally using the stored (cached) policy decision.” *Id.* ¶¶ 104–105; *see also, e.g.*, ¶ 42. We find that web server 61 accessing that stored (cached) policy decision teaches “access[ing] a decision stored on the computing device,” as required by element 13b. The stored decision was received from policy engine 63 (which teaches the claimed “server”) and was based on a policy stored thereon. *Id.* ¶¶ 100–101; *see also, e.g., id.* ¶¶ 51, 55–56. We also find that Bhat discloses policies specific to an organization (*id.* ¶ 30), and an ordinary artisan would have understood (or at least found it obvious) that an administrator of the organization would have managed such policies (Ex. 1003 ¶ 187).

In addition, we find that Bhat’s stored decision is “based on a policy . . . that determines whether the function is permitted to run” on Bhat’s web server 61, as element 13b also requires. The stored decision (and the policy upon which it is based) determines whether the user’s request for access is forwarded to the resource. *E.g.*, Ex. 1006 ¶¶ 26, 41–42, 57; *see also* Ex. 1016 ¶ 132; Ex. 1017, 129:12–21. Patent Owner’s contrary arguments

(*see* PO Resp. 48) are premised on a misunderstanding of the Petition, as discussed in connection with element 13a.

[13c] receive from the server an update to the decision

Petitioner contends that Bhat discloses element 13c because Bhat's web server receives an update to the decision from the policy engine. Pet. 54 (citing Ex. 1006 ¶ 106; Ex. 1003 ¶ 189).

Patent Owner does not dispute these contentions. *See* PO Resp.

We are persuaded that Petitioner has shown, by a preponderance of the evidence, that Bhat discloses element 13c. Bhat teaches that web server 61 can receive a “notification” and “an updated policy decision” when there is a change to the policy decision. Ex. 1006 ¶ 106; *see also, e.g., id.* ¶¶ 49 (stating that web server 61 is PEP), 76 (stating that PEP can receive notification and new policy decision), Fig. 5.

[13d] determine whether the request is granted or denied based on the decision and the update

Petitioner contends that Bhat discloses element 13d. Pet. 55–56. According to Petitioner, Bhat discloses that, when the same user requests the same resource, the web server “identifies the stored policy decision, determines whether an update to the policy decision is needed, and requests (and receives) the update from the policy engine to determine whether to grant the request based on the stored policy decision and the update.” *Id.* (citing Ex. 1006 ¶¶ 74, 76, 105–106, Fig. 5; Ex. 1003 ¶ 192).

Patent Owner does not dispute these contentions. *See* PO Resp.

We are persuaded that Petitioner has shown, by a preponderance of the evidence, that Bhat discloses element 13d. We find that an ordinary

artisan would have understood that Bhat's web server 61 determines whether to grant or deny access to the resource based on the original policy decision and the updated policy decision. Ex. 1006 ¶¶ 74, 76, 105–106, Fig. 5; Ex. 1003 ¶ 192 (testifying that an ordinary artisan would have understood Figure 5 of Bhat in this way).

[13e] enable or disable the communication with the remote computing device over the communication network based on the determination

Petitioner contends that Bhat discloses element 13e. Pet. 56–57. According to Petitioner, Bhat's web server “enforces the request to communicate with a remote computing device (such as a resource) by enabling the communication or disabling the communication” based on the policy determination. *Id.* (citing Ex. 1006 ¶¶ 41, 106; Ex. 1003 ¶ 195).

Patent Owner argues that Bhat fails to teach or suggest element 13e. PO Resp. 44–47. According to Patent Owner, Petitioner maps Bhat's user device 50 to the claimed “remote computing device” (*id.* at 44–45), and Bhat's “policies and updates are not applied to enable or disable communications between web server 61 [and] remote (user) device 50” (*id.* at 47).

We are persuaded that Petitioner has shown, by a preponderance of the evidence, that Bhat discloses element 13e. Bhat teaches that web server 61 enforces its determination regarding whether access to the resource should be granted or denied. Ex. 1006 ¶¶ 105–106; *see also, e.g., id.* ¶¶ 41 (stating that the policy decision specifies whether to “allow/deny” access), 57 (“Once the policy definition is accessed and the policy evaluation completed . . . , the Web server 61 . . . uses the resultant policy

decision to enforce the policy decision.”). We also find that an ordinary artisan would have understood this enforcement to include, for example, enabling the communication when it is determined that access should be granted. *E.g., id.* ¶¶ 5, 26; *see also* Ex. 1003 ¶¶ 194–195. Patent Owner’s contrary arguments (*see* PO Resp. 44–47) are unavailing because they are premised on a misunderstanding of the Petition, as discussed in connection with element 13a.

Conclusion

For the reasons provided above, we are persuaded that each limitation of independent claim 13 is either taught or suggested by Bhat. We are also persuaded that an ordinarily skilled artisan would have found it obvious, in view of Bhat’s teachings, to arrive at the subject matter recited in claim 13. Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claim 13 would have been obvious over Bhat.

2. Dependent Claims 14, 15, and 18–21

Claims 14, 15, and 18–21 depend from independent claim 13. Ex. 1001, 17:37–42, 17:53–63. Petitioner contends that the subject matter of each of these claims is rendered obvious by Bhat. Pet. 57–61. Patent Owner does not dispute these contentions. *See* PO Resp. Having considered the record, we are persuaded that Petitioner has shown that each limitation of claims 14, 15, and 18–21 is taught by Bhat or obvious in view of it.

As for claim 14, we are persuaded by Petitioner’s undisputed arguments that Bhat’s policies limit content that can be sent or received. *See* Pet. 57 (citing Ex. 1006 ¶¶ 5, 37–38).

As for claim 15, we are persuaded by Petitioner's undisputed arguments that Bhat's policies establish temporal limits and other conditions and that applying a quantity limit would have been a routine design choice that applied known techniques to yield a predictable result. *See* Pet. 58 (citing Ex. 1006 ¶¶ 29, 40; Ex. 1003 ¶¶ 201–202).

As for claim 18, we are persuaded by Petitioner's undisputed arguments that Bhat teaches (or at least suggests) a policy that limits the type of content sent or received. *See* Pet. 58–59 (citing Ex. 1006 ¶¶ 36–37, 40).

As for claim 19, we are persuaded by Petitioner's undisputed arguments that an ordinary artisan would have understood that Bhat's policies that establish temporal limits are a type of filter and that applying a content filter would have been a routine design choice that applied known techniques to yield a predictable result. *See* Pet. 59–60 (citing Ex. 1006 ¶¶ 36–37, 40; Ex. 1003 ¶¶ 209–211).

As for claim 20, we are persuaded by Petitioner's undisputed arguments that Bhat's policies are established and managed by an administrator and an ordinary artisan would have understood the administrator to similarly manage the filters. *See* Pet. 60–61 (citing Ex. 1006 ¶ 31; Ex. 1003 ¶¶ 214–215); *see also* Ex. 1006 ¶ 30 (*cited in* Pet. 54).

As for claim 21, we are persuaded by Petitioner's undisputed arguments that Bhat's policies can be established and managed by a third-party and an ordinary artisan would have understood the third-party to similarly manage the filters. *See* Pet. 61 (citing Ex. 1006 ¶¶ 30–31; Ex. 1003 ¶¶ 218–219).

Accordingly, we conclude that Petitioner has shown, by a preponderance of the evidence, that the subject matter of claims 14, 15, and 18–21 would have been obvious over Bhat.

III. MOTION TO AMEND

Pursuant to 35 U.S.C. § 316(d)(1) and 37 C.F.R. § 42.121(a), Patent Owner filed a Contingent Motion to Amend seeking to replace claims 1–12 and 27–30 of the '559 patent with proposed substitute claims 31–46, respectively, if any of the original claims are found unpatentable. *See* MTA. After receiving Preliminary Guidance from the Board (*see* PG), Patent Owner filed a Revised Contingent Motion to Amend proposing revised substitute claims 31, 32, and 35–45 for original claims 1, 2, 5–12, and 27–29, respectively. *See* RMTA; RMTA Reply.²⁰ Patent Owner does not propose substitute claims to replace original claims 13–15 or 18–21. *See id.*

Because we have determined that claims 1, 5–12, and 27–29 are unpatentable (*see supra* §§ II.E.1, II.E.2, II.E.4, II.G), we proceed to address proposed substitute claims 31 and 35–45 in Patent Owner's Revised Motion. Because we have determined that claim 2 is not unpatentable (*see supra* §§ II.E.3, II.F.1), the Revised Motion is dismissed as to proposed substitute claim 32.

²⁰ In the Motion to Amend, Patent Owner proposed substitute claims 33, 34, and 46 as replacements for original claims 3, 4, and 30 (MTA 24–25, 28), and the Revised Motion also includes reference to these proposed substitute claims (RMTA 1, 30). Those substitute claims would have been improper because they would replace claims 3, 4, and 30, which are not challenged in this proceeding (*see* PG 3–4 (explaining issue)), but Patent Owner formally withdrew them with its reply (RMTA Reply 1). We do not consider substitute claims 33, 34, and 46 to be a part of the Revised Motion.

A. Proposed Substitute Claims

In the Revised Motion to Amend, Patent Owner proposes two substitute independent claims: substitute claim 31 would replace original claim 1 and substitute claim 43 would replace original claim 27. RMTA 27–30.²¹ These claims are reproduced below, with underlining to indicate added text. For clarity, we have added emphasis to each amendment, and for ease of reference, we add the reference identifiers corresponding to those used for our analysis of the original claims.

31. [31pre] A non-transitory computer readable storage medium comprising instructions that, when executed on a user's computing device configured to perform a function on a communication network managed by a service provider, cause the computing device to at least:

[31a] send to a server a request to communicate with a remote computing device over the communication network, **wherein the requested communication is to be between the computing device and the remote computing device;**

[31b] receive in real-time from the server a response indicative of a decision granting or denying the request, the decision being based on one or more policies that are stored at the server and based at least in part on input from an administrator; and

[31c] enforce the response by enabling the requested communication with the remote computing device over the communication network when the decision grants the request and by disabling the requested communication when the response denies the request, the requested communication being enabled or disabled without accessing the one or more policies by the computing device.

²¹ The Revised Motion identifies these pages as A-1 to A-4.

43. [43pre] A method for controlling a user's computing device configured to execute a function using a communication network managed by a service provider, the method comprising, at the computing device:

[43a] sending to a server a request to communicate with a remote computing device over the communication network, wherein the requested communication is to be between the computing device and the remote computing device;

[43b] receiving in real-time from the server a decision granting or denying the request, the decision being based on a policy stored at the server and configured by an administrator; and

[c] enforcing the decision by enabling a communication with the remote computing device over the communication network when the decision grants the request and by disabling the communication when the decision denies the request, the communication being enabled or disabled without storing the policy on the computing device.

RMTA 27, 29 (emphases and reference identifiers added). In addition, Patent Owner proposes substitute claims 35–42, 44, and 45 to replace dependent claims 5–12, 28, and 29. *Id.* at 28–31. Each of these proposed substitute claims are identical to the dependent claims they would replace, except for a revision to update the number of the claim from which they depend. *Id.*

B. Claim Construction

We need not expressly construe any claim terms or phrases to resolve the parties' dispute regarding the Revised Motion to Amend. *See Nidec Motor*, 868 F.3d at 1017. For purposes of this Decision, we apply Patent Owner's understanding that the term "user's computing device" refers to a user-level computing device and excludes network-level computing devices.

See RMTA 13; *cf. supra* § II.C.1 (addressing construction of “computing device”).

C. Statutory and Regulatory Requirements

“Before considering the patentability of any substitute claims, . . . the Board first must determine whether the motion to amend meets the statutory and regulatory requirements set forth in 35 U.S.C. § 316(d) and 37 C.F.R. § 42.121.” *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15, 4–8 (PTAB Feb. 25, 2019) (precedential). Specifically, Patent Owner must demonstrate: (1) the amendment proposes a reasonable number of substitute claims; (2) the amendment responds to a ground of unpatentability involved in the trial; (3) the amendment does not seek to enlarge the scope of the claims of the patent; and (4) the proposed claims are supported in the original disclosure. *See* 35 U.S.C. § 316(d); 37 C.F.R. § 42.121.

1. Reasonable Number of Substitute Claims

Patent Owner contends that the Revised Motion proposes a reasonable number of substitute claims because it proposes one substitute claim for each challenged claim. RMTA 3–4. Petitioner does not dispute this contention. *See* RMTA Opp.; *see also* MTA Opp.

We are persuaded that Patent Owner proposes a reasonable number of substitute claims because it proposes one substitute claim for each challenged claim. *See Lectrosonics*, Paper 15 at 4 (“There is a rebuttable presumption that a reasonable number of substitute claims per challenged claim is one (1) substitute claim.”); *see also* 37 C.F.R. § 42.121(a)(3).

2. Respond to a Ground of Unpatentability

Patent Owner contends that the Revised Motion responds to a ground of unpatentability because it adds limitations that Patent Owner contends distinguish the asserted prior art references. RMTA 2–3; *see also* MTA 2–3.

Petitioner does not dispute this contention in its Opposition to the Revised Motion. *See* RMTA Opp. Previously, Petitioner argued that the proposed substitute claims were not responsive to a ground of unpatentability (MTA Opp. 5–7), but in our Preliminary Guidance, we explained that Petitioner’s arguments on this topic do not indicate that the Motion fails to respond to a ground of unpatentability (PG 6). Petitioner did not respond to this analysis and did not repeat its argument that Patent Owner’s amendment fails to respond to a ground of unpatentability. *See* RMTA Opp.

We are persuaded that the proposed amendments are responsive to a ground of unpatentability involved in this trial, namely, Ground 1 based on obviousness over Putzolu. In the Revised Motion, Patent Owner argues Putzolu’s policy client 22 is “not a ‘user’s computing device’ as now claimed.” RMTA 2. Patent Owner also argues that the queries from Putzolu’s policy client 22 to its policy server 18 are not requests to communicate between policy client 22 and a remote computing device, defeating Petitioner’s mapping of this reference. *Id.* at 2–3. These arguments persuasively show that the amendments proposed by the Revised Motion are responsive to a ground of unpatentability.

3. Scope of the Claims

Patent Owner asserts that the proposed substitute claims are narrower than the corresponding original claims because the amendments “narrow the independent claims.” RMTA 3.

Petitioner does not dispute this contention in its Opposition to the Revised Motion. *See* RMTA Opp. Prior to that Opposition, Petitioner argued that Patent Owner’s “current interpretation of substitute claim 43 . . . would impermissibly broad[e]n the scope of original claim 27” because Patent Owner previously advanced a different contention regarding the scope of the original claim language. Opp. 16–17. In our Preliminary Guidance, we explained that this argument was misplaced because “[t]he question is not whether the Motion articulates a broader claim construction than Patent Owner previously advocated, but rather whether the proposed *amendment*, properly interpreted, seeks to enlarge the scope of the claims.” PG 7. Petitioner did not respond to this analysis and did not repeat its argument that Patent Owner’s amendment enlarges the scope of the claims. *See* RMTA Opp.

We are persuaded that the proposed substitute claims do not enlarge the scope of the claims. In particular, the proposed amendments would add limitations to the claims without removing any limitations from those claims.

4. Support in the Original Disclosure

A motion to amend may not introduce new matter. 35 U.S.C. § 316(d); 37 C.F.R. § 41.121(a)(2)(ii). “New matter is any addition to the claims without support in the original disclosure.” *Lectrosonics*, Paper 15 at

7 (citing *TurboCare Div. of Demag Delaval Turbomach. v. Gen. Elec. Co.*, 264 F.3d 1111, 1118 (Fed. Cir. 2001)). To this end, a motion to amend must “set forth written description support in the originally filed disclosure of the subject patent for each proposed substitute claim, and also set forth support in an earlier filed disclosure for each claim for which benefit of the filing date of the earlier filed disclosure is sought.” *Id.* (citing 37 C.F.R. § 42.121(b)(1)–(2)).

“To satisfy the written description requirement, the disclosure of the prior application must ‘convey with reasonable clarity to those skilled in the art that, as of the filing date sought, [the inventor] was in possession of *the invention*.’” *Id.* (alteration in original) (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563–64 (Fed. Cir. 1991)). “[T]he hallmark of written description is disclosure.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). The sufficiency of written description support is based on “an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art.” *Id.* “Based on that inquiry, the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed.” *Id.* The invention need not be described *in haec verba*, but a disclosure that merely renders obvious the claims does not provide adequate written description support. *Id.* at 1352. The written description requirement “guards against the inventor’s overreaching by insisting that he recount his invention in such detail that his future claims can be determined to be encompassed within his original creation.” *Vas-Cath*, 935 F.2d at 1561.

Patent Owner contends that its proposed substitute claims are supported by the application that issued as the '559 patent, i.e., US 13/786,730 (“the '730 application”), as well as other applications in the priority chain. RMTA 4–16 (citing Ex. 2010); *see* RMTA Reply 1–5. Petitioner disagrees. RMTA Opp. 2–12; RMTA Sur-reply 1–5.

Having considered the parties’ arguments and the evidence of record, we find that Patent Owner has not shown that the '730 application provides written description support for proposed substitute independent claims 31 and 43. Proposed substitute claim 31 requires “a user’s computing device” to both: (a) “send to a server a request to communicate with a remote computing device . . . wherein the requested communication is to be between the computing device and the remote computing device” (element 31a) and (b) “enforce the response [from the server] by enabling the requested communication . . . and by disabling the requested communication,” depending on the server’s response (element 31c). RMTA 27. Proposed substitute claim 43 includes substantially similar requirements. *Id.* at 29; *see also id.* at 13 (“[T]he substitute claims now all require that [the] user’s computing device is the device that sends the request to the server, that receives the decision from the server, and that enforces the decision.”). As explained below, we find that the '730 application fails to disclose a user-level computing device that performs the enforcing limitation, as required by element 31c.

In the Preliminary Guidance, we preliminarily provided substantially the same finding. *See* PG 7–9. In particular, we explained that Patent Owner’s Motion to Amend failed to show a disclosure of a user-level device that performs the enforcing limitation, and we stated that “the '730

application discloses that PEP 28, a network-level device, enforces the response.” *Id.* at 8–9 (citing Ex. 2010 ¶¶ 40–41). In addition, “we disagree[d] with Patent Owner’s argument that the [S]pecification discloses an alternative where the enforcement is performed by a user device.” *Id.* at 9 (citing MTA 9 (citing Ex. 1001, 9:3–11)).

In its Revised Motion, Patent Owner acknowledges that the Specification discloses that PEP 28, a network-level device, performs the enforcing limitation recited in element 31c. RMTA 13–14; *see* Ex. 2010 ¶¶ 40–41. But Patent Owner argues that the Specification “also discloses a secondary embodiment where a user device,” i.e., mobile station 10, does so. RMTA 14–15 (citing Ex. 1001, 9:3–11; Ex. 2010, 12:10–12; Ex. 2029 ¶¶ 47–48; Ex. 1016 ¶ 168). In support, Patent Owner provides an annotation of Figure 2 from the ’730 application to show the “secondary embodiment.” *Id.* at 14. In addition, Patent Owner contends that the ’730 application “identifies a non-exclusive list regarding where the PEP ‘can be’” and “does not exclude the PEP from being on a user’s computing device.” *Id.* (citing Ex. 2010, 11:13–17; Ex. 2029 ¶ 46). Also, according to Patent Owner, an ordinary artisan would have recognized that a game installed on a mobile device “would have features and functions for which a communication request would need to be to a remote device” because “multiplayer network games had become mainstream.” *Id.* at 16 (citing Ex. 2029 ¶¶ 50–52; Ex. 2031, 1, 6).

We disagree with Patent Owner’s contention that the ’730 application discloses a “secondary embodiment” where a user-level device, such as mobile device 10, performs element 31c. Patent Owner primarily relies upon one passage from the Specification to provide written description

support for this element. *See* RMTA 14 (citing Ex. 1001, 9:3–11).²² It states:

Likewise, the *user's request may not have anything to do with making a call or downloading content*, but rather just to use some feature or function of the device, such as a game that is already stored on the device. *Even in this instance, the device would need to communicate with the PDP* to determine if a policy is in place that would prevent use of the feature or function for some reason, such as the wrong time of the day, the wrong day of the week, the game has been played in excess of some time limit set on the game, etc.

Ex. 2010 ¶ 39 (emphases added); *see also* Ex. 1001, 9:3–11 (including same text). Although this passage states that a user-level device (e.g., mobile device 10) *sends* a communication to a server, we are not persuaded that it discloses *enforcement* of the server's policy decision by the user-level device, given the context of the '730 application. *E.g.*, Ex. 2010 ¶ 40 ("If the subscriber is valid, PEP 28 will enforce the provisioned policies for the particular subscriber of the mobile station 10."); *see also, e.g., id.* ¶¶ 37–38, 40, Fig. 2. But, even if it did disclose enforcement by the user-level device, it fails to teach a user-level device "enforc[ing] the response *by enabling the requested communication with the remote computing device*," as element 31c also requires. The cited passage is directed to situations that *do not* involve a request to communicate with a remote computing device: The relevant paragraph begins by addressing "requests . . . initiated by the

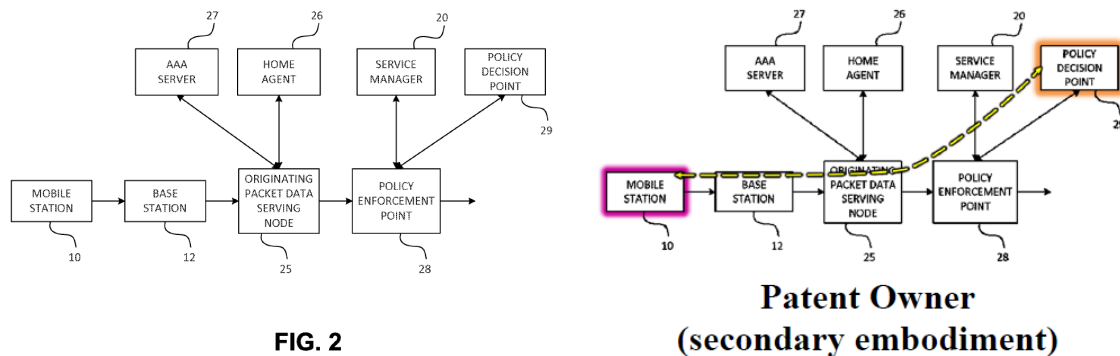
²² Patent Owner improperly cites to the Specification of the issued '559 patent, rather than the '730 application. *See* RMTA 14; *Lectrosonics*, Paper 15 at 7 (explaining that the motion to amend must "set forth written description support *in the originally filed disclosure* of the subject patent for each proposed substitute claim" (emphasis added)). However, the '730 application includes a corresponding passage.

device,” and then addresses “request[s] . . . initiated by another device,” before addressing “request[s that] may not have anything to do with making a call or downloading content,” as discussed in the cited passage. Ex. 2010 ¶ 39; *see also* Ex. 1001, 8:60–9:6. As a result, we find that this passage does not provide written description support for element 31c.

We disagree with Patent Owner’s argument (RMTA 14–16) that an ordinary artisan would have understood this passage to disclose a request to communicate because it refers to a “game . . . stored on the device.” Even if we assume that cell phones were known to include “networked games involving communications with remote devices,” as Patent Owner contends (RMTA 16), the cited passage clearly is directed to a situation where *there is no requested communication*. Moreover, whether or not a game that involves communication with a remote device would have been *obvious* in view of the ’730 application, such a game is not actually *disclosed* in the ’730 application.²³ *See* Ex. 2010 ¶ 39; *see also Ariad*, 598 F.3d at 1352 (“[A] description that merely renders the invention obvious does not satisfy the [written description] requirement.”). Similarly, Patent Owner’s argument that an ordinary artisan would have found it “logical and reasonable to have the enforcement mechanism available not only at the network level but on a user’s device” (RMTA 15 (quoting Ex. 2029 ¶ 48)) is also unavailing.

²³ Mr. Lipoff testifies that an ordinary artisan would have understood a cell phone game to be a multiplayer networked game because the latter had become mainstream. Ex. 2029 ¶¶ 50–52. Mr. Lipoff appears to conflate a species (a multiplayer networked game) with its genus (games). As a result, we assign little weight to this testimony.

We also disagree with Patent Owner’s argument (RMTA 14) that Figure 2 discloses a “secondary embodiment.” Below, we reproduce Figure 2 of the ’730 application (on the left) and Patent Owner’s annotation of it (on the right):



As shown above, Figure 2 includes mobile station 10, policy enforcement point 28, and policy decision point 29, and Patent Owner annotates this figure by outlining mobile station 10 in purple, outlining policy decision point 29 in orange, and connecting these components with a dotted yellow line. RMTA 14; Ex. 2010, 30 (Fig. 2). However, Figure 2 (and its associated description) provide no support for the dotted yellow line added by Patent Owner. *See* Ex. 2010 ¶¶ 36–41, Fig. 2; *see also* Ex. 1001, 8:19–9:46, Fig. 2. They also provide no support for Patent Owner’s argument that the ’730 application discloses element 31c. *See id.*; *see also* RMTA Opp. 5 (further explaining why Figure 2 lacks the requisite disclosure).

Patent Owner’s remaining arguments are unavailing. First, Patent Owner argues that the written description “does not exclude the PEP from being on a user’s computing device” (RMTA 14), but this misses the mark. The salient question is whether the claimed invention is affirmatively disclosed, not whether it is specifically excluded. *See Ariad*, 598 F.3d at 1351 (“[T]he hallmark of written description is disclosure.”). Second,

contrary to Patent Owner's argument (RMTA 15), Dr. Madisetti does *not* agree that the claimed enforcement occurs on the user's device. *See* Ex. 1016 ¶ 168. Third, Patent Owner's table points to other passages as allegedly providing the requisite disclosure (RMTA 5 (citing Ex. 2010, 2:5–8, 5:1–3, 11:13–17, 11:26–12:4, 12:10–12, 17:18, 19:3–4)), but none of these passages (individually or collectively) supply the requisite disclosure.

Finally, we have considered Mr. Lipoff's testimony (*see* Ex. 2029 ¶¶ 46–52 (*cited in* RMTA 14–16)), but it suffers from the same deficiencies as Patent Owner's arguments. We assign little weight to his conclusions that the written description includes the necessary disclosure because they are not supported by sufficient evidence. Moreover, although we find the '730 application to be sufficiently clear on its face that we do not need to rely on expert testimony, we find Dr. Madisetti's testimony on this point (*see* Ex. 1016 ¶¶ 157–160, 162–165, 168) to be more credible than Mr. Lipoff's.

Accordingly, we find that the '730 application does not provide written description support for proposed substitute independent claims 31 and 43, and consequently, Patent Owner fails to show that its amendment does not seek to introduce new subject matter. Given this finding, we need not (and do not) address whether Patent Owner has shown that the other identified applications provide written description support for the proposed substitute claims. *See* RMTA 4–16 (citing Exs. 2011–2014); *Lectrosonics*, Paper 15 at 7.

5. Conclusion

As explained above, we determine that Patent Owner fails to show that the amendment does not seek to introduce new subject matter.

Consequently, Patent Owner fails to meet the statutory and regulatory requirements, so we *deny* Patent Owner's Revised Motion to Amend (Paper 39) as to proposed substitute claims 31 and 35–45.

D. Petitioner's Challenges to the Proposed Substitute Claims

Petitioner argues that the proposed substitute claims are unpatentable because they lack written description support (RMTA Opp. 2–12), are indefinite (*id.* at 12–13), claim ineligible subject matter under 35 U.S.C. § 101 (*id.* at 13–20), and would have been obvious under 35 U.S.C. § 103 over Putzolu or the combination of Putzolu and Rothman (*id.* at 20–25). *See also* RMTA Sur-reply. Patent Owner disagrees with these contentions. RMTA Reply 1–12. We need not (and do not) reach Petitioner's arguments because we have dismissed-in-part and otherwise denied Patent Owner's Revised Motion. *See supra* § III.C.5.

IV. CONCLUSION²⁴

On this record, Petitioner has shown by a preponderance of the evidence that claims 1, 5–15, 18–21, 27–29 of the '559 patent are unpatentable, and Petitioner has not shown by a preponderance of the evidence that claim 2 of the '559 patent is unpatentable.

²⁴ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*, 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

In addition, Patent Owner’s Revised Motion to Amend is *dismissed* as to proposed substitute claim 32: Petitioner did not show that claim 2 is unpatentable, so we do not reach Patent Owner’s motion to replace it with substitute claim 32. Moreover, Patent Owner’s Revised Motion to Amend is *denied* as to proposed substitute claims 31 and 35–45 because Patent Owner fails to show that these proposed substitute claims do not add new matter.

In summary:

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 2, 5–12, 27–29	103	Putzolu	1, 5–12, 27–29	2
2, 7, 8	103	Putzolu, Rothman ²⁵		2
13–15, 18–21	103	Bhat	13–15, 18–21	
Overall Outcome			1, 5–15, 18–21, 27–29	2

Motion to Amend Outcome	Claim(s)
Original Claims Cancelled by Amendment	
Substitute Claims Proposed in the Amendment	31, 32, 35–45
Substitute Claims: Motion to Amend Granted	
Substitute Claims: Motion to Amend Denied	31, 35–45
Substitute Claims: Not Reached	32

²⁵ We do not address the contention that claims 7 and 8 would have been obvious over the combination of Putzolu and Rothman. *See supra* § II.F.2.

V. ORDER

Accordingly, it is

ORDERED that claims 1, 5–15, 18–21, 27–29 of U.S. Patent No. 8,667,559 B1 are determined to be unpatentable;

FURTHER ORDERED that claim 2 of the '559 patent is determined not to be unpatentable;

FURTHER ORDERED that Patent Owner's Revised Motion to Amend (Paper 39) is *dismissed*-in-part and otherwise *denied*; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2022-00001
Patent 8,667,559 B1

FOR PETITIONER:

Charanjit Brahma
Manish Mehta
Samuel Ruggio
BENISH FRIEDLANDER COPLAN AND ARONOFF LLP
cbrahma@beneschlaw.com
mmehta@beneschlaw.com
sruggio@beneschlaw.com

FOR PATENT OWNER:

Robert L. Hails
Jason F. Hoffman
Timothy D. Casey
BAKER & HOSTETLER LLP
rhails@bakerlaw.com
jhoffman@bakerlaw.com
tcasey@bakerlaw.com