

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

KEYSIGHT TECHNOLOGIES, INC.,
Petitioner,

v.

CENTRIPETAL NETWORKS, LLC,
Patent Owner.

IPR2022-01607
Patent 10,511,572 B2

Before KEVIN F. TURNER, BRIAN J. McNAMARA, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

TURNER, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. *Background and Summary*

In response to a Petition (Paper 1, “Pet.”), on April 17, 2023, we instituted an *inter partes* review of claims 1–24 (“the challenged claims”) of U. S. Patent No. 10,511,572 B2 (“the ’572 Patent”). Paper 8 (“Dec. to Inst.”). Patent Owner filed a Patent Owner Response (Paper 12, “PO Resp.”), Petitioner filed a Petitioner Reply (Paper 16, “Pet. Reply”), Patent Owner filed a Patent Owner Sur-reply (Paper 22, “PO Sur-reply”), and a transcript of an oral hearing held on January 10, 2024 (Paper 24, “Hr’g Tr.”) has been entered into the record.

We have jurisdiction under 35 U.S.C. § 6. This Final Written Decision is issued pursuant to 35 U.S.C. §318(a). We base our decision on the preponderance of the evidence. 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2023).

Having reviewed the arguments of the parties and the supporting evidence, we conclude that Petitioner has demonstrated by a preponderance of the evidence that the challenged claims are unpatentable.

B. *Related Proceedings*

According to the parties, the ’572 Patent is involved in the following proceedings: *Centripetal Networks, Inc. v. Keysight Technologies, Inc.*, No. 2-22-cv-00002 (E.D. Va., filed Jan. 1, 2022). Pet. 2; Paper 4, 1. Patent Owner additionally identifies the following ITC proceeding as a related matter: *Certain Computer Network Security Equipment and Systems, Related Software, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-1314 (ITC, filed Apr. 19, 2022). Paper 4, 1.

Additionally, Petitioner cites to prior *inter partes* review proceedings involving patents related to the ’572 Patent. Pet. 1–2, 4–7, 11, 16–22, 27–

28, 31–32, 36, 39, 43, 46–69, 70. U.S. Patent No. 9,674,148 B2 (Ex. 1002, “the ’148 patent”) is a predecessor to the ’572 Patent. Ex. 1001, code (63). The ’148 patent was the subject of a prior *inter partes* review (IPR2018-01454, “01454 IPR”), and Petitioner cites to the Decision on Institution (“01454 DI”) and Final Written Decision (“01454 FWD”) in that proceeding. The Final Written Decision in the 01454 IPR was affirmed on appeal by the U.S. Court of Appeals for the Federal Circuit. *Centripetal Networks, Inc. v. Cisco Sys., Inc.*, 847 F. App’x 928 (Fed. Cir. May 11, 2021). Petitioner also filed a petition challenging claims of U.S. Patent No. 10,681,009 B2 in IPR2022-01421 (Paper 2), which has been denied (IPR2022-01421, Paper 9).

C. *Real Party-in-Interest*

Petitioner identifies itself as the sole real party-in-interest. Pet. 2. Patent Owner identifies itself as the sole real party-in-interest. Paper 4, 1; Paper 6, 1.¹

D. *The ’572 Patent*

The ’572 Patent discloses methods and systems for protecting a secured network. Ex. 1001, Abstract. The ’572 Patent discloses that “[n]etwork protection devices (e.g., firewalls) implement rules with respect to packet-switched network traffic entering or leaving the networks.” *Id.* at 1:24–26. The ’572 Patent details that multiple, consecutive rule sets may be implemented on those network protection devices, and conventionally, “[n]etwork protection devices may require time to switch between rule sets” and that “[a]s rule sets increase in complexity, the time required for

¹ Before filing the Preliminary Response, Patent Owner changed its name from Centripetal Networks, Inc. to Centripetal Networks, LLC. Paper 6, 1.

switching between them presents obstacles for effective implementation.” *Id.* at 1:38–41. This can introduce a problem because “while implementing a new rule set, a network protection device may continue processing packets in accordance with an outdated rule set” which “may exacerbate . . . the effect of the network attack.” *Id.* at 1:47–50.

The ’572 Patent seeks to remedy this problem by having processors within a network protection device configured to “cease processing packets and may cache any unprocessed packets” while the network protection device is being reconfigured. *Id.* at Abstract, 1:65–2:5, 2:16–17, Fig. 3A. The ’572 Patent details that “the faster [the] network protection device 100 can switch” to processing packets in accordance with the desired rule set during an attack, “the greater the likelihood that the effects of the attack may be mitigated.” *Id.* at 9:16–20. The ’572 Patent also details that “preprocess[ing of] multiple rule sets prior to their implementation [can] thereby enable network protection device 100 to perform fast rule swapping between rule sets.” *Id.* at 5:17–21.

E. Illustrative Claim

Of the challenged claims, claims 1, 9, and 17 are independent. Claim 1 is illustrative of the challenged claims and is reproduced below.

1. A method comprising:
 - receiving, by a network device, a first rule set;
 - modifying, by the network device, the first rule set;
 - configuring the network device to process packets in accordance with the first rule set;
 - receiving, by the network device and after the modifying the first rule set and the configuring of the network device to process packets in accordance with the first rule set, a plurality of packets;

processing, by the network device, a first portion of the plurality of packets in accordance with the first rule set;

receiving, by the network device, a second rule set;

modifying, by the network device, the second rule set; and

based on a signal to process packets in accordance with the second rule set:

ceasing processing of one or more packets of the plurality of packets;

caching the one or more packets of the plurality of packets;

reconfiguring the network device to process packets in accordance with the second rule set; and

after completion of the reconfiguring of the network device to process packets in accordance with the second rule set, processing the one or more cached packets in accordance with the second rule set.

Ex. 1001, 10:45–11:2 (emphasis added).

F. Grounds of Institution

Trial was instituted on the following grounds:

References	35 U.S.C. § ²	Claims Challenged
Roose ³ , Golnabi ⁴ , Huima ⁵ , Hayter ⁶	§ 103(a)	1, 2, 4–10, 12–18, 20–24
Roose, Golnabi, Huima, Hayter, Esbensen ⁷	§ 103(a)	3, 11, 19

Dec. to Inst. 28.

II. ANALYSIS

A. Level of Ordinary Skill in the Art

The level of ordinary skill in the pertinent art at the relevant time is a factor in how we construe patent claims. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). It is also one of the factors

² The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103 effective March 16, 2013. Because the '572 Patent has an effective filing date prior to the effective date of the applicable AIA amendment, we refer to the pre-AIA version of § 103.

³ U.S. Patent Publication No. 2006/0048142 A1 (filed Sept. 2, 2004) (published Mar. 2, 2006) (Ex. 1005, “Roose”).

⁴ K. Golnabi et al., “Analysis of Firewall Policy Rules Using Data Mining Techniques,” 2006 IEEE/IFIP Network Operations and Management Symposium, NOMS 2006, 10th IEEE/IFIP, 305–15 (2006) (Ex. 1008, “Golnabi”).

⁵ U.S. Patent Publication No. 2004/0015905 A1 (filed Oct. 26, 2001) (published Jan. 22, 2004) (Ex. 1006, “Huima”).

⁶ U.S. Patent No. 7,320,022 B2 (filed July 25, 2002) (issued Jan. 15, 2008) (Ex. 1007, “Hayter”).

⁷ U.S. Patent No. 5,226,141 (filed Nov. 18, 1991) (issued July 6, 1993) (Ex. 1009, “Esbensen”).

we consider when determining whether a patent claim is obvious over the prior art. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

To assess the level of ordinary skill, we construct a hypothetical “person of ordinary skill in the art,” from whose vantage point we assess obviousness and claim interpretation. *See In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998). This legal construct “presumes that all prior art references in the field of the invention are available to this hypothetical skilled artisan.” *Id.* (citing *In re Carlson*, 983 F.2d 1032, 1038 (Fed. Cir. 1993)).

Petitioner contends that in the 01454 FWD, the Board found that “a person of ordinary skill in the relevant art in January 2013 would have had a bachelor’s degree in computer science, computer engineering, or an equivalent, four years of professional experience, and a working knowledge of packet-switched networking, firewalls, security policies, communication protocols and layers, and the use of customized rules to address cyber-attacks.” Pet. 6 (citing 01454 FWD, 5). Petitioner asserts that the same level of ordinary skill in the art should apply in this proceeding. *Id.* (citing Ex. 1003 ¶ 37). Patent Owner also adopts the level of ordinary skill in the art from the 01454 FWD. PO Resp. 8–9 (citing 01454 FWD, 5). For purposes of this Decision, we find no reason to deviate from the Board’s previous determination and, therefore, adopt the undisputed level of ordinary skill in the art previously found by the Board in the 01454 FWD.

B. Claim Construction

In an *inter partes* review, we construe a patent claim “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). In applying such standard, claim terms are generally given their ordinary and customary

meaning, as would be understood by a person of ordinary skill in the art, at the time of the effective filing date of the patent application and in the context of the entire patent disclosure. *Phillips*, 415 F.3d at 1312–13. “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Petitioner asserts that “no claim term requires express construction” for purposes of this proceeding. Pet. 7. Petitioner reiterates this in its Reply. See Pet. Reply 2. Patent Owner contends that the claim term “caching the one or more packets” recited in independent claims 1, 9, and 17 should be construed to require that full versions of the packets are cached while swapping between rule sets. PO Resp. 9. Patent Owner presents multiple arguments that we address below.

First, Patent Owner argues that “the claims require that the caching occur *while the rule sets are being swapped*.” PO Resp. 10. Patent Owner recites the surrounding steps or processes to the “caching the one or more packets” limitation, and asserts that the limitation requires “the caching occurs while the rule sets are being swapped.” *Id.* Although Patent Owner has provided the context of the claim limitation, we are not persuaded that such a stricture needs to be imported into the claim limitation itself. The “caching the one or more packets” limitation itself does not require that such caching can *only* occur while the rule sets are being swapped. The plain meaning of caching packets alone does not require such a restriction. The independent claims employ “comprising” language and could allow, for example, for the caching of packets, after the signal to process packets in

accordance with the second rule set has been received, *even if* the swapping of rule sets has not yet occurred. Patent Owner's construction attempts to incorporate other aspects of the claims into a single limitation that is not so limited under its plain and ordinary meaning. We are not persuaded that specifying when the caching occurs, i.e., while the rule sets are being swapped, is integral to the plain and ordinary meaning of "caching the one or more packets."

Second, Patent Owner argues that the challenged claims require "the caching of *entire* packets, not just the relevant portion of every incoming packet." PO Resp. 11 (citing Ex. 2005 ¶ 43). Patent Owner's declarant states that "[a] POSITA would understand that because the term packet is used to describe both the unit of data received at the network device and the unit of data that is cached, the Challenged Claims require caching the entirety of the packet received at the network device, which generally includes both header and payload data." Ex. 2005 ¶ 43 (citing Ex. 2008, 385). We generally agree with Patent Owner's position, that one of ordinary skill in the art would consider that caching of a packet would include caching the entire packet. We also presume that the caching of only relevant portions of a packet could be construed as caching a packet in the context of monitoring packets passing through a network device, for example, but we are persuaded that the intent of the independent claims is to cache the packets that have yet to be processed when a swapping of rule sets has been instigated, such that those packets, i.e., entire packets, can be processed under the new rule set. As such, we agree with Patent Owner that persons of ordinary skill in the art would have understood "caching the one or more packets" to mean "caching the one or more entire packets."

Based on the arguments presented by the parties, we determine that the claim limitation of “caching the one or more packets” to mean “caching one or more entire packets,” in the context of the ’572 Patent. As discussed in the Decision to Institute, it remains unclear what Patent Owner means by “full versions of the packets,” such that we are not persuaded that such terminology should be introduced into the construction. *See* Dec. to Inst. 8, 21.

No other claim terms need to be construed expressly for purposes of this Decision.

C. Collateral Estoppel Based on Prior Proceeding

“Issue preclusion [i.e., collateral estoppel] is appropriate only if: (1) the issue is identical to one decided in the first action; (2) the issue was actually litigated in the first action; (3) resolution of the issue was essential to a final judgment in the first action; and (4) [the party defending against preclusion] had a full and fair opportunity to litigate the issue in the first action.” *In re Freeman*, 30 F.3d 1459, 1465 (Fed. Cir. 1994); *see also MaxLinear, Inc. v. CF CRESPE LLC*, 880 F.3d 1373, 1376 (Fed. Cir. 2018) (holding that issue preclusion applies in the administrative context).

Petitioner makes numerous assertions regarding collateral estoppel, arguing that collateral estoppel applies to the issues decided by the 01454 FWD, in which all claims of the ’148 patent were held unpatentable as obvious over the same combination of references asserted in this proceeding—i.e., the combination of Roese, Golnabi, Huima, Hayter, and/or Esbensen. *See* Pet. 1, 16–22, 27–28, 31–32, 36, 39, 43, 46, 48–51, 53–58, 60–65, 67–69. Petitioner also argues that “where the ‘differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity, collateral estoppel applies.’” *Id.* at

17 (quoting *Soverain Software LLC v. Victoria's Secret Direct Brand Mgmt., LLC*, 778 F.3d 1311, 1319 (Fed. Cir. 2015)). Petitioner further asserts that “claim language in the prior proceeding being construed under a different claim construction standard does not materially alter the question of invalidity.” *Id.* (citing *Amazon.com, Inc., v. M2M Solutions LLC*, IPR2019-01205, Paper 43 at 41 (PTAB Jan. 25, 2021)).

In the Decision to Institute, we determined that the requirements for collateral estoppel had not been met because claim construction of the term “caching the one or more packets” under the *Phillips* standard was not actually litigated in the 01454 IPR, nor was it decided in the 01454 FWD. Dec. to Inst. 10–11. We also determined that although the claims of the ’572 Patent and the claims in the ’148 patent may be similar in certain aspects, the recitations are facially different and, unlike in the 01454 FWD, the scope of the claims of the ’572 Patent must be evaluated (expressly or implicitly) under the *Phillips* standard in this proceeding. *Id.* at 11. We also determined, however, that to the extent that Patent Owner were to raise previously decided issues, we would determine collateral estoppel to apply to such arguments. *Id.* at 12.

In the Patent Owner Response, Patent Owner reiterates its prior arguments that collateral estoppel does not apply because the “caching the one or more packets” claim construction issue was never actually litigated nor decided. PO Resp. 16–19. In reply, Petitioner submits that the substantive validity issue presented by Patent Owner’s proposed construction—whether the combination of Roese, Huima, and Hayter renders obvious caching entire packets while the rule sets are being swapped—was actually litigated and decided in the 01454 FWD. Pet. Reply 3 (citing Ex. 1018). Petitioner discusses our prior findings with respect to

the applied references and the caching of entire packets, where we previously determined the combination of Roese, Huima, and Hayter renders obvious caching entire packets while the rule sets are being swapped. *Id.* at 3–6.

Although Petitioner is correct that the Board has made such determinations, Petitioner has not showed that the Federal Circuit considered those findings, even if Petitioner is correct that such findings are “necessary to the decision in the 01454 FWD.” *Id.* at 6. As Patent Owner points out:

Indeed, during the appeal of the -1454 FWD, the prior-petitioner argued that the Federal Circuit should not consider arguments about whether the prior art taught caching entire packets because it was not litigated or decided in the case. *Centripetal Networks, Inc. v. Cisco Sys., Inc.*, No. 20-1768, Dkt. 22 at 51-52 (Fed. Cir. Nov. 23, 2020) (“[T]he Board did not address this argument [of whether Hayter caches entire packets] in its Final Written Decision.”).

PO Sur-reply 5. As such, we continue to determine that the requirements for collateral estoppel have not been met with respect to the claim limitation at issue. Nevertheless, we need not and do not decide this case solely on the basis of collateral estoppel. We now further consider the parties’ substantive arguments, in the context of the grounds of unpatentability.

D. Legal Standards

The 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) objective evidence of nonobviousness. *See Graham*, 383 U.S. at 17. Additionally, the obviousness inquiry typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by

the patent at issue.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)); see *In re Warsaw Orthopedic, Inc.*, 832 F.3d 1327, 1333 (Fed. Cir. 2016) (citing *DyStar Textilfarben GmbH & Co. Deutschland KG v. C. H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006)).

An obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418; accord *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1259 (Fed. Cir. 2007). Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Instead, Petitioner must articulate a reason why a person of ordinary skill in the art would have combined or modified the prior art. *In re NuVasive*, 842 F.3d 1376, 1382 (Fed. Cir. 2016).

A reason to combine or modify the prior art may be found explicitly or implicitly in market forces; design incentives; the “interrelated teachings of multiple patents”; “any need or problem known in the field of endeavor at the time of invention and addressed by the patent”; and the background knowledge, creativity, and common sense of the person of ordinary skill. *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1328–29 (Fed. Cir. 2009) (quoting *KSR*, 550 U.S. at 418–21).

In determining whether a claim is obvious in light of the prior art, when in evidence, we consider any relevant objective evidence of non-obviousness. See *Graham*, 383 U.S. at 17. Notwithstanding what the teachings of the prior art would have suggested to one of ordinary skill in the

art at the time of the invention, the totality of the evidence submitted, including objective evidence of non-obviousness, may lead to a conclusion that the challenged claims would not have been obvious to one of ordinary skill. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984).

We analyze the asserted grounds of unpatentability in accordance with these principles to determine whether Petitioner has met its burden to establish unpatentability of the challenged claims by a preponderance of the evidence.

E. Obviousness over Roese, Golnabi, Huima, and Hayter

Petitioner contends that claims 1, 2, 4–10, 12–18, and 20–24 are unpatentable under 35 U.S.C. § 103(a) over Roese, Golnabi, Huima, and Hayter. Pet. 11–66. Patent Owner argues that the challenged claims are patentable over the combination of Roese, Golnabi, Huima, and Hayter because the combination of Roese and Hayter does not teach the caching limitation as properly construed. PO Resp. 19–32; PO Sur-reply 7–24. We begin with a discussion of the references, address Petitioner’s rationale for combining their disclosures, and consider Petitioner’s assertions regarding the references’ teachings with respect to the challenged claims and Patent Owner’s arguments countering those assertions.

1. Overview of Roese

Roese is a U.S. patent publication directed to a system and method for rapid response network policy implementation through the pre-installing of responsive policy and/or rule sets. Ex. 1005, Abstract. Thereafter, unique rapid response identifiers are generated and transmitted, corresponding to one or more selected policy and/or rule sets, so that the network device is already configured with a response. *Id.* As illustrated in Figure 1, network system 100 includes network infrastructure 101 having multiple switching

devices, routing devices, firewalls, and access points. *Id.* ¶ 32, Fig. 1. A response system includes policy enforcement function (“PEF”) 250 and policy manager function 200, with the latter having analysis and implementation functions, that “analyzes monitored information to determine whether that information includes one or more conditions, events, occurrences, etc. (‘triggers’) for the purpose of implementing one or more policy enforcement changes.” *Id.* ¶ 33. The analysis function further determines whether the triggers require the implementation of responses through the PEF. *Id.* The response system “includes storage means 251, such as a database or a caching function, having one or more installed policy and/or [policy enforcement rule] PER sets, and corresponding related rapid response identifier(s).” *Id.* ¶ 38.

Through a specific example, Roese discusses its processes:

In a first example, a virus is detected at an ingress port of a network edge device. The virus detection information is stored in the database 202. The analysis function 201 matches the detected trigger information with one or more policies and/or PERs deemed suitable to respond to the detected trigger information. It then initiates enforcement of the matched and identified policy(ies) and/or rule(s) responsive to the detected trigger by signaling the processor 253 with one or more rapid response identifiers of one or more policy and/or PER sets to be implemented. For example, the policy change may be a complete blocking of the virus on all access ports in the entire network system.

Id. ¶ 53.

2. Overview of Golnabi

Golnabi is a publication directed to the generation of policy rules for firewalls and creating a minimum number of rules for efficiency. Ex. 1008, 305, 308. To achieve this minimization, Golnabi discloses merging rules

that have similar characteristics, to split filtering rules with multivalued fields into several rules, and reordering and prioritizing of rules based on use. *Id.* at 308, 310, 312–314, Fig. 14. Golnabi discloses a Filtering-Rule Generalization (FRG) as an aggregation algorithm to generate a minimum number of firewall policy rules, which is characterized as a “practical, effective and critical approach in firewall policy rules analysis and optimization in real time.” *Id.* at 308, 314. Golnabi also provides that “[b]y reordering or prioritizing ... firewall policy rules, one may expect a tremendous performance gain.” *Id.* at 314.

3. Overview of Huima

Huima is a U.S. patent publication directed to network protection systems that process packets in a firewall. Ex. 1006 Abstract, ¶¶ 85, 91. Huima provides for pausing of packet process “at a suitable instant in time,” to avoid the processing of packets with outdated rules. *Id.* ¶ 31. After the rules are updated, a signal is sent to the packet processor that processing may continue. *Id.* ¶ 36.

4. Overview of Hayter

Hayter is an issued U.S. patent directed to network devices that process packets. Ex. 1007, Abstract, 1:10–36. Hayter discloses a packet processing system where “[a] processor, a cache, a memory controller, and at least one packet interface circuit may be integrated into a single integrated circuit.” *Id.* at 1:40–42, Fig. 1.

Figure 2 of Hayter is reproduced below.

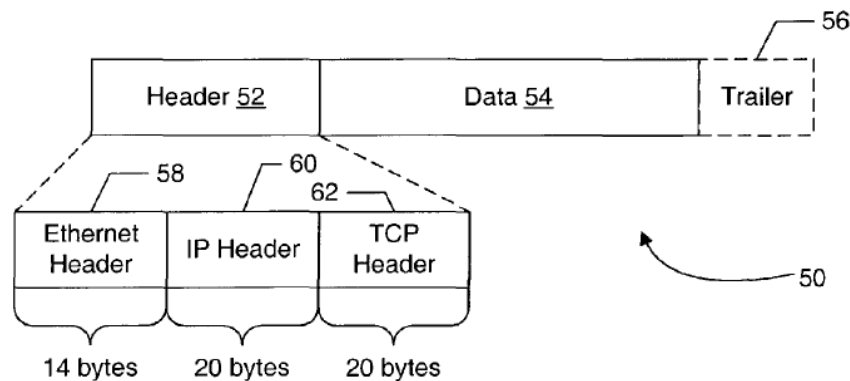


FIG. 2

Figure 2 of Hayter is a block diagram of an exemplary packet.

As shown in Figure 2, Hayter describes that packet 50 includes header 52, data payload 54, and optional trailer 56. *Id.* at 10:14–16. According to Hayter, the header may include: “source and destination addresses for the packet, the size of the packet, the size of the header, and status/control information for the packet.” *Id.* at 10:24–27. “The data payload 54 is the data being transmitted with the packet.” According to Hayter, “[i]n some packets, the data payload 54 may not be included.” *Id.* at 11:1–3.

Hayter discloses that “it may [b]e desirable for the header of a packet to be stored in the L2 cache 14,” as well as a portion of the data payload of the packet. *Id.* at 6:3–23. For example, Hayter discloses that in an embodiment, all of the header and some of the data payload are stored in the L2 cache. *Id.* at 11:14–22; 24:34–36.

5. Petitioner’s Assertions Regarding Combining of References

Petitioner asserts that we previously determined, with affirmance by the Federal Circuit, that a person of ordinary skill in the art would have been motivated to combine the teachings of Roese, Golnabi, Huima, and Hayter

with respect to claims of the '148 patent and that Patent Owner should be precluded from re-litigating this issue. Pet. 18 (citing 01454 FWD, 12–14, 17, 21, 29, 31–34, 44), 19. Additionally, Petitioner explains, citing the testimony of Dr. Jacobson, why one of ordinary skill in the art would have been motivated to combine Roese, Golnabi, Huima, and Hayter. *Id.* at 19–22.

With respect to the combination of Roese and Golnabi, Petitioner asserts that one of ordinary skill in the art would have been motivated to implement Roese's rules by merging, separating, and ordering them such that the rules sets installed provide optimized packet processing. Pet. 20 (citing Ex. 1003 ¶¶ 69–86). Petitioner asserts that Roese and Golnabi are analogous prior art and both pertain to the same field of endeavor, and the use of Golnabi's optimization as applied to the rules of Roese would have provided predictable and beneficial results. *Id.* (citing Ex. 1005, Abstract, ¶ 50; Ex. 1008, 305; Ex. 1003 ¶¶ 69–86). Petitioner asserts that a person of ordinary skill in the art would have been motivated to implement in Roese Golnabi's teachings of combining, separating, and ordering of rules in order to optimize performance to achieve optimized performance and would have had success doing so. *Id.* (citing Ex. 1005, Abstract, ¶ 52; Ex. 1008, 305–06, 308, 313–15; Ex. 1003 ¶¶ 71–72).

Addressing the combination of Roese and Huima, Petitioner asserts that one of ordinary skill in the art would have been motivated to pause the processing of rules sets, as disclosed by Huima, to avoid processing packets with outdated rules. Pet. 20 (citing Ex. 1003 ¶¶ 88–96). Petitioner asserts that Roese and Huima are analogous and their combination would have been made to obtain predictable and beneficial results. *Id.* at 20–21 (citing Ex. 1005, Abstract, ¶ 50; Ex. 1006 ¶¶ 85, 91; Ex. 1003 ¶¶ 89, 93–96).

Petitioner also asserts that a person of ordinary skill in the art “would have recognized that packets may continue to be received before the rule set is changed,” and the processing of packets with outdated rules “would be contrary to Roese’s goal of rapidly changing rule sets to respond to detected attack.” *Id.* (citing Ex. 1005 ¶¶ 13, 18, 42, 47, 52–56; Ex. 1006 ¶¶ 31, 91; Ex. 1003 ¶¶ 90–93). Petitioner also asserts that it would have been obvious to utilize a signal, per Huima, in the system of Roese to indicate that the processing of packets may resume. *Id.* at 21 (citing Ex. 1006 ¶ 36; Ex. 1003 ¶ 94).

Regarding the combination of Roese and Hayter, Petitioner asserts that one of ordinary skill in the art would have been motivated to implement Roese’s system with multiple processors and a cache for receiving packet data to facilitate efficient packet processing. Pet. 21 (citing Ex. 1003 ¶¶ 98–108). Petitioner asserts that Roese and Hayter are analogous and their combination would have been made to obtain predictable and beneficial results. *Id.* at 21–22 (citing Ex. 1005 ¶¶ 19, 32, 43, 45, 49, 50, 56; Ex. 1007, Abstract, 1:10–32, 10:64–67; Ex. 1003 ¶¶ 99, 130–106).⁸ Petitioner also asserts that one of ordinary skill in the art would have known that the speed at which the device can process packets can be increased by employing multiple processors operating in parallel, and that by utilizing a cache to store packets the data would be rapidly available to the processor, thereby increasing the speed of processing. *Id.* (citing Ex. 1005 ¶ 18; Ex. 1007, 1:34–36; Ex. 1003 ¶¶ 100–102; Ex. 1017, 1; Ex. 1011, 1–4; Ex. 1012, 9:15–21).

⁸ Petitioner cites an incorrect range (“130–106”) in Exhibit 1003.

6. Independent Claim 1

a. Petitioner's Assertions

Petitioner asserts that all of the elements of claim 1 are taught or suggested by the combination of Roese, Golnabi, Huima, and Hayter. Pet. 22–52. Petitioner asserts that Roese discloses a method for rapidly responding to triggering events or activities in a network system, and that Roese teaches or renders obvious receiving by a network device a first rule set and a second rule set. *Id.* at 22–25 (citing Ex. 1005, Abstract, ¶¶ 2, 8–9, 16, 18, 20, 23, 33–38, 41, 44, 56, Figs. 1–2; Ex. 1003 ¶¶ 114–117).

Petitioner also contends that Roese and Golnabi render obvious modifying the first rule set and the second rule set. Pet. 28–32 (citing Ex. 1005 ¶¶ 16, 18, 20, 23, 33, 38, 46, 52, 56, Figs. 1–2, 4; Ex. 1008, 305, 308, 312–14; Ex. 1003 ¶¶ 33, 123–131). Petitioner further asserts that Roese renders obvious configuring the network device in accordance with the first rule set and processing a first portion of packets in accordance with the first rule set. *Id.* at 32–35 (citing Ex. 1005 ¶¶ 20, 24, 35, 37, 41, 45–49, 56, Fig. 4; Ex. 1003 ¶¶ 133–140), 39–43 (citing Ex. 1005 ¶¶ 9, 41–42, 54, Figs. 2, 4; Ex. 1003 ¶¶ 152–155).

Claim 1 further recites that based on a signal to process packets in accordance with the second rule set, ceasing processing of one or more packets, and Petitioner asserts that Roese alone or Roese and Huima render these elements obvious. Pet. 43–46 (citing Ex. 1005, Abstract, ¶¶ 24, 41–42, 47, 56, Fig. 4; Ex. 1003 ¶¶ 159–166), 46–48 (citing Ex. 1005 ¶¶ 18, 52, 57; Ex. 1006 ¶ 31; Ex. 1003 ¶¶ 168–173).

Claim 1 further recites caching one or more packets and Petitioner asserts that Roese, Huima, and Hayter render this element obvious. Pet. 48–49 (citing Ex. 1003 ¶¶ 175–180). In particular, Petitioner asserts that Hayter

teaches that the “entirety of the header . . . is stored in the cache” (*id.* at 49 (citing Ex. 1007, 24:34–36)) and that some, and potentially the entirety, of a packet’s payload may also be stored in the cache (*id.* (citing Ex. 1007, 24:35–36)). Citing the testimony of Dr. Jacobson, Petitioner argues that it would have been obvious to a person of ordinary skill in the art

to store in cache entire headers and at least one byte of data payload (and up to the entire payload) of pending and incoming packets, as Hayter teaches, when pausing the processing of the packets (per Roese and Huima) so that the packets can be efficiently processed once packet processing resumes with the second rule set.

Id. (emphasis added) (citing Ex. 1007, 1:34–36, 3:53–59, 6:11–13; Ex. 1003 ¶¶ 177–179).

Lastly, Petitioner asserts that Roese discloses reconfiguring to process packets in accordance with the second rule set (Pet. 49–50 (citing Ex. 1005 ¶¶ 24, 41, 42, 48, Fig. 4; Ex. 1003 ¶¶ 182–185)) and that Roese and Huima render obvious processing after completion of reconfiguring the one or more cached packets in accordance with the second rule set (*id.* at 51–52 (citing Ex. 1006 ¶ 36; Ex. 1007, 6:7–19; Ex. 1003 ¶¶ 187–192)).

b. Patent Owner’s Arguments

Patent Owner argues that 1) it would not have been obvious over Roese in combination with Huima and Hayter to cache packets while rule sets are being swapped (PO Resp. 15, 21–24); 2) it would not have been obvious over Roese in combination with Huima and Hayter to cache entire packets (*id.* at 24–26); and 3) a POSITA would not have been motivated to combine Roese with Huima and Hayter (*id.* at 26–32). Petitioner traverses these arguments (Pet. Reply 6–22), and Patent Owner counters (PO Sur-

reply 7–24), while also asserting certain of Petitioner’s arguments are beyond the permissible scope on reply (*id.* at 13–15, 19–22).

As a preface, we address Patent Owner’s arguments that are directed to its temporal aspect of when caching of packets occurs, i.e., its claim construction that such caching occurs during a swapping of rule sets. As discussed above in Section II.B, we are not persuaded that the limitation “caching the one or more packets” requires that the caching must occur only while the rule sets are swapped. We are persuaded, however, that Roesse, Huima and Hayter teach, as proposed by Petitioner, the caching of at least some portion of a packet while rule sets are being swapped.

As discussed above, we are persuaded that Roesse teaches that when the rapid response identifier signal is received, the response system initiates the process of configuring the forwarding engine with the one or more policies and/or PERs, and Huima teaches that in response to receiving a signal to change the rule set, packet processing pauses. Ex. 1005 ¶¶ 47, 52; Ex. 1006 ¶ 31. We agree with Petitioner’s assertion that persons of ordinary skill in the art would have understood that a network device should pause the processing of any pending packets and any incoming packets that arrive after the instruction to change the rule set but before the change is completed, in view of Roesse and Huima. Pet. 47 (citing Ex. 1003 ¶ 171). Further, we continue to be persuaded that Hayter teaches using a packet processor with an integrated cache to store at least portions of packets in the L2 cache, and we are persuaded that such storage would occur while awaiting processing to begin again. Pet. 48–49 (citing Ex. 1007 1:40–48, 3:53–59, 6:3–26, 24:34–36; Ex. 1003 ¶ 176). We are persuaded that this teaches or suggests that any caching of packets, or portions thereof, would occur in the period between when a signal is received to change rule sets and when processing of packets

reoccurs under the new rule set. As such, we consider Patent Owner's arguments in the context of whether the combination of Roesse, Golnabi, Huima, and Hayter would have taught or suggested to one of ordinary skill in the art that *entire* packets should be cached in the combined system.

Patent Owner continues to argue that Hayter's system caches only a portion of a packet during processing. PO Resp. 20. Patent Owner continues that for Hayter's objective to be achieved, i.e., high-performance packet processing, persons of ordinary skill in the art would have been guided to cache only portions of packets, instead of entire packets. *Id.* at 21. Further, Patent Owner argues that

[A] desire for increased packet processing speed would not have prompted a POSITA to rearchitect the system to cache additional data. [Ex. 2005] ¶ 55. Hayter does not describe caching packets while swapping between rule sets, and Petitioner fails to explain what would have motivated a POSITA to modify Hayter's technique so that it would cache entire packets, rather than portions of packets. *Id.*

Id. at 23. Patent Owner argues that repurposing Hayter's cache would run counter to Hayter's stated purpose, that Hayter's system only stores a portion of a packet in cache memory for processing, and that skilled artisans would have leveraged Hayter's cache technique for the purpose of increasing processing speed, which is unrelated to caching entire packets while rule swapping. *Id.* at 23–28.

Petitioner asserts that Patent Owner's arguments fail to consider the combined teachings of Roesse, Huima, and Hayter and instead focus on reading Hayter in isolation. Pet. Reply 11. Petitioner reiterates that Hayter also teaches that some, and potentially the entirety, of a packet's payload may also be stored in the cache, with Hayter placing no upper limit on the portion of the data payload that may be stored in the cache. *Id.* at 13–14

(citing Pet. 49; Ex. 1003 ¶ 178; Ex. 1007 24:35–36; Ex. 1026 ¶ 16).

Petitioner also argues that both parties’ declarants agree that persons of ordinary skill in the art would have understood that some packets, such as TCP acknowledgement packets, may consist entirely of the header and lack any data payload or any other data, such that the entirety of a packet may consist of only its header. *Id.* at 19–20 (citing Ex. 1026 ¶ 24; Ex. 1027, 24:34–36, 31:3–11).

Patent Owner counters Petitioner’s arguments, arguing that “Hayter places an upper limit to the amount of payload data stored in cache because it teaches a POSITA to specifically identify and inhibit caching of the portion of the packet that will not be evaluated.” PO Sur-reply 8–9 (citing Pet. Reply 14; Ex. 1007, 24:21–24). Patent Owner asserts that Hayter’s inhibition of caching the entire packet is a teaching away. *Id.* at 11 (citing PO Resp. 8, 25; Ex. 1007, 6:19–23, 24:21–24; *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1362 (Fed. Cir. 2012); *ATD Corp v. Lydall, Inc.*, 159 F.3d 534, 546 (Fed. Cir. 1998)).

We continue to find Patent Owner’s argument to be unavailing. As discussed above, Petitioner argues, citing the testimony of Dr. Jacobson, that Hayter teaches caching the “entirety of the header” and potentially the entirety of a packet’s payload data and that it would have been obvious to a person of ordinary skill in the art “to store in cache *entire headers* and at least one byte of data payload (and *up to the entire payload*) of pending and incoming packets.” Pet. 49 (emphasis added) (citing Ex. 1007, 1:34–36, 3:53–59, 6:3–26, 24:34–36 (“the entirety of the header and at least one byte of data payload of the data packet is stored in the cache”); Ex. 1003 ¶¶ 177–179). *See also* Ex. 1026 ¶¶ 15–17 (reiterating Dr. Jacobson’s testimony).

In addition, we note that Hayter discloses that all of the header (or the entirety of the header) is cached (Ex. 1007, 11:14–22; 24:34–36) and that “[i]n some packets, the data payload . . . may not be included” (*id.* at 11:2–3). In those circumstances where a packet includes no payload data, the header would comprise the entirety of the packet, and when all of the header is cached in Hayter, the entire packet would be stored in the cache. It is well established that “combinations of prior art that sometimes meet the claim elements are sufficient to show obviousness.” *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1002 (Fed. Cir. 2016); *see also Hewlett–Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1326 (Fed. Cir. 2003) (“Just as ‘an accused product that sometimes, but not always, embodies a claimed method nonetheless infringes,’ a prior art product that sometimes, but not always, embodies a claimed method nonetheless teaches that aspect of the invention.” (quoting *Bell Commc’ns Rsch., Inc. v. Vitalink Commc’ns Corp.*, 55 F.3d 615, 622–23 (Fed. Cir. 1995))). Because Hayter discloses caching the entire packet in the circumstances where the entirety of the header is cached and the packet includes no payload data, we find that Hayter’s disclosures are sufficient to meet “caching the one or more packets” for purposes of obviousness analysis.

With respect to this finding, Patent Owner argues that because Hayter’s technique caches only the portion of the packet necessary for analysis, application of its algorithm would not result in caching entire packets for any of the packets because there is no disclosure that certain types of packets are treated differently than others. PO Sur-reply 12. We disagree, and we find Petitioner’s following assertions to be persuasive:

To the extent Patent Owner is arguing that the claim limitation “caching the one or more packets” only includes within its scope

packets that have payload data, and excludes packets such as TCP acknowledgement packets that lack payload data, such an interpretation of “packet[]” should be rejected as contrary to the plain and ordinary meaning of packet, which includes TCP acknowledgement packets. Ex. 1026 ¶ 26. Moreover, nothing in the claim language or the specification of the ’572 Patent evidences an intent to exclude packets that lack payload data from the meaning of “packet[]”. *Id.*

Pet. Reply 20. For such packets that comprise only or mostly a header, i.e., without a payload or minimal payload, Hayter clearly indicates that such packets would be completely contained within its L2 cache. This comports with Petitioner’s assertion that

[i]t would have been obvious to a POSITA to store in cache entire headers and at least one byte of data payload (and up to the entire payload) of pending and incoming packets, as Hayter teaches, when pausing the processing of the packets (per Roese and Huima) so that the packets can be efficiently processed once packet processing resumes with the second rule set.

Pet. 49 (Citing Ex. 1007, 1:34–36, 3:53–59, 6:11–13; Ex. 1003 ¶¶ 177–179).

We agree with Petitioner and are persuaded that one of ordinary skill in the art, in view of Roese, Golnabi, Huima, and Hayter, would have been motivated to utilize Hayter’s cache to store entire packets before resumption of processing of packets by the network device.

We also note the above analysis does not rely on Petitioner’s arguments that Patent Owner asserts to be beyond the permissible scope on reply (PO Sur-reply 13–15, 19–22), such that we need not address Patent Owner’s arguments about impermissible scope on reply.

c. Conclusion Regarding Obviousness of Claim 1

Based on the record presented and for the foregoing reasons, we determine that Petitioner has demonstrated that the combination of Roese, Golnabi, Huima, and Hayter teaches or suggests of all the limitations of

independent claim 1 and conclude that a preponderance of the evidence establishes that claim 1 is unpatentable as being obvious.

7. Independent Claims 9 and 17

With respect to independent claim 9, Petitioner asserts that Roesé's "response system" corresponds to the claimed "*network device*." Pet. 53 (citing Ex. 1005 ¶¶ 16, 33, 38). Petitioner further contends that Roesé teaches "at least one processor" recited in claim 9 because Roesé discloses that the response system's network device includes "processor 253," and that the system may include multiple network devices. *Id.* (citing Ex. 1005 ¶¶ 39, 41, Figs. 1–2; Ex. 1003 ¶ 196). Petitioner also asserts that Roesé teaches "memory comprising instructions" recited in claim 9 because Roesé discloses that the response system includes

a non-volatile recording medium, an integrated circuit memory element, or a combination thereof. Such computer program product may include . . . instructions . . . that, as a result of being executed by a computer, instruct the computer to perform one or more processes or acts described herein . . .

Id. at 55 (citing Ex. 1005 ¶ 59; Ex. 1003 ¶¶ 202–205).

With respect to the remaining limitations of claim 9, Petitioner asserts that they are substantially the same as the method steps of claim 1 and are rendered obvious for the reasons asserted with respect to claim 1, as discussed above.

Regarding independent claim 17, Petitioner asserts that Roesé teaches "[o]ne or more non-transitory computer-readable media comprising instructions . . . executed by one or more processors," as recited in claim 17, because Roesé discloses that the response system includes "**a computer readable medium, for example, a non-volatile recording medium**" that "**may include . . . instructions . . . that, as a result of being executed by a**

computer, instruct the computer to perform one or more processes or acts described herein” Pet. 55 (citing Ex. 1005 ¶ 59; Ex. 1003 ¶¶ 209–211). With respect to the remaining limitations of claim 17, Petitioner asserts that they are substantially the same as the method steps of claim 1 and are rendered obvious for the reasons asserted with respect to claim 1, as discussed above.

Patent Owner does not provide separate arguments with respect to the elements of independent claims 9 and 17, except with respect to similar elements argued with respect to claim 1. *See generally* PO Resp.

For the same reasons discussed above with respect to claim 1, based on the current record, Petitioner has demonstrated that the combination of Roese, Golnabi, Huima, and Hayter teaches or suggests of all the limitations of independent claims 9 and 17 and conclude that a preponderance of the evidence establishes that claims 9 and 17 are unpatentable as being obvious.

8. Dependent Claims 2, 4–8, 10, 12–16, 18, and 20–24

Petitioner asserts that dependent claims 2, 4–8, 10, 12–16, 18, and 20–24 are obvious under 35 U.S.C. § 103(a) over the combination of Roese, Golnabi, Huima, Hayter. *See* Pet. 55–66. With respect to the language recited in the dependent claims, Petitioner asserts that the parallels between the dependent claims and corresponding claims of the ’148 patent preclude Patent Owner from relitigating whether the combination renders those elements nonobvious. *Id.* Additionally, Petitioner also points to specific support for the limitations of the dependent claims based on disclosures in the cited references. *Id.* We have reviewed the citations provided in the Petition, and we agree that that the combination of Roese, Golnabi, Huima, and Hayter teaches or suggests of all the limitations of dependent claims 2, 4–8, 10, 12–16, 18, and 20–24.

Patent Owner does not provide separate arguments with respect to the elements of dependent claims, except with respect to elements argued with respect to claim 1. *See generally* PO Resp. As such, we conclude that a preponderance of the evidence establishes that claims 2, 4–8, 10, 12–16, 18, and 20–24 are unpatentable as being obvious over the combination of Roese, Golnabi, Huima, Hayter.

F. Obviousness over Roese, Golnabi, Huima, Hayter, and Esbensen

Claims 3, 11, and 19 depend from claims 1, 9, and 17, respectively. Petitioner contends that claims 3, 11, and 19 are unpatentable under 35 U.S.C. § 103(a) over Roese, Golnabi, Huima, Hayter, and Esbensen. Pet. 66–70. Patent Owner does not explicitly contest the contentions made regarding claims 3, 11, and 19, instead relying on arguments regarding the teachings of Roese and Hayter, discussed above. *See* PO Resp. 20 n.2.

1. Overview of Esbensen

Esbensen is an issued U.S. patent directed to a variable capacity cache memory. Ex. 1009, Abstract. Esbensen describes “a method and an apparatus ... for dynamically changing the storage capacity, or size, of a cache memory.” *Id.* at 2:44–48. Esbensen also discloses that “calculating the amount of output medium necessary to store the current contents of the cache memory” and that “the size of the cache memory can be increased by the size of the block or file of data which is to be next written into the cache memory.” *Id.* at 3:16–29.

2. Dependent Claims 3, 11, and 19 as Obvious over Roese, Golnabi, Huima, Hayter, and Esbensen

Petitioner asserts that a person of ordinary skill in the art would have been motivated to combine the teachings of Roese and Esbensen to allow

Roesse's cache to be dynamically adjusted in size in order to maintain cache optimization and efficiency. Pet. 67 (citing Ex. 1003 ¶¶ 270–278).

Petitioner also asserts that Roesse and Esbensen are analogous prior art and both pertain to the same field of endeavor, and Roesse specifically discloses that it utilizes a storage means with a caching function, but Roesse does not provide implementation details of how the cache is allocated. *Id.* (citing Ex. 1005 ¶ 38; Ex. 1009, 6:36–39, 6:44–49; Ex. 1003 ¶¶ 271–272).

Petitioner asserts that a person of ordinary skill in the art implementing the system of Roesse would have looked to other relevant references to determine how to efficiently allocate its cache memory, and Esbensen is one such reference. *Id.* (citing Ex. 1003 ¶¶ 272–274). Petitioner also asserts that this may particularly be the case where the combination of Roesse with Golnabi allows for rule sets to be combined or split apart, resulting in changes to the size of memory needed for a rule set. *Id.* (citing Ex. 1003 ¶¶ 274–276).

Petitioner contends that Roesse and Esbensen teach “storing . . . in a memory buffer” recited in claim 3. Pet. 68 (citing Ex. 1005 ¶¶ 38, 56; Ex. 1009, 12:25–28; Ex. 1003 ¶¶ 281–282). Petitioner further asserts that Esbensen teaches the claimed “dynamically adjusting” because Esbensen discloses “**dynamically changing the storage capacity, or size, of a cache memory . . . by an amount corresponding to the next received block or file of information to be written.**” *Id.* at 69 (citing Ex. 1009, 2:44–68, 3:16–33). Lastly, Petitioner argues that it would have been obvious to a person of ordinary skill in the art to apply Esbensen's teachings to Roesse's system because it would allow for the size of Roesse's cache to be adjusted dynamically to advantageously avoid excessive cache size. *Id.* (citing Ex. 1003 ¶¶ 284–288).

With respect to dependent claims 11 and 19, Petitioner asserts that all of the elements of those claims are obvious for the same reasons discussed above with respect to dependent claim 3. Pet. 69–70.

We find that the combination of Roese, Golnabi, Huima, Hayter, and Esbensen teaches all the limitation of claims 3, 11, and 19 of the '572 Patent and that a motivation to combine the relevant teachings of these references existed. We conclude that a preponderance of the evidence establishes that claims 3, 11, and 19 of the '572 Patent are unpatentable as obvious.

III. CONCLUSION⁹

Having reviewed all the evidence and arguments of record, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 1–24 of the '572 Patent are unpatentable. In summary:

Claims	35 U.S.C. §	Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 2, 4–10, 12–18, 20–24	103(a)	Roese, Golnabi, Huima, Hayter	1, 2, 4–10, 12–18, 20–24	
3, 11, 19	103(a)	Roese, Golnabi, Huima, Hayter, Esbensen	3, 11, 19	
Overall Outcome			1–24	

⁹ 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*. See 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).

IV. ORDER

In consideration of the above it is:

ORDERED that claims 1–24 of the '572 Patent are unpatentable; and

FURTHER ORDERED that 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.

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