

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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KEYSIGHT TECHNOLOGIES, INC.,  
Petitioner,

v.

CENTRIPETAL NETWORKS, INC.,  
Patent Owner.

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IPR2023-00448

Patent 11,012,474 B2

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PETITIONER'S REQUEST FOR DIRECTOR REVIEW

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## **I. INTRODUCTION**

Keysight Technologies, Inc. (“Petitioner”) requests Director Review in view of inconsistencies within the Board’s Final Written Decision in two material respects on two sets of dependent claims—(1) claims 6, 14, 22, and 30, and (2) claim 33. If there are inconsistencies in the Board’s reasoning, the Federal Circuit has made clear that the Board must explain them. The Board did not do so here.

First, the Board’s Final Written Decision diverged from its Institution Decision without explanation. Whereas the Institution Decision explicitly found that the Petition had sufficiently established that the prior art references teach the inventions covered by both sets of dependent claims, the Final Written Decision directly contradicted the Institution Decision and found those claims not unpatentable based on its assertion that the Petition had not advanced arguments for their invalidation. The FWD does not explain or reconcile this inconsistency.

Second, for claim 33, the Board’s Final Written Decision also is internally irreconcilable. Specifically, the FWD found that the primary reference renders obvious the subject matter of claim 33 in its analysis of other claims, whereas it then found claim 33 not unpatentable, without any explanation as to how the same subject matter can be both unpatentable and not-unpatentable over the primary reference.

The Board’s unexplained reversal on both sets of dependent claims is particularly troubling given the absence of any dispute that the prior art teaches their

subject matter. The Petition set forth how the prior art covered those claims in its analysis of the prior art references, independent claims, and other dependent claims. To be clear, the Petition inadvertently did not repeat those teachings in later subsections for those dependent claims, as it did for other claims, but such repetition was not required to establish their obviousness, as the Institution Decision recognized. Further, Patent Owner never contested the obviousness of those claims. Thus, there was no dispute that the prior art teaches the subject matter of claims 6, 14, 22, and 30—the claimed packet security gateway being “a LAN switch.” Pet. at 12, 19-21; Ex. 1005 ¶ 54 (“network device 146”, which the Petition explained corresponds to the packet security gateway, “includes ... a network switch”). There also was no dispute that the prior art teaches the subject matter of claim 33—“rout[ing]” packets to “a monitoring device”. Pet. at 22-23, 73; Ex. 1005 ¶ 103 (identifying a “re-route” action to be applied to packets); Ex. 1003 ¶ 168 (explaining obviousness of routing to a monitoring device in view of “re-route” action).

Permitting a few clearly-unpatentable claims of an otherwise invalid patent to survive IPR without even a merits analysis of the evidence presented in the Petition would be contrary to the IPR statutory purpose of improving patent quality. Accordingly, Petitioner respectfully requests that Director Review be granted to direct the Board to consider the full analysis of the prior art from the Petition and provide a reasoned explanation with respect to the Petition’s argument and evidence

that it had found sufficient to teach the inventions covered by claims 6, 14, 22, 30, and 33 in its Institution Decision.

## **II. BACKGROUND**

The '474 patent is directed to systems and methods that include “one or more packet security gateways” (PSGs) associated with a “security policy management server” (SPMS). Ex. 1001, 1:58–60; FWD at 3. Each packet security gateway may perform “at least one of multiple packet transformation functions specified by the dynamic security policy” on “packets associated with a network protected by the packet security gateway.” Ex. 1001, 1:60–66; FWD at 3-4. “Performing the at least one of multiple packet transformation functions specified by the dynamic security policy on the packets may include performing at least one packet transformation function” other than “forwarding (accepting or allowing) or dropping (denying) a packet,” such as routing a packet to a monitoring device. Ex. 1001, 1:66–2:3, 8:23–33; FWD at 4.

The '474 patent's Figure 3 depicts an exemplary dynamic security policy including five rules, with each row corresponding to a rule. Ex. 1001, 7:27–30, Fig. 3; *id.* at 4:5; FWD at 5. “Each rule may specify criteria and one or more packet transformation functions that should be performed for packets associated with the specified criteria.” Ex. 1001, 7:30–33. The “specified criteria” may take the form of a five-tuple of values, including protocol, source and destination IP addresses, and

source and destination ports. Ex. 1001, 7:33–39; FWD at 6. The so-called “packet transformation functions” include customary “actions” for networking devices, such as “accepting or allowing,” “blocking (denying)” or “route[ing] to a monitoring device.” Ex. 1001, 8:23-33, Fig. 3.

The Petition (Paper 2) explained that all 33 claims of the ’474 Patent are rendered obvious over the combination of Law (Ex. 1005) and Golnabi (Ex. 1009), alone or in combination with other references. Pet. at 11-73. The Patent Owner, in both its Preliminary Response (Paper 6) and Response (Paper 12), presented arguments solely disputing the obviousness of the independent claims. Prelim. Resp. at 9-29; Resp. at 11-34. In both its Institution Decision (Paper 7, “I.D.”) and Final Written Decision (Paper 25, “FWD”), the Board correctly rejected Patent Owner’s arguments and found that the combined teachings of Law and Golnabi render obvious the subject matter of the independent claims. FWD at 17-87; I.D. at 16-57.

The Petition also explained how the combined teachings of Law and Golnabi render obvious the subject matter of the first set of dependent claims, numbers 6, 14, 22, and 30. These claims each recite: “wherein the packet security gateway is a LAN switch.” As the Petition explained, these claims are rendered obvious over the combination of Law and Golnabi. Pet. at 3 (identifying claims 6, 14, 22, and 30 as included in ground 1 as obvious over Law and Golnabi); Pet. at 11 (same); Pet. at 11-58 (ground 1 arguments). The Petition explained in ground 1 how Law and

Golnabi render obvious the subject matter of these claims in the context of addressing the related “packet security gateway” limitation of the independent claims, even though it did not repeat that explanation in a later section specifically addressing those dependent claims. For example, the Petition explained that the claimed “packet security gateway” corresponds to Law’s UTMS-configured network devices 146a and 146b, which may be a firewall and/or a switch. Pet. at 12 (“Law discloses UTMS-configured network devices, such as firewalls 146a and 146b”) (citing Law, Ex. 1005 ¶¶ 52, 54-55); Pet. at 19-21 (explaining that “Law’s perimeter UTMS firewalls 146a and 146b each correspond to the claimed ‘packet security gateways.’”) (citing Law, Ex. 1005 ¶¶ 52, 54-55). The evidence cited by the Petition for Law’s UTMS-configured network device 146 corresponding to the claimed “packet security gateway” explicitly states that it may include both a “firewall” and a “switch”. Ex. 1005 ¶ 54 (“**network device 146 includes** one or more of ... **a network switch** [and] a firewall”) (emphasis added).

In addition, the Petition explained how the combined teachings of Law and Golnabi render obvious the subject matter of the dependent claim 33, which recites: “wherein at least one packet transformation function is configured to route associated packets to a monitoring device.” Pet. at 3 (identifying claim 33 as included in ground 1 as obvious over Law and Golnabi); Pet. at 11 (same); Pet. at 11-58 (ground 1 arguments). In particular, although the analysis was incorporated

into the Petition’s analysis of the “packet transformation function” of claim 1 and other dependent claims rather than a later sub-section, the Petition explained in detail how Law and Golnabi render obvious the subject matter of claim 33. For example, the Petition explained that “packet transformation function” has been construed to mean “[one or more] operations performed on a packet” (Pet. at 22) and showed that Law discloses the same three “packet transformation functions” disclosed by the ’474 patent—accept, block, and re-route. *Id.* Specifically, the Petition explained that Law discloses the packet transformation functions of being “configured to perform blocking operations on a packet” as well as “accept (forward to destination), notify, and **re-route actions.**” Pet. at 22-23 (citing Ex. 1005 ¶ 103) (“While the example first rule 1326 identifies an action of ‘accept,’ other actions may include, but are not limited to, block, notify, and/or re-route.”). Similarly, the Petition explained that “[i]n view of Law’s express disclosure of re-routing a packet based on the packet identification criteria of a corresponding rule, it would have been obvious to a POSITA to re-route such packets to a monitoring device.” Pet. at 73 (citing Ex. 1005 ¶ 103, Ex. 1003 ¶ 168).

Patent Owner’s Preliminary Response did not dispute the sufficiency of the Petition’s evidence for claims 6, 14, 22, 30, and 33. Prelim. Resp. at 9-29.

In the Institution Decision, the Board credited the Petition’s argument and evidence and found, correctly, that Petitioner had established that the combined



disclosures in Law and Golnabi taught the inventions covered by claims 6, 14, 22, 30, and 33. I.D. at 58 (“[F]or the reasons advanced by Petitioner and supported by Dr. Jacobson’s testimony, Petitioner establishes sufficiently that the combined disclosures in Law and Golnabi teach the inventions covered by claims 2, 3, 5–7, 10, 11, 13–15, 18, 19, 21–23, 26, 27, 29–31, and 33.”).

In its Response, Patent Owner again did not dispute the I.D.’s finding that the Petition had established that the combined disclosures in Law and Golnabi teach claims 6, 14, 22, 30, and 33. *See* Resp. at 11-34 (only raising patentability arguments with respect to the independent claims).

At the oral hearing, the Board asked Petitioner’s counsel to identify the arguments in the Petition supporting the unpatentability of claims 6, 14, 22, 30, and 33, and counsel directed the Board to portions of the Petition addressing the above-identified evidence. Paper 24 (Hearing Tr.) at 21:3–15, 41:9–42:7. Nevertheless, in its FWD, the Board did not analyze any of the Petition’s arguments and evidence regarding the subject matter of these claims or the relevant portions of Law, including the evidence and portions of Law identified by counsel in both the Petition and at the hearing, nor did the Board analyze any of the Petition’s argument and evidence that the Board had previously found “sufficient” in the I.D. to “teach the inventions covered by” claims 6, 14, 22, 30, and 33. *See* FWD at 91-92, 94. Instead, the FWD erroneously characterized counsel’s identification of the relevant teachings

*in the Petition* and prior art as “a new unpatentability argument” and asserted that “the Petition does not address the obviousness of these claims.” *Id.* In so doing, the Board did not explain the contradiction between that assertion in the FWD and the I.D.’s finding that the Petition had “establishe[d] sufficiently” that Law and Golnabi taught the inventions covered by those claims. *Id.*; I.D. at 58.

Moreover, for claim 33, the Board failed to reconcile an internal inconsistency in its reasoning in the FWD itself. Specifically, the Board did not address how it found that the subject matter of claim 33 was not unpatentable over Law while also finding that the same subject matter of claims 8, 16, 24 and 32 was unpatentable over Law. FWD at 106. Like claim 33, each of claims 8, 16, 24, and 32 recite “routing ... each packet to a monitoring device,” which the Board found obvious in view of Law’s disclosure of the “re-route” action and Dr. Jacobson’s testimony. FWD at 106 (citing Pet. at 73; Ex. 1005 ¶ 103, Ex. 1003 ¶ 168). As it stands, the Board found that the Petition both established and did not establish that Law renders obvious routing packets to a monitoring device.

### **III. LEGAL STANDARD**

Director Review of the Board’s final written decision is appropriate for “decisions presenting (a) an abuse of discretion, (b) important issues of law or policy, (c) erroneous findings of material fact, or (d) erroneous conclusions of law.” *See* USPTO, Revised Interim Director Review Process at 2.B, Availability of Director

Review: AIA Trial Proceedings (last updated April 16, 2024), <https://www.uspto.gov/patents/ptab/decisions/revised-interim-director-review-process>.

#### **IV. ARGUMENT**

##### **A. The Unexplained Contradictory Findings Between The FWD and I.D. Regarding Claims 6, 14, 22, 30, and 33 Must Be Vacated**

It is well-established that when, without explanation, a final written decision reaches the opposite conclusion that the Board had reached in its institution decision and overlooks an argument that it had previously considered, the appropriate course of action is to send the matter back to the Board for further consideration of the overlooked argument. *See Google LLC v. Conversant Wireless Licensing S.A.R.L.*, 753 Fed. Appx. 890, 893, 895 (Fed. Cir. Nov. 20, 2018) (vacating patentability finding and remanding for consideration of “all arguments and evidence” regarding an overlooked argument when “[w]ithout explanation, the Board's final written decision diverged from its institution decision” and “did not explain why it reached the opposite conclusion that it reached in its institution decision.”); *Vicor Corp. v. SynQor, Inc.*, 869 F.3d 1309, 1321-22 (Fed. Cir. 2017) (“The Board's decision ... **must** be vacated” because “the Board reached inconsistent conclusions ... without any explanation to justify such inconsistency.... [W]here a panel ... issues opinions on the same technical issue between the same parties on the same record, and reaches opposite results without explanation, we think the best course is to vacate and

remand these findings for further consideration.”) (emphasis added); *see also, e.g., Kiewit Infrastructure West Co. v. United States*, 147 Fed. Cl. 700, 710 (Ct. Fed. Cl. Mar. 11, 2020) (“When the record shows that an agency has reached opposite conclusions from the same set of facts, the agency **must** ... explain how the same facts led to opposite conclusions before its reasoning for either conclusion can be considered ‘compelling.’”) (emphasis added).

As discussed above, the Board’s Institution Decision and Final Written Decision both assessed whether the Petition had sufficiently established whether the combined teachings of Law and Golnabi taught claims 6, 14, 22, 30, and 33, yet they reached opposite conclusions. *Compare* I.D. at 58; FWD at 91-92, 94. In particular, as the Institution Decision found, the Petition sufficiently established that the combined teachings of Law and Golnabi teach the inventions covered by claims 6, 14, 22, 30, and 33. I.D. at 58.

Indeed, the Petition did. Regarding the subject matter of claims 6, 14, 22, and 30—“wherein the packet security gateway is a LAN switch”—the argument and evidence in the Petition explicitly demonstrated that Law’s UTMS-configured network devices 146a and 146b, which the Petition asserted correspond to the claimed “packet security gateway”, may be a LAN switch. Pet. at 12 (“Law discloses UTMS-configured network devices, such as firewalls 146a and 146b”) (citing Law, Ex. 1005 ¶¶ 52, 54-55); Pet. at 19-21 (explaining that “Law’s perimeter UTMS

firewalls 146a and 146b each correspond to the claimed ‘packet security gateways.’” (citing Law, Ex. 1005 ¶¶ 52, 54-55); Ex. 1005 ¶ 54 (“**network device 146 includes one or more of ... a network switch [and] a firewall**”) (emphasis added).

Likewise, regarding the subject matter of claim 33—“wherein at least one packet transformation function is configured to route associated packets to a monitoring device”—the Petition explained that Law discloses the packet transformation functions “blocking operations on a packet” as well as “accept (forward to destination), notify, and **re-route actions.**” Pet. at 22-23 (citing Ex. 1005 ¶ 103) (“While the example first rule 1326 identifies an action of ‘accept,’ other actions may include, but are not limited to, block, notify, and/or re-route.”). The Petition further established that in view of Law’s disclosure of a “re-route action[],” it would have been obvious to re-route such packets to a monitoring device. Pet. at 73 (“In view of Law’s express disclosure of re-routing a packet based on the packet identification criteria of a corresponding rule, it would have been obvious to a POSITA to re-route such packets to a monitoring device.”) (citing Ex. 1005 ¶ 103, Ex. 1003 ¶ 168).

In contrast with the I.D.’s consideration of the Petition’s arguments, finding them sufficient to show that Law and Golnabi taught the subject matter of these claims, the FWD reached the opposition conclusion on the same evidence. FWD at 91-92, 94. The FWD did not include any analysis of the cited teachings of Law that

disclose the subject matter of claims 6, 14, 22, 30, and 33. For example, the FWD did not address Law's disclosure that "network device 146 includes ... a network switch;" Pet. at 12, 19-21; Ex. 1005 ¶ 54. Nor did the FWD address the Petition's argument that Law's packet transformation functions included a "re-route action[]." Pet. at 22-23 (citing Ex. 1005 ¶ 103). Instead, the FWD's analysis of the Petition's arguments and evidence with respect to the subject matter of claims 6, 14, 22, 30, and 33 is limited to an assertion that "the Petition does not address the obviousness of these claims." FWD at 91-92, 94.

This assertion does not explain the inconsistency with the I.D. Rather, it contradicts the Petition itself and the I.D.'s finding that the Petition had in fact "establishe[d] sufficiently that the combined disclosures in Law and Golnabi teach the inventions covered by claims [6, 14, 22, 30, and 33]." I.D. at 58.

To be clear, the Petition did not repeat its analysis of the subject matter of claims 6, 14, 22, 30, and 33 in later sections addressing the dependent claims, as it did for other claims directed to subject matter not already addressed. However, there is no separate-subheadings requirement or requirement that arguments be repeated for each dependent claim. *See Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 271-272 (2016) (stating PTO view that the "particularity" requirement of § 312 does not mean that a petition needed to "mention[] claims 10 and 14 separately, for claims 10, 14, and 17 are all logically linked ... and a petition need not simply repeat the

same argument expressly when it is so obviously implied”). Rather, the Petition was obligated to identify “the relevance of the evidence to the challenge raised, including identifying specific portions of the evidence that support the challenge.” 37 C.F.R. § 42.104(b)(5). As explained above, and as Patent Owner did not dispute, the Petition did just that, providing ample evidence to support the I.D.’s determination that the Petition had sufficiently established that the combined teachings of Law and Golnabi teach the inventions covered by claims 6, 14, 22, 30, and 33. Having considered that evidence in the I.D., the Board was not free to ignore it in the FWD without a reasoned explanation. *See Vicor*, 869 F.3d at 1321; *see also Donner Tech., LLC v. Pro Stage Gear, LLC*, 979 F.3d 1353, 1359 (Fed. Cir. 2020) (“conclud[ing] that the Board erred in its analysis” when “the Board erroneously stated that [petitioner] did not put forth any argument or evidence” on an issue) (citations omitted). Accordingly, the Board should be required to consider the overlooked argument and explain whether those teachings of Law and Golnabi render obvious claims 6, 14, 22, 30, and 33.

**B. The Unexplained Contradictory Findings Between The FWD’s Analysis Of Claim 33 And Claims 8, 16, 24 and 32 Must Be Vacated**

The Final Written Decision also includes an unexplained, internal inconsistency in its analysis of claim 33. Claims 8, 16, 24, 32, and 33 each recite routing packets to a packet monitoring device. Compare Ex. 1012 at [8.3], [16.3],

[24.3], and [32.3] (“routing ... each packet to a monitoring device”) with claim 33 “wherein at least one packet transformation function is configured to route associated packets to a monitoring device”). In the context of claims 8, 16, 24, and 32, the FWD found that Law rendered obvious routing packets to a monitoring device, whereas in the context of claim 33, the FWD found that Law did not render obvious routing packets to a monitoring device. *See* FWD at 106. The Final Written Decision did not address, explain, or provide any reason for this internal inconsistency, let alone address the Petition’s arguments and evidence on which it had based its decision to institute.

Instead, the FWD’s analysis of the Petition’s arguments and evidence with respect to the subject matter of claim 33 is limited to an assertion that “the Petition does not address the obviousness of claim 33.” FWD at 94. However, this assertion fails to explain the FWD’s internal inconsistency of how Law renders obvious re-routing packets to a monitoring device only for claims 8, 16, 24, and 32, but not claim 33. *See IBG LLC v. Trading Techs. Int’l, Inc.*, 757 Fed. Appx. 1004, 1008 (Fed. Cir. Feb. 23, 2019) (“We conclude that the Board’s reasoning with regard to the ’132 and ’304 patents is internally inconsistent and therefore arbitrary and capricious.”). The Board should be required to consider the overlooked argument and explain whether the teachings of Law and Golnabi that render obvious claims 8, 16, 24, and 32 likewise render obvious the same subject matter in claim 33.



### **C. Important Policy Considerations Favor Director Review**

The FWD found every claim of the '474 patent that it substantively analyzed to be unpatentable over the prior art. Permitting a handful of clearly-unpatentable claims of an otherwise invalid patent to survive IPR without even a merits analysis of the evidence presented in the Petition, simply because the evidence was not later repeated in a subsection expressly addressing the specific dependent claims, would be contrary to the IPR statutory purpose of “improv[ing] patent quality and restor[ing] confidence in the presumption of validity that comes with issued patents.” *See Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 272 (2016) (quoting H.R. Rep. No. 112-98, pt. 1, at 45, 48); *see also Code200, UAB v. Bright Data, Ltd.*, IPR2022-00861, Paper 18 at 4-5 (Aug. 23, 2022) (precedential) (order granting director review of an I.D. that discretionarily denied institution and explaining that “[t]he desire[] to improve patent quality” favors “allowing [a petitioner] the opportunity to pursue a decision on the merits”). Just as policy favors instituting for a merits consideration of a petition’s arguments, the same policy favors considering the merits of a petition’s arguments once instituted. *Id.*

### **V. CONCLUSION**

For the reasons in the Petition, and given above, Petitioner respectfully requests Director Review of the Board’s FWD on claims 6, 14, 22, 30, and 33.

Dated: July 3, 2024

Respectfully submitted,

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## **CERTIFICATE OF SERVICE**

In accordance with 37 C.F.R. § 42.6(e), and pursuant to an agreement by the parties that filing with the Board through P-TACTS constitutes electronic service, the undersigned certifies that service is being made upon the Patent Owner's representatives identified below via the filing of this document.

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