

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ARISTA NETWORKS, INC.,
Petitioner,

v.

CORRIGENT CORPORATION,
Patent Owner.

Case IPR2023-00839

Patent 9,118,602

PATENT OWNER SUR-REPLY

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Patent Owner Corrigent Corporation respectfully submits this Sur-Reply to Petitioner's Reply (Paper 23, "Reply") regarding the '602 Patent.

I. Introduction

The Petition was deficient. For Ground 1, the primary reference, RFC3209, is a generic standard for networking communications and does not include the claimed LAG or "single physical tunnel port" of a LAG that is used to transmit data between nodes. Raz does not cure these deficiencies. Instead, Raz discloses multiplexed, internal subports (i.e., processors) that converge at a single Ethernet link between nodes, and teaches away from the claimed LAG and the selection of a single physical tunnel port between network nodes. Petitioner's Reply ignores these teach away arguments, which alone is fatal to the Petition.

Moreover, both RFC3209 and Raz emphasize the *independent* selection of network pathways at each network node—not the consistent assignment of a single physical tunnel port of a LAG that is encoded and sent to a preceding node by a first MPLS/LAG switch, received by that first switch, and then sent to a second MPLS/LAG switch through the same physical port. Petitioner's alleged motivation—bandwidth—is generic and would not motivate the POSA to arrive at the claimed invention, let alone do so with a reasonable expectation of success.

The Reply arguments do not salvage Petitioner's case. Petitioner doubles down on its argument that Raz teaches the claimed LAG. But the claimed LAG, as

even the Petitioner in IPR2023-00447 recognized, pertains to links *between* network nodes, not within them. In arguing that the combination includes the claimed LAG, Petitioner mixes and matches Raz’s embodiments, and relies on new, incorrect, conceptions of a LAG that were not in the Petition and are divorced from the claimed invention. Even if considered, Petitioner does not explain how or why utilizing Raz’s internal subports with RFC3209 would teach the assignment of a single physical tunnel port of a LAG assigned and transmitted between three distinct network nodes as claimed.

Ground 2 fares no better. The ground allegedly adds Ferguson to the combination of RFC3209 and Raz, but fails to address RFC3209 or how the combination would work. Moreover, Ferguson only provides a generic teaching of LAGs. The combination fails to cure Ground 1’s deficiencies and thus fails. Indeed, Petitioner simply recycles arguments from the petition in IPR2023-00447, which relied on the combination of Raz and Ferguson, but not RFC3209.

II. RFC3209 and Raz Do Not Render the Claims Obvious

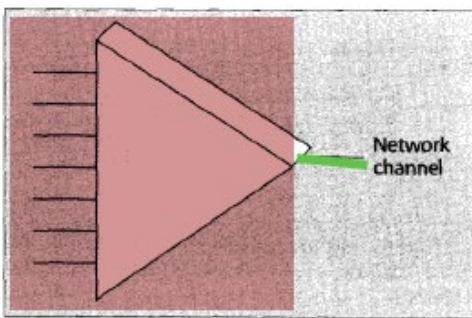
A. RFC3209 and Raz Do Not Render Obvious the Claimed “LAG”

1. Petitioner Ignores That the Combination of RFC3209 and Raz Teaches Away From the Claimed Invention

Petitioner’s Reply insists that “a POSITA would have understood Raz’s disclosure of subports to be a link aggregation group.” Reply, 2. But this argument is wrong. *First*, there is no dispute that Raz’s subports—or processors—are internal

and are ultimately used to multiplex processing that occurs *within a router* into a single, high speed packet stream. Even Cisco, the prior Petitioner in IPR2023-00447, admitted this. *See Cisco v. Corrigent*, IPR2023-00447, Paper 21, at 1-2 (PTAB Feb. 20, 2024) (“Petitioner has always acknowledged that Raz addresses the use of subports within an LSR”) (citing IPR2023-00447, EX1021, ¶13).

Here, Petitioner admits that Raz’s subports “transport high speed Ethernet network traffic *within an LSR*” and that “Raz’s subports provide multiple 1G pathways for handling packet streams and are logically associated and treated as a single aggregated 10G pathway.” Pet., 17; Reply, 3.¹ Dr. Min admitted that Raz’s subports “converge into a single 10 gigabit Ethernet cable.” EX2016, 31:17-32:21. That single 10G link is the only link that Raz teaches between network nodes. As shown below, this teaching in Raz is known in the art as multiplexing.



■ Figure 1. Multiplexer symbol.

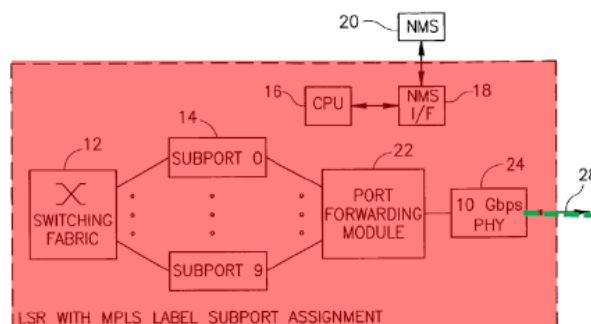
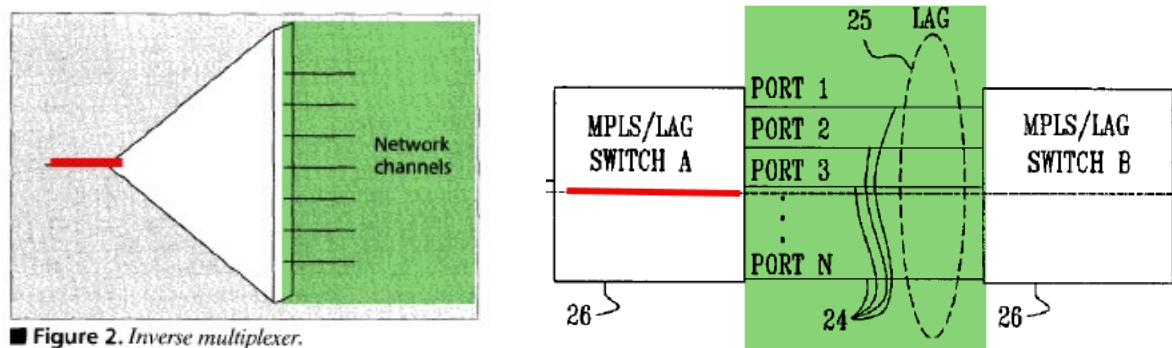


FIG.1

¹ Petitioner also conceded that “the components described by RFC3209 and Raz would be operating as described in their respective references.” Pet., 14.

POR, 10, 16, 28; EX2007, ¶¶49, 51, 66, 67, 96; EX2010, Fig.1. Petitioner cannot now ignore this teaching, as it must consider the references as a whole. POR, 4; *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987) (reference must be considered in its entirety, including portions that teach away).

The '602 patent is directed toward the exact opposite concept—inverse multiplexing—as reflected in the below diagrams, which show a single link that is inverse multiplexed into “a group of parallel physical links between two endpoints in a data network.” POR, 9, 10, 16, 28; EX1001, 2:1-5; EX2007, ¶¶49, 51, 67, 96; EX2010, Fig. 2.



These diagrams confirm that the combination of RFC3209 and Raz teaches away from the claimed LAG. Specifically, the combination at most teaches toward utilizing internal subports (i.e. processors) *within an LSR*, only to multiplex them into a single link between LSRs—not toward one using a LAG spanning multiple links, from which a “single physical tunnel port” is selected.

Despite repeatedly noting that Raz would have “discouraged a POSA” and “taught away from” communications using the claimed LAG and associated single physical tunnel port, Petitioner’s Reply ignores it. POR, 10, 14, 15, 54; EX2007, ¶¶51, 62-63, 156. The words “teach away” never appear in the Reply, and Petitioner fails to recognize or counter the fact that Raz teaches the exact opposite configuration of the ’602 patent’s claimed invention. Thus, the Petition fails as a matter of law. *W.L. Gore & Assocs. v. Garlock.*, 721 F.2d 1540, 1550 (Fed. Cir. 1983) (cannot “disregard[] disclosures in the references that diverge from and teach away from the invention at hand”).

Moreover, Petitioner admits that its obviousness argument is based on extending “RFC3209’s LSR teachings to incorporate LAG-compatible LSR’s *as taught by Raz.*” Reply, 12 (emphasis added); EX2013, 11:19-12:2. Petitioner emphasizes that Raz is compatible with RFC3209’s labeling protocol, RSVP-TE, and provides citations to Raz that include references to RSVP-TE. Reply, 11, 13 (citing EX1006, 5:10, 6:46-50). But this only reinforces that, if combined, a POSA starting with RFC3209 and modifying it in view of Raz would have been motivated to implement *intra-node* subports that converge in a single link.

Finally, Petitioner cannot escape that Raz’s subports are processors, not physical links (or “physical tunnel ports”) of a LAG. As Patent Owner explained, “Raz’s subports are *processors* strictly *within* a single LSR and thus do not

constitute or suggest a group of *links between* two LSRs (i.e., a LAG).” POR, 9 (citing EX2007, ¶¶45-48). Petitioner does not dispute that Raz’s subports are not the required links. Instead it recasts Patent Owner’s argument as a “theory that Raz’s subports are not actually *ports*, but merely processors,” and states that “[t]he subports [in Raz] are described as 1G *interfaces* trunked from a 10G *interface*, which a POSITA would have understood refers to ports.” Reply, 4 (citing EX1006, 7:7-16; EX1034, ¶31). But Raz says no such thing. To the contrary, the disclosure Petitioner relies on refers to the “high speed interface (e.g., 10G),” and does not refer to the subports as interfaces. EX1006, 7:14-16. Indeed, the subports are referenced as processors, in contrast to the 10G “line interface” consisting of a “10G PHY 24 coupled to a 10G link 28” into which they must converge. EX1006, Abstract, 7:1-5, 7:7-9, Fig. 1; EX2016, 32:7-21, 59:6-20. This only reinforces that Raz does not teach the claimed LAG and the associated physical tunnel ports.

2. Petitioner’s New Arguments Based on IEEE 802.3ad Ignore Portions of 802.3ad, the Specification, and Claims

The Petition argued that Raz taught the claimed LAG, asserting that “a POSITA would have understood that Raz *discloses and suggests Ethernet subports in an Ethernet LAG*.” Pet., 19 (emphasis added). But as discussed above, Raz teaches a single high-speed Ethernet link to interconnect nodes—the exact opposite of the claimed LAG. POR, 10, 15, 28. Thus, after its arguments crumbled, the Reply pivoted to IEEE 802.3ad and argues that, based on 802.3ad, a “[a] POSITA would

understand Raz’s associated group of subports are a LAG,” and that a LAG is implemented at the MAC Layer. Reply, 2-5 (citing EX1033).

Petitioner could have raised this new argument in the Petition. The 802.3ad specification is incorporated by reference in the ’602 patent, and Dr. Min, Petitioner’s expert, admitted that he was fully aware of 802.3ad decades before the Petition and his initial declaration. EX1001, 2:8-17; EX2016, 8:13-9:7, 37:5-10. Yet it was not until its Reply that Petitioner and Dr. Min, in new declaration testimony spanning more than a dozen paragraphs, relied on 802.3ad for the assertion that Raz teaches the claimed LAG. EX1001, 2:8-12; EX1003, ¶27 (referencing 802.3ad, but not addressing it in the context of Raz or alleged LAGs); EX1034, ¶¶11-23. Because this is an improper new argument it should be rejected. PTAB Consolidated Trial Practice Guide (Nov. 2019) (“PTAB-TPG”) at 73-74; *See, e.g., Intelligent Bio-Systems, Inc. v. Illumina Cambridge, Ltd.*, 821 F.3d 1359, 1369-70 (Fed. Cir. 2016); *Ariosa Diagnostics v. Verinata Health, Inc.*, 805 F.3d 1359, 1367-68 (Fed. Cir. 2015). Petitioner’s shift prejudices Patent Owner, who cannot respond with new expert evidence at this late stage. *See* 37 CFR § 42.23(b).

Even if considered, Petitioner’s 802.3ad argument is incorrect and only reinforces that Raz teaches away from the claimed LAG. As Corrigent explained in the POR (and as Petitioner ignores), 802.3ad states that link aggregation “specifies the establishment of [data terminal equipment] to [data terminal equipment] logical

links, consisting of *N parallel instances* of full duplex *point-to-point links* operating at the same data rate.” POR, 9; EX2012 (802.3ad 2000), Abstract (emphasis added); EX2007, ¶49 & n.3. 802.3ad further defines a LAG as “[a] *group of links*” that “connect between the same pair of Aggregation Systems.” EX1033, p. 3 (emphasis added). Meanwhile, the 802.3 1998 standard that is foundational to 802.3ad defines “link” as a “transmission path between any two interfaces of generic cabling,” meaning that LAGs must involve *multiple* “interfaces of generic cabling” (i.e., “links”). EX2015, 20 (Definition 1.4.141); EX2016, 49:8-52:12. Petitioner ignored these definitions from the 802.3ad standard, focusing instead on generic statements that allegedly tie LAGs to *ports*. Reply, 2-3. This is telling because Dr. Min conceded that “according to 802.3ad, *a link and a port are two different things.*” EX2016, 43:14-16 (emphasis added).

802.3ad’s statements about LAGs consisting of a “group of links” directly contradict the Reply’s assertions that the claimed LAG is not “a group of links between two LSRs,” and that a LAG within the claimed invention “does not require multiple physical links.” Reply, 5. When confronted during his deposition, Dr. Min attempted to take the absurd position that a LAG could have a single link. EX2016, 24:1-11, 42:13-43:2; EX1033, 13. That position is belied by 802.3ad and common sense, which Dr. Min acknowledged. *Id.* (“[I]t doesn’t really make sense to have just one port in a LAG”).

Moreover, the '602 patent specification and claims contradict Petitioner's argument. As explained in the POR, "[t]he '602 patent explains that a LAG involves a group of 'links between two endpoints in a data network.'" POR, 5 (quoting EX1001, 2:1-5). The LAG joins together "a group of parallel physical links," (EX1001, 2:1-5), which the POR and Dr. Rouskas repeatedly emphasized. POR, 5, 9, 27, 28; EX2007, ¶¶17, 47, 49, 96. Tellingly, Petitioner and its expert, Dr. Min, ignored this disclosure in Reply.² Yet, Dr. Min admitted this was a "correct description of what this link aggregation does," and that it describes "a situation where I have multiple physical links, and I want to . . . join the bandwidth across that multiple physical link." EX2016, 9:14-10:8, 12:1-19.

Consistent with the above, the claim language confirms that the "single physical tunnel port" of the claimed LAG must run between the first and second MPLS/LAG switches that include multiple physical links between them. *See* EX1001, Claim 1 (9:44-47), Fig.1A, 2:1-17; EX2016, 23:3-24:11. Petitioner points to claim language (Reply, 5), but focuses on the word "port" to the exclusion of the fact that the relevant port is a "**physical** tunnel port" and a "**physical** data port" of a LAG via which a data packet is sent between nodes (from a "first MPLS/LAG switch

² Likewise, Petitioner ignores Ferguson's statement that link aggregation involves "multiple physical interconnects." EX1007, 1:27-29.

to a second MPLS/LAG switch”). EX1001, Claim 1. Both Petitioner and Dr. Min ignored the claim language and teachings from the ’602 Patent, preferring instead to broaden the scope of the claimed LAG well beyond what the ’602 patent claims.

Petitioner also points to Dr. Rouskas’ testimony in an attempt to argue that Raz discloses the claimed LAG. Reply, 7. But Petitioner ignores that this testimony relates to a different proceeding—IPR2023-00447—and his declaration testimony is unimpeached and unchallenged in this case. Nonetheless, Arista relies on Dr. Rouskas’s prior testimony stating that the link aggregation “standard is well known” and that there are “multiple implementations” of link aggregation. Reply, 4 (citing EX1036, 17:10-13). But the citations are out of context and ignore that in the same deposition Dr. Rouskas made clear that a LAG is “technology that allows a number of physical links between nodes to be treated as a single logical entity,” and that “there is absolutely no indication” to a POSA that Raz “actually refers to a LAG” in the context of its subports. EX1036, 13:18-21, 30:25-31:14.

Moreover, to the extent that Dr. Rouskas addressed a reference to a LAG in column 9 of Raz (*see* Reply, 6-7 (citing EX1006, 9:9-15)), Dr. Rouskas testified that this disclosure *shows the distinction* between Raz’s subports and a LAG, and that it was irrelevant “because it is specifically for Raz’s Figure 2 embodiment that does not use MPLS labels.” EX1036 at 33:2-34:25; EX2007, ¶97 & n.7; POR, 28 & n.11. In the Petition, Petitioner relied on Raz’s Figure 1 embodiments (and associated

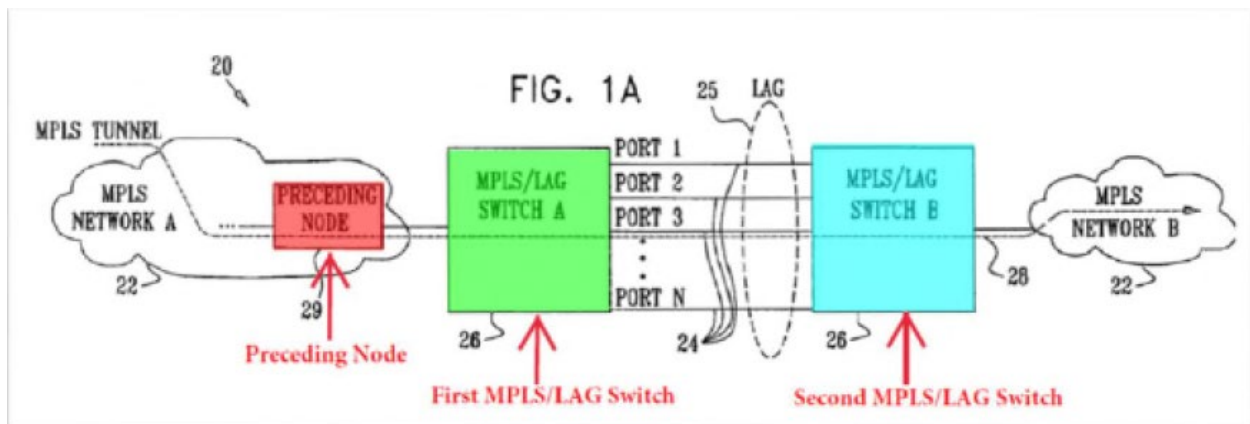
supports) to teach the claimed LAG. Pet., 6, 14, 18, 24, 26, 48, 54; EX1003, ¶¶66, 96, 106, 111, 175, 182, 243. Dr. Min admitted that the Figure 2 embodiment is a “variation” from the Figure 1 embodiment, that it does not use label-based subport forwarding, and that it does not even use an MPLS switch that can “process the MPLS label.” EX2016, 28:2-15, 29:12-31:11. As is well known, it is improper to mix and match embodiments of a reference to assert obviousness. *Abiomed, Inc. v. Maquet Cardiovascular, LLC*, IPR2017-01204, Paper 8 at 10-11 (cannot treat various features of different embodiments as if they are interchangeable). Even if considered, the Figure 2 embodiment still multiplexes packets into a single high-speed link, and teaches away from the claimed LAG and its physical tunnel ports.

Finally, like its improper effort to rely on 802.3ad, Petitioner continues to rely on Rabie (which is not even part of Ground 1) in its strained bid for obviousness. Rabie was Petitioner’s only support in Ground 1 for the notion that “bundled links,” rather than the single high-speed link of Raz, might be utilized between two network nodes. Pet., 28. Even now, Petitioner asserts that “Rabie is used to support the motivation to combine.” Reply, 10. This is another indication that Petitioner asks this Board to ignore the clear teaching of Raz in the completely opposite direction. This is precisely what it cannot do. *Panduit Corp.*, 810 F.2d at 1568.

B. The POSA Would Not Have Been Motivated To Combine RFC3209 and Raz to Assign and Encode a “Single Physical Tunnel Port” of a LAG, As Claimed

In addition to the Petition’s deficiencies with regard to the claimed LAG, the Petition also failed to explain *how* or *why* a POSA would have been motivated to combine the references to properly assign and transmit data using a single physical tunnel port of a LAG between the distinct network nodes recited in the claims.

The POR explained how the claims recite a first MPLS/LAG switch assigning a single physical tunnel port of a LAG between that first MPLS/LAG switch and a second MPLS/LAG switch, receiving the port information from a preceding node, and then *sending* a data packet between the first and second MPLS/LAG switches via that particular tunnel port that was assigned. POR, 5-6, 29-46. An exemplary embodiment of this was shown in ’602 patent Figure 1A, annotated below. *Id.*



EX1001, Fig. 1A (annotated). During his deposition, Dr. Min conceded that all three of the above nodes would need to utilize port 3 in connection with the embodiment claimed and shown in Figure 1A. EX2016, 18:2-19:1.

However, Raz only teaches an LSR selecting, and generating a label indicating, a subport used for packets *received* by that LSR—as shown in Raz’s Figure 3, annotated below. POR, 29-46. The subport used for packets *sent* from that LSR in Raz is independently selected, and indicated in a label generated, by the next downstream LSR. *Id.*

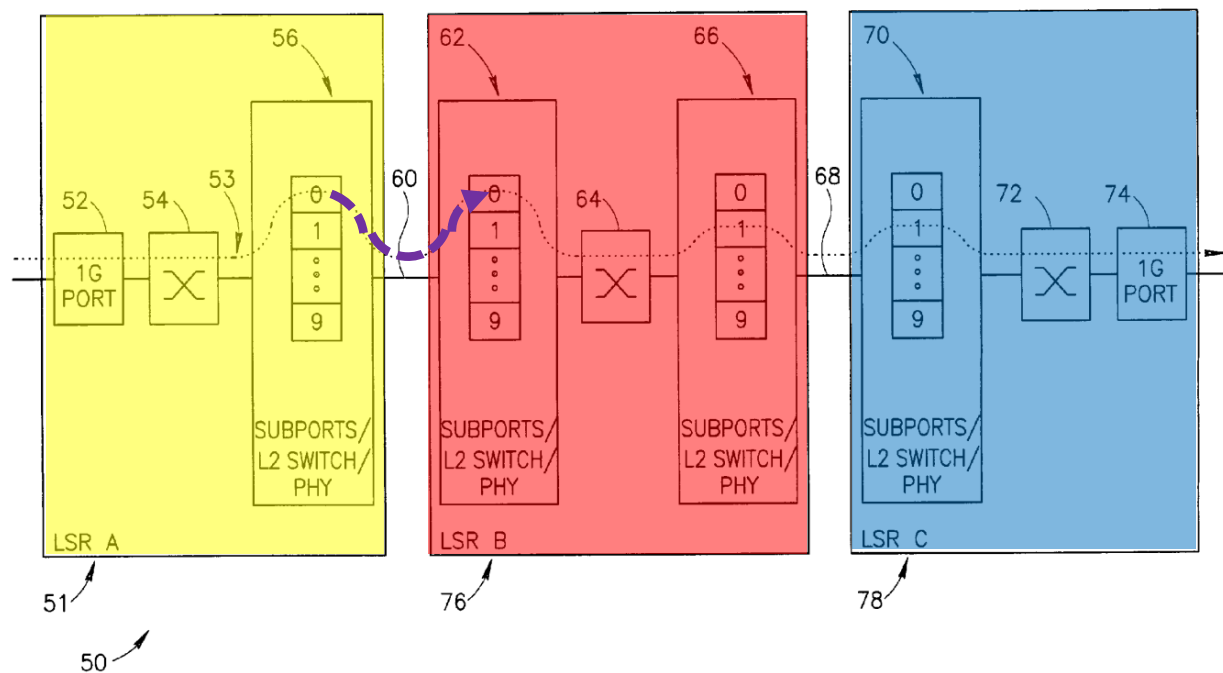


FIG.3

EX1006, Fig. 3 (annotated); POR, 32-36, 43-44. Yet, the Petition relied on Raz’s Fig. 3 subport provisioning to meet the claims (*see* Pet., 31-33 (relying on LSR C in the Figure, as well as LSR A and B)), and emphasized that, within the proposed combination, the alleged encoding of the subport is “within the data packet label as taught by Raz.” Pet., 32.

Petitioner’s Reply does not dispute that Raz’s receiving port dictates the subport that is independently selected at each hop, but dismisses those teachings as irrelevant “because Raz is concerned with ensuring that the LSR-to-LSR hop—as a whole—contains sufficient bandwidth.” Reply, 9 (citing EX1034, ¶¶ 34-36).

But Raz’s subport provisioning mechanism *is* relevant because a key aspect of Raz’s teaching is that each subport assignment is assigned *independently* at each receiving node. In the figure above, the assigned “subport” between LSR A and LSR B is 0, and the assigned “subport” between LSR B and LSR C is 1, underscoring the independent assignment of subports at each node. So too with RFC3209, which Dr. Min admits applies to RFC3209’s explicit routing: “each intermediate node along the route may make an *independent forwarding decision* (i.e., an independent *assignment* of network topology to the requested LSP).” EX1003, ¶102 (emphasis added) (citing EX1010, Section 4.3.4.1); Pet., 21-22. Dr. Min admitted that the interface and subport provisioning decisions are independent at each hop for both RFC3209 and Raz, respectively. EX2016, 54:1-55:2; EX2013, 29:16-30:4, 31:18-33:23. At the same time, Dr. Min agreed that the assigned physical tunnel port (shown in Figure 1A) spans the preceding node, first MPLS/LAG switch, and second MPLS/LAG switch. EX2016, 13:9-19. In light of this evidence of the independent selection of subports at each hop, the POSA would not have been motivated to assign the same subport between a tunnel that spans a preceding node, a first MPLS/LAG

switch, and second MPLS/LAG switch. As Patent Owner explained, “in section IX.A. of the Petition, there is only one mention of the claimed ‘single physical tunnel port’ despite it being recited in every limitation of claim 1, and there is no discussion of the claimed ‘preceding node’ recited in limitations 1.3 and 1.4,” let alone how the alleged combination would work across 3 network nodes. POR, 19-20; *see id.*, 21-25. This failure to address the combination on a limitation-by-limitation basis is fatal. *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1327-28 (Fed. Cir. 2012) (obviousness analysis insufficient when untethered from claim limitations).

The Reply does not cure this deficiency, as it only focuses on an alleged motivation to select one of Raz’s internal subports, and does not address the claims as a whole. *See generally* Reply, 7-10. The Reply also acknowledges that RFC3209 and Raz provide contradictory teachings of **which** node (the receiving or sending) selects the port to be used at the next hop. *See* Reply, 9 (“Raz discloses that a downstream LSR may make the subport selection, while RFC3209 uses an upstream LSR for interface selection”). The Reply does not reconcile those teachings or explain how the POSA **would have been motivated** to pursue the claimed invention in view of them. Rather, it simply asserts that “both upstream and downstream LSRs would . . . **be capable** of making the subport selection.” Reply, 9 (emphasis added).

Mere capabilities do not support a motivation.³ *InTouch Technologies, Inc. v. VGO Communications, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014); *PersonalWeb Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993-94 (Fed. Cir. 2017).

Petitioner also does not substantively address the numerous deficiencies spanning limitations 1.1-1.5 that the POR raised, including the references' independent decisions at each hop, the conflict between RFC3209 and Raz's use of internal subports that converge into a single external link, and the fact that there is no explanation of how "RFC3209's explicit routing would have to be modified" to meet the claim elements in light of RFC3209's complete lack of teachings pertaining to LAGs. *See* POR, 29-46; EX2007, ¶¶100-137. Petitioner's response ignores limitations 1.1 and 1.3, and suggests that Patent Owner's arguments on the other limitations are "repetitions" or somehow "misrepresent[] the proposed combination." Reply, 15-16.⁴ Not so. Petitioner does not explain why or how

³ Moreover, Petitioner's declarant, Dr. Min, argues for the first time in reply that "the choice for the transmitting LSR to make the subport selection would have been an obvious design choice." EX1034, ¶36. This handwave to a "design choice" is conclusory, untimely, and reinforces that the combination fails.

⁴ Petitioner also asserts that there was somehow a misrepresentation because "PO recycles arguments made in its Cisco IPR Response," (Reply, 16), but Petitioner

RFC3209 and Raz would be combined, other than to suggest “Raz’s explicit teachings as applied to RFC3209’s label” render the claims obvious. *Id.*; *see also id.*, 17 (“The piece missing from RFC3209 is that a chosen interface for an LSR may be a LAG subport”).

Petitioner’s conclusory argument that Raz could be applied to RFC3209’s teachings is insufficient. Petitioner also does not explain how RFC3209’s label could identify a subport of a single physical tunnel port of LAG, as claimed, let alone how RFC3209 would work with the specific subports mentioned in Raz to implement the claimed invention. Nor is there any indication of how RFC3209 (which has nothing to do with LAGs) could be adapted to incorporate the claimed LAG, even if Raz taught one. EX2007, ¶109 (“[A] POSA would have understood that RFC3209 does not teach a LAG and therefore, does not teach MPLS/*LAG* switches, which Petitioner acknowledges by relying instead on Raz for the claimed LAG.”). This is because, as Dr. Rouskas explained, RFC3209 teaches outgoing interfaces that conflict with Raz, along with different label allocation and

ignores that Raz (and some of the same arguments raised in the prior proceeding) remain relevant to the combination because RFC3209 does nothing to fill the gaps pertaining to how the “single physical tunnel port” of the LAG is assigned, encoded, and transmitted between 3 network nodes, as claimed.

distribution techniques from Raz, that would not work if combined. EX2007, ¶¶72-73, 78, 98, 109. This reinforces that Petitioner improperly relies on hindsight in its attempt to find a purported obviousness combination. *Univ. of Strathclyde v. Clear-Vu Lighting LLC*, 17 F.4th 155, 160 (Fed. Cir. 2021); 35 U.S.C. § 103(a) (pre-AIA).

C. There Is Still No Reasonable Expectation of Success In Combining RFC3209 and Raz

The POR explained that Petitioner failed to “argue that a POSA would have had a reasonable expectation of success in modifying RFC3209 with Raz.” POR, 24. The POR also noted Petitioner’s argument that, in the combination, “the components described by RFC3209 and Raz would be operating as described in their respective references” Pet., 14-15. If this were true the references would be incompatible with one another as a result of the references’ conflicting teachings and the fact that Raz’s teachings of subports “could not work with inter-router communications and because RFC3209’s and Raz’s assignment and labeling processes are incompatible.” POR, 25-26 (citing EX2007, ¶¶88-89).

In a single paragraph, Petitioner asserts that it argued for reasonable expectation of success (Reply, 14-15), but cites no evidence from Dr. Min’s opening declaration supporting that assertion. Instead, Petitioner cites Dr. Min’s reply declaration, makes a conclusory argument that the “POSITA would have been motivated to look to Raz,” and reiterates that “[t]he components of RFC3209 and Raz would be operating as described in their respective documents.” *Id.* (citing

EX1034, ¶¶39-40). But neither the Reply nor Dr. Min’s reply declaration explain how Raz’s internal subport assignments could be successfully combined with RFC3209’s routing and labeling mechanism, or reconcile the discrepancy in how subports and interfaces are assigned between the references.

At bottom, Petitioner’s argument is that the references would have been successfully combined because the references discuss routers in contexts that sometimes involve MPLS and RSVP-TE. *See* Reply, 11-13. But that argument is generic and cannot be credited because it ignores the specific teachings of the references that show both that Raz teaches the use of internal subports that function in precisely the opposite way of the claimed LAG, and do not employ multiple physical tunnel ports between nodes. *See Samsung Elecs. Co. v. Elm 3DS Innovations, LLC*, 925 F.3d 1373, 1380–81 (Fed. Cir. 2019) (upholding determination of nonobviousness where Petitioner failed to show reasonable expectation of success). If Petitioner’s argument were correct, every reference that references MPLS or RSVP-TE would be successfully combined with every reference that refers to those standards, no matter the proposed combination. Petitioner needed to do more and failed to meet its burden.

D. The Alleged Combination of RFC3209 and Raz Does Not Teach or Render Obvious Independent Claim 15

The Petition also failed to show that the combination of RFC3209 and Raz teaches the “mapper” recited in limitation 15.5, let alone that any such mapper

performs limitations 15.6–15.8. POR, 47-50. The POR explained that “Petitioner merely alleges that some vague mystery component within RFC3209’s LSR constitutes the ‘mapper.’” POR, 48. The discussion of the “mapper” spanned a single paragraph and did not identify a mapper within RFC3209, or argue that the POSA would be motivated to include a mapper based on Raz. *See* Pet., 51-52.

Petitioner’s Reply confirms that the disclosures for the “mapper” limitation are deficient. It does not dispute that Petitioner failed to identify the claimed “mapper,” but asserts that Patent Owner “ignore[d] expert testimony that POSITA would have understood the presence of the claimed ‘mapper’ from the disclosures in RFC3209 and alternatively from the disclosures in Raz as applied to RFC3209.” Reply, 18. But this is improper new argument and evidence and should be disregarded. Reply, 17-19; PTAB-TPG, 73-74. Indeed, the Petition’s single paragraph regarding limitation 15.5 did not mention Raz.

Even if considered, the argument fails. The Reply asserts that “a component in RFC3209’s LSR” performs the functions of limitations 15.5-15.8 without identifying the component, and alternatively states that Raz’s “forwarding module” performs the mapper functions. Reply, 18-19 (citing EX1006, 7:39-45). But the argument for RFC3209 is conclusory, and, as the POR explained with respect to Raz’s subport forwarding module, the module cannot both “receive a data packet from an upstream node” (limitation 15.6) and also send the packet to a *different LSR*

(limitation 15.8). POR, 47-50; EX2007, ¶¶139-143. Instead, the evidence Petitioner cites for limitation 15.8 relates to sending the packet to a subport within the same LSR, which only reinforces the numerous problems outlined above with combining RFC3209 and Raz. Moreover, Petitioner does not explain why or how Raz’s forwarding module would be modified to apply to a single physical tunnel port of a LAG across three nodes, as claimed. Reply, 19-21.

III. The Combination of RFC3209, Raz, and Ferguson Does Not Render the Claims Obvious for Ground 2

A. There Is No Motivation To Combine RFC3209, Raz, and Ferguson

The POR explained that there is no motivation for Ground 2 because Raz’s mechanism is specifically for inside an LSR and teaches away from application between LSRs in combination with RFC3209. POR, 53-54. The Reply ignores Raz’s teachings and responds, with a new argument, that “[t]he Petition is arguing for modifying RFC3209 to incorporate the beneficial teachings of both Raz *and* Ferguson.” Reply, 19-20. But Petitioner cannot ignore Raz’s teachings in the context of the RFC3209, Raz, and Ferguson combination. Moreover, Petitioner never addresses that “Ground 2 include[d] no discussion regarding the specific teachings of primary reference RFC3209 or any modifications thereof” and that the “Ground 2 analysis is copied almost word-for-word from the petition in IPR2023-00447, where Raz is the primary reference and the asserted combination is just Raz

and Ferguson, without RFC3209.” POR, 51. Thus, the Reply never explains *why* or *how* RFC3209 would have been modified based on both Raz and Ferguson.

Aside from not discussing RFC3209, Petitioner never explained how it could reconcile the disparate teachings of Raz and Ferguson and then somehow incorporate them into an alleged combination with RFC3209. For example, the POR explained that a POSA would have understood that while Ferguson discloses its techniques could be applied between routers, the same would not be true for Raz, which is solely dedicated to communications within an LSR. POR, 54-57, 61-66. Meanwhile, Petitioner’s response is to cite conclusory paragraphs of its expert’s reply declaration that does not clarify why or how a POSA would have looked to, or implemented, Raz and Ferguson’s disclosures within RFC3209. Reply, 20-21 (citing EX1007, 5:61-6:9; EX1034, ¶¶41-45). Indeed, Ferguson’s teachings (besides an oblique reference to a LAG), do not remedy the deficiencies of Raz and its internal supports.⁵ By contrast, Patent Owner has explained, using Raz’s and Ferguson’s

⁵ Indeed, as noted in the POR, Ferguson teaches that its techniques can be used *within* a router, but provides no motivation to convert Raz’s internal subport provisioning mechanism to an external LAG between routers. *See* POR, 54-56, 61 (citing EX2007, ¶¶155-159, 168).

disclosures and expert testimony, that RFC3209 would not have been modified based on Raz and Ferguson to meet the claims. POR, 54-66.

The POR also explained that RFC3209, Raz, and Ferguson address different problems and use fundamentally different methods, including distinct labeling assignment methods and data transmission techniques. POR, 55-57, 60-62. Moreover, it is undisputed that how packets are processed and move within a switch (as in Raz) differ from how packets are communicated between switches (as in Ferguson). EX2007, ¶¶178-79; EX2016, 56:6-16 (agreeing with Dr. Rouskas’s analysis of “how data packets are processed and moved within a switch as opposed to communication between switches” as being correct). The Reply does not address these differences. Reply, 20-22. Instead, like Cisco in the prior IPR, Arista pivots to bandwidth, asserting that RFC3209, Ferguson, and Raz are all “directed to solving the problem of ensuring enough bandwidth is available to communicate high-speed packet streams through an MPLS network.” Reply, 20. But there is no explanation of how “bandwidth” would somehow motivate the POSA to combine the references to arrive at the claimed invention. Indeed, as noted above, the three references’ teachings underscore the need to independently assign the links through which packets traverse at each hop to optimize bandwidth, not to provision a “single physical tunnel port of a LAG” between three distinct network nodes, as claimed. *See supra*, §II.B.; Reply, 22. Petitioner’s generic references to “bandwidth” are

conclusory and do not show how the three references would have been combined “in the way the claimed invention” operates. *ActiveVideo*, 694 F.3d at 1328.

Petitioner further asserts that the combination is plausible because “Raz is concerned with reserving bandwidth on *ports*, and . . . the principles of port to port communication are the same whether within a switch or communicating between switches.” Reply, 22 (citing EX1034, ¶¶51-55). But Petitioner again ignores that Raz’s teachings are about processor subports (not links), and even if they were about ports, Petitioner still fails to account for the admitted differences between links and ports in the context of the LAG standard, as well as the fact that internal packet processing (such as that using Raz’s internal subports) is distinct from external packet processing. EX2016, 43:14-16. Petitioner makes a conclusory statement that “Raz, Ferguson, and RFC3209 are referring to the same labeling protocol.” Reply, 21. But, as noted above, the subport labeling technique employed by Raz is fundamentally different from the MPLS labeling technique of Ferguson, and Petitioner does not and cannot explain what the label provisioning in RFC3209 would look like in RFC3209 as modified by both the teachings of Raz and Ferguson.

B. The Petition Fails to Establish a Reasonable Expectation of Success

Consistent with the lack of a specific motivation and the numerous problems identified above, the Petition contains no argument regarding reasonable expectation of success of modifying RFC3209 in combination with Raz and Ferguson. POR,

67; EX2007, ¶¶180-83. Yet the POR explained that the combination would not work and would in fact be inoperable. *Id.* Nonetheless, the Reply does not have any discussion of reasonable expectation of success in the context of Ground 2 whatsoever, and Dr. Min’s attempt to address the issue in his reply declaration are conclusory and simply parrot the suggestion that the references could be combined because they are “related to the use of an MPLS network.” EX1034, ¶¶46-47. Petitioner and its expert failed to put forward any evidence to demonstrate how the proposed combination of the references would work together. *See, e.g., Samsung*, 925 F.3d at 1380-81. This is yet another reason that Ground 2, and the Petition, fails.

C. Ground 2 Fails Even If Raz Is Modified Based on Ferguson

The POR explained that even if Raz is modified based on Ferguson, as alleged, Ground 2 still fails for reasons discussed for Ground 1. POR, 65-66. The Reply does not deny that those reasons apply to Ground 2. Reply, 24.

IV. Conclusion

For the foregoing reasons, the Board should reject all grounds in the Petition and affirm the patentability of the challenged claims.

Date: July 9, 2024

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CERTIFICATION UNDER 37 C.F.R. § 42.24

Under the provisions of 37 C.F.R. § 42.24, the undersigned hereby certifies that the foregoing document contains 5,591 words, and thus complies with the word-count limits of 37 C.F.R. § 42.24.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing PATENT OWNER SUR-REPLY was served on July 9, 2024 by filing this document through the P-TACTS platform as well as by delivering a copy via the delivery method indicated to the attorneys of record for the Petitioner as follows:

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