

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

JUNIPER NETWORKS, INC.,
Petitioner,

v.

PORTSMOUTH NETWORK CORPORATION,
Patent Owner.

Case No. IPR2024-00913¹
Patent No. 8,014,394

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

¹ IPR2024-00989 has been consolidated with IPR2024-00913.

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1001	U.S. Patent No. 8,014,394 (“’394”)
1002	File History of U.S. Patent Application No. 12/369,011 (“’394FH”)
1003	Declaration of Dr. Tal Lavian (“Lavian”)
1004	CV of Dr. Tal Lavian
1005	U.S. Patent 7,983,205 (“Blease”)
1006	U.S. Patent Application Publication No. 2005/0041665 (“Weyman”)
1007	U.S. Patent 8,068,416 (“Hu”)
1008	U.S. Patent Application Publication No. 2009/0290585 (“Deng”)
1009	U.S. Patent 8,238,344 (“Chen”)
1010	Federal Judicial Caseload Statistics (2024) – District of Massachusetts
1011	Proof of Service, <i>Portsmouth Network Corp. v. Juniper Networks, Inc.</i> , 1:23-cv-12201, Dkt. No. 14 (D. Mass. Sept. 28, 2023)
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1013	First Amended Complaint – Exhibit 4, <i>Portsmouth Network Corp. v. Juniper Networks, Inc.</i> , 1:23-cv-12201, Dkt. No. 61-4 (D. Mass. Dec. 22, 2023)
1014	Kolias and Tomkos, “Switch Fabrics,” IEEE Circuits & Devices Magazine, pages 12-17 (Sept./Oct. 2005)
1015	Elhanany et al., “Switch Fabric Interfaces,” Computer, Vol. 36, Issue 9, pages 106-108 (Sept. 2003)
1016	Robert Wood, Next-Generation Network Services, Cisco Press, pages 125-131, 275-280 (2006)
1017	SysKonnect GmbH, Link Aggregation according to IEEE Standard 802.3ad, White Paper, v1.10 (Oct. 10, 2002)

Exhibit	Description
1018	IEEE Standard 802.3, Amendment to Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications – Aggregation of Multiple Link Segments (2000 Edition) (“802.3ad-Std”)
1019	<i>Request for Ex Parte Reexamination of U.S. Patent 8,014,394</i> , Control No. 90/019,441 (Mar. 5, 2024)
1020	<i>Cisco Systems, Inc. v. Portsmouth Network Corp.</i> , IPR2024-00506, Paper 2 (Mar. 31, 2024)
1021	Congdon and Subramaniam, “Why we don’t need to specify the load balancing algorithm in the Standard,” Load Balancing Algorithm, Aggregation Study Group (Feb. 4, 1998)
1022	Jeffree, “Link Aggregation Control Protocol,” Presentation to the Link Aggregation Study Group (Apr. 1998)
1023	Jeffree, Contribution to the November ‘98 Link Aggregation Meeting, Strawman/D2½: Changes/Additions to 802.3 required in order to specify Link Aggregation (Nov. 9, 1998)
1024	U.S. Patent 8,102,848 (“Rao”)
1025	U.S. Patent Application Publication No. 2007/0140155 (“Yu”)
1026	Transcript of Deposition of James Olivier, Ph.D. (Jul. 17, 2025)
1027	Declaration of James Olivier, Ph.D., in Reexamination Control No. 90/019,441 (Mar. 17, 2025)
1028	<i>Cisco Systems, Inc. v. Portsmouth Network Corp.</i> , IPR2024-00506, Paper No. 14 (Patent Owner’s Response, Jan. 23, 2025)
1029	<i>Cisco Systems, Inc. v. Portsmouth Network Corp.</i> , IPR2024-00506, EX1033 (Transcript of Dr. Olivier’s Deposition, Apr. 9, 2025)
1030	U.S. Patent No. 6,430,273 (“Shaheen”)
1031	U.S. Patent No. 6,711,162 (“Ortega”)
1103	Declaration of Dr. Tal Lavian (IPR2024-00989)

I. Introduction

There are three basic router architectures: (1) centralized, (2) decentralized, and (3) distributed. Back in March, Patent Owner's ("PO's") expert Dr. Olivier acknowledged this truism in a reexamination declaration he submitted in a reexamination of the '394 patent. EX1027, ¶32. Yet, in June (3 months later), Dr. Olivier submitted a completely contradictory IPR declaration insisting that he did not understand "what is meant by distributed" in the context of routing architectures.² EX2005, ¶50. From this contrived starting point, PO's brief treats the Blease reference as if only disclosing a centralized router architecture. As can be appreciated, PO's own witness testimony demonstrates the bulk of its IPR trial briefing as baseless.

As to Weyman's teaching on adding router line cards, PO's witness summarily concludes that "non-default" as used by the Weyman reference is a "typo." EX2005, ¶60, fn. 3. In doing so, PO's expert ignores the fact that "non-default" is used twice by Weyman. Indeed, he fails to even acknowledge its second

² PO withheld its reexamination declaration from the Board, and at deposition, despite only a three month difference in conflicting declaration submissions, PO's expert claimed he had "no idea" if he even worked on the reexamination. EX1026, 9:21-10:2.

occurrence or dispute the plain technical explanation described by Weyman. The testimony of PO's "say anything" expert should be given no weight.

The remainder of PO's arguments are directed to bodily incorporation theories that appear nowhere in the Petition or attack individual references for features relied upon by the Petition in combination, or in a different reference altogether.

Accordingly, Petitioner respectfully requests that claims 1-2, 4, 6-12, 14 and 16-18 ("Challenged Claims") be cancelled as unpatentable.

II. Ground 1.1: Blease³, Weyman⁴, Hu⁵

A. "Distributed"

Blease is directed to a system for routing multicast traffic, including a router with interface cards (IFCs), as shown in Fig. 4 (below). Pet.⁶, 14. Blease Fig. 4 shows a single control unit 44 (including elements 46-53) but explains: "for example, control unit 44 and its corresponding functionality may be distributed within IFCs 54." Pet., 18; Blease, 11:54-57.

³ EX1005

⁴ EX1006

⁵ EX1007

⁶ "Pet." refers to the IPR2024-00913 petition. "-989 Pet." refers to the IPR2024-00989 petition.

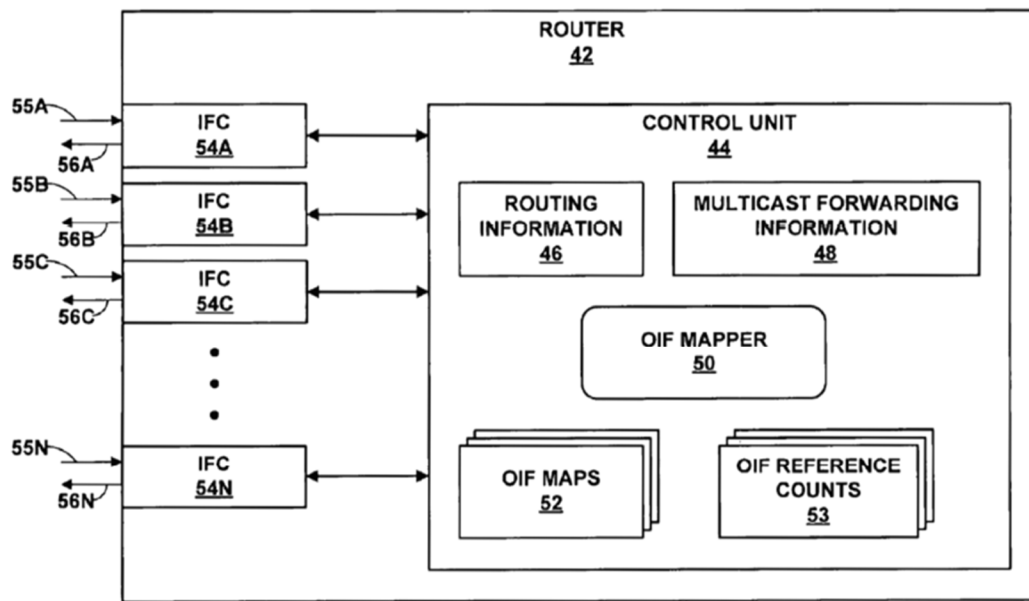


FIG. 4

PO's bases its arguments on Petitioner's alleged misinterpretation of Blease's clear statement that the control unit and functionality are "distributed." POR, 15-16. However, PO's distinction is not only incorrect but also contradicted by the '394 and by PO's own expert's explanation of known architectures, provided just months earlier.⁷

⁷ The '394 was the subject of reexam 90/019,441. Dr. Olivier submitted a declaration there on 2025-03-12. EX1027. As of his 2025-07-17 deposition in this IPR, Dr. Olivier had to be reminded of his prior involvement and could not recall the firm or attorneys that he worked with. EX1026, 9:8-10:19.

In prior testimony, Dr. Olivier explained that “[t]here are three basic router architectures: (1) centralized, (2) decentralized, and (3) distributed.” EX1027, ¶32. Continuing, Dr. Olivier stated that a “*distributed router architecture* minimizes the risk of overburdening by replacing the central processor and database with processors and databases distributed to each line card.” EX1027, ¶33 (emphasis in original). He also acknowledged that a distributed router architecture “must have some mechanisms to make sure that each line card processing unit has the same instructions” to avoid inconsistent processing and delivery of packets to wrong addresses. EX1027, ¶¶34-35.

Dr. Olivier also identified the '394 itself as utilizing a distributed routing architecture, stating that the '394 system “utilizes a distributed router architecture... relying... on databases 52 and network processors 48 **distributed** to each line card 36 in the router....” EX1027, ¶¶33.

The '394's utilization of a distributed architecture, as pointed out by Dr. Olivier “must have some mechanisms to make sure that each line card processing unit has the same instructions” to avoid inconsistent processing and delivery of packets to wrong addresses. EX1027, ¶34. To this end, the '394 “requires” the distribution of “request[s] among the multiple processing units with the network element” because “[w]ithout distributing every client request to every other line

card processing unit, the line card processing units cannot update their lists and ensure consistent treatment of incoming packets.” EX1027, ¶36.

Thus, PO's latest argument that “‘distributed’ means spread across”—seemingly controlling as to Blease only—is defeated by its own expert. POR, 16.

Moreover, even if one dictionary definition of “distributed” includes a division of information, that is not how the term is used in the art of record (Weyman's “System and Method for Distributed Multicast Routing” with “distributed router;” Weyman, Title, Abstract) or the '394. Instead, the '394 confirms via its own use that “distribute” includes the sharing of information by, *e.g.*, duplicating information and sending the information to multiple recipients. *See* EX1001, 2:4-10 (“distributing” a request includes duplicating the request to send to different units), 7:58-61 (request “distributed” by sending it to all network processors); EX1027, ¶40 (Dr. Olivier described the distributed architecture functionality duplicating a request and distributing the copies). PO's argument that the plain meaning of “distributed” means divided is at odds with the '394 specification and claims.⁸

⁸ To the extent PO would argue that Blease discloses a “centralized” architecture and a “distributed” architecture must be “decentralized,” neither PO nor its expert have

Accordingly, the intrinsic record is clear, and there is no factual or legal basis offered by PO to read Blease's "distributed" control unit and functionality as requiring division throughout the device or as preventing any distributed units/functions from being duplicates of each other. There is no basis to replace the intrinsic record with PO's extrinsic dictionary citation. *Profectus Tech. LLC v. Huawei Techs. Co.*, 823 F.3d 1375, 1380 (Fed. Cir. 2016) (Extrinsic evidence may not contradict unambiguous claim meaning based on intrinsic evidence). There is no factual or legal basis to construe Blease's "distributed" term based on a random passage in PO's dictionaries to the exclusion of the term as used in the cited art, the '394 itself, and PO's own expert testimony. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998) ("a common meaning, such as one expressed in a relevant dictionary, that flies in the face of the patent disclosure is undeserving of fealty"). The '394 and PO's expert both confirm that Blease's "distributed" control unit and functionality should be provided at each of the plurality of IFCs. Even setting aside the intrinsic record and Dr. Olivier's testimony that distributed architectures were well known and understood in the art, a POSITA would nonetheless look to "distributed" solutions for implementation of

made that distinction. Given the recognized meaning of "distributed," there can be no such confusion.

Blease's distributed system. Weyman, Title ("Distributed Multicast Routing"). As PO's expert points out there are only two other options other than centralized, and one is named "distributed architecture."

B. Blease teaches a distributed architecture

PO's arguments regarding Blease and the obviousness of modifying Blease in view of Weyman's distributed architecture implementation fall with its strained definition of "distributed" and unreasonable attempts to ignore and/or limit Blease and Weyman's teachings.

1. Blease is not limited to a centralized architecture

While Blease does illustrate a centralized control unit in an embodiment (*see* Blease Fig. 4), Blease nevertheless presents an alternative by stating that "[i]n one embodiment, for example, control unit 44 and its corresponding functionality may be distributed within IFCs 54." Blease, 11:54-57. Blease explains that "[t]he architecture of router 42 illustrated in FIG. 4 is shown for exemplary purposes only," "is not limited to [that] architecture," and "may be configured in a variety of ways." Blease, 11:52-55; Pet., 18, 23, 36. PO's repeated conclusory statements that "Blease discloses a centralized control unit" and that "the Petition does not change that" (POR, 15-16) ignores Blease itself, the petition, and the instituted grounds. Petitioner does not rely on Blease's centralized control architecture, and, as such, PO's arguments naturally fail.

2. PO's attacks Weyman in isolation

PO's blinkered view of the ground regarding Weyman misses the mark because the Petition does not rely on bodily incorporation of Weyman's distributed architecture to replace all of Blease's components and functions. Blease discloses that control unit 44 and its functionality (*e.g.*, OIF mapper, multicast forwarding information, etc.) is distributed within the plurality of IFCs, further taught by Weyman. Pet., 37-39 (discussion of element 1[b], citing, *e.g.*, Blease, 10:49-61 ("Multicast forwarding information 48 controls replication and forwarding of multicast packets")). Modifying Blease in view of Weyman does not require importing Weyman's exact same forwarding databases, as PO seems to suggest, nor does it require bodily incorporation of Weyman's "fabric link" into Blease, as PO also suggests (POR, 26). *In re Keller*, 642 F.2d 413, 425 (CCPA 1981)) ("test for obviousness is not whether the features... may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to [a POSITA]").

Nevertheless, even if bodily incorporation were the standard (and it is not), PO still takes an unreasonably narrow view of Weyman when arguing that Weyman's processing units only store information about their respective local ports. POR, 16-18 (referencing Weyman, [0041]). That is just one example of

forwarding databases in Weyman. In the paragraph that immediately follows PO's citation, Weyman explains that "[s]ome products... learn[] of MAC addresses directly against any user port within the fabric, regardless of the unit on which the user port is located," and in those circumstances, **"it would not be necessary to reference the fabric ports in the forwarding databases."** Weyman, [0042] (referencing Donoghue⁹; emphasis added). "An identifier for **the user port may be used instead**" of fabric ports. Weyman, [0042] (emphasis added). Thus, while PO could cite one example where Weyman describes forwarding databases using fabric ports (*i.e.*, the device's internal ports), Weyman is not limited to that example and specifically states that user ports (*i.e.*, the device's ports for external connections) are used instead.

3. PO's alleged incompatibilities are manufactured

PO's final arguments—that multicast distribution information need not be synchronized "because Blease is not concerned with synchronizing... multicast distribution information" and does not keep track of all multicast packet streams; and that Blease and Weyman disclose different techniques—fails on several fronts. POR, 20-22.

⁹ U.S. Application 10/067,738, incorporated-by-reference at Weyman, [0029].

First, distributed architectures (Blease, 11:54-57) and synchronization go hand-in-hand. As noted above, Dr. Olivier explained that distributed architectures “***must*** have some mechanisms to make sure that each line card processing unit has the same instructions” to avoid inconsistent processing, and “[w]ithout distributing every client request to every other line card processing unit, the line card processing units cannot update their lists and ensure consistent treatment of incoming packets.” EX1027, ¶¶34-36. Blease’s distributed architecture (alone and in view of Weyman) therefore would have had IFCs with “the same instructions” processing “every client request” to ensure consistent treatment. Blease, 11:55-57; Weyman, [0162] (“changes to the multicast distribution tree must be kept synchronized for all the units in the fabric”); Pet., 25, 33, 41.

Second, PO’s arguments attack Blease, alone, without proper consideration of Weyman. Thus, *even if* “Blease is not concerned with synchronizing” (POR, 20), Weyman teaches that synchronization provides benefits regarding performance, redundancies, and failure recovery. Pet., 25; Weyman, [0024], [0052], [0072]-[0075], [0086], [0093], [0162]. “A finding of obviousness... cannot be overcome ‘by attacking references individually where the rejection is based upon the teachings of a combination of references.’” *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). As explained, Blease describes a distributed architecture as an optional implementation, and, without explicit details (*e.g.*,

regarding distribution and synchronization), a POSITA would have looked to Weyman for implementation details. Pet., 23-26. PO's argument fails.

Third, PO's unsupported conclusion that Blease does not keep track of all streams (POR, 20) is nonsensical and inconsistent with its other arguments. PO does not and cannot explain how Blease's control unit, *if* it is constrained to a centralized architecture (which it is not), could possibly forward multicast streams accurately and predictably if it did not keep track of all multicast streams. Thus, all multicast streams that are to be forwarded are accounted for in the multicast distribution information. PO offers no evidence that Blease is inoperable as described.

Accordingly, because Blease is not limited to a centralized architecture, and because a POSITA would have understood "distributed" routing architectures as "replacing the central processor and database with processors and databases distributed to each line card," it would have been obvious to a POSITA that Blease's disclosure of a distributed control unit and control unit functions included implementations of known distributed architectures (*i.e.*, Weyman's) with a plurality of control units (*e.g.*, processing units) operating on the same information (*e.g.*, instructions, forwarding databases, etc.). EX1027, ¶33.

Even if PO's arguments are considered responsive to the Petition grounds, they still fail.

The functionality in Blease that PO's expert narrowly relies on (POR, 20 (citing EX2005, ¶54, which refers to Blease, 10:67-11:2 and 14:52-54, and argues that multicast forwarding information does not change)) only references keeping track of whether certain multicast streams are "currently forwarded."

OIF mapper 50 determines whether multicast forwarding information 48 indicates that the multicast stream associated with the requested multicast group is currently forwarded to the network switch, i.e., whether another subscriber device connected to the same network switch is currently receiving the requested multicast stream.

Blease, 10:55-61. Thus, the multicast forwarding information 48 is updated when a requested multicast stream is not currently forwarded (*i.e.*, a new request to start forwarding a stream not currently being forwarded must be tracked so that future requests will recognize that the stream is then being "currently forwarded"), but if the multicast stream is already currently forwarded at the time of the request, no change is needed (*i.e.*, the stream is already currently forwarded, so that "currently forwarded" information does not change). But, even if PO was correct in saying that forwarding information is not changed in this limited scenario, that argument is irrelevant to the '394 claims, which do not require that every request (even improper requests, incomplete requests, and requests missing crucial information) must result in a change to the claimed "list." *See, e.g.*, EX1001, claim 1[c]

(“receiving... a request”), 1[d] (“updating the respective list... responsively to the request”). PO’s attempt at misdirection fails.

PO’s final argument that Blease and Weyman are incompatible because they describe different multicast techniques (POR, 21-22) again attacks Blease and Weyman for their individual features, not the totality of their teachings. *In re Keller*, 642 F.2d at 425 (quoted in §II.B.2 above). Blease suggests implementing a distributed architecture, which Weyman teaches. Pet., 23-25. It is an “error” to assume that “a [POSITA] attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 420-21 (2007). Blease and Weyman are both “of the art, relevant for all they contain” and should not be dismissed for merely having differences in their disclosures. *In re Heck*, 699 F.2d 1331, 1332-33 (Fed. Cir. 1983).

C. Aggregation is standardized and well known

1. Blease and Hu are compatible

PO characterizes Blease as a “stream-by-stream” system and Hu as a “request-by-request” system, allegedly incompatible with each other. POR, 22-23. PO again attacks Blease and Hu individually, rather than addressing their combined teachings. *In re Merck*, 800 F.2d at 1097; *Twilio Inc. v. Telesign Corp.*, IPR2016-01688, Paper No. 32 at 21 (P.T.A.B. Mar. 6, 2018) (rejecting position

that “in effect, would require that a single prior art reference have to disclose the full concept” of claim’s limitations) (citing *In re Mouttet*, 686 F.3d 1322, 1332-33 (Fed. Cir. 2012)). PO’s attack on Blease as having “[n]owhere... a description of an aggregated link to form a high-speed link” fails by attacking references individually and suffers the same deficiency. Petitioner merely relies on Blease’s suggestion of aggregation as a well-known concept and cites the teachings of Hu to suggest aggregation implementation details for Blease’s system, as claimed. Pet., 26-28.

PO’s other arguments fixate on Blease’s disclosure of a DSLAM (Digital Subscriber Line Access Multiplexer), but the DSLAM is one example in Blease. PO willfully ignores details about other technologies, such as Blease’s Ethernet switches (EX1026, 13:22-14:1), at the same time tellingly insisting that they are not the same and not directly interchangeable (EX1026, 14:2-16:1) and therefore fails to address the Petition’s full reliance on Blease.

For example, PO, through its expert, argues that Blease describes a DSLAM network switch with a “single physical connection, which cannot be a high-speed port as described in the ’394 patent.” EX2005, ¶¶56-58. However, PO’s expert’s

relied citations (Blease, 5:24-25, 7:24-25¹⁰) are premised on DSLAMs as being definitive and controlling in Blease. It is not.

There is no dispute that Blease's network switches may be implemented with a variety of technologies. Dr. Olivier conceded that Blease is not limited to DSLAMs (EX1026, 12:9-13:6), and Blease states that DSLAMs and Ethernet switches are only examples of devices. Blease, 1:39-43, 2:12-15, 4:18-20. In any event, POSITAs knew that DSLAMs aggregated internal modems. EX1030, 1:35-38 ("DSLAM includes a modem for every customer premise modem"); EX1031, 6:24-40 (DSLAM "function... is to terminate all the remote ADSL modems and routers into a single location;" "DSLAM aggregates the data... and backhauls the data over higher density interfaces"); EX1029, 77:9-80:1 (DSLAM is "a set of modems," each modem "is a service port"). DSLAMS therefore also aggregate as Blease suggests, including multiple links to one.

Further, nowhere does PO or its expert address Blease's Ethernet configurations (or "other" technologies). POR, 22-24; EX1026, 12:9-16, 13:22-14:1. The Petition explains that LAGs and LAG management were well known in the art, indeed such was standardized long before the '394 as part of the Ethernet

¹⁰ Dr. Olivier's cite to Blease at 8:24-25 appears to be a typo and should be 7:24-25. EX2005, ¶58.

suite of standards (Pet., 4, citing Weyman, [0050]), and PO has admitted the same, stating that Weyman discloses link aggregation to Ethernet switches. EX1028, 10-11 (referencing Weyman Fig. 6 (below)). It remains obvious to modify the distributed embodiment of Blease with this known technique. Paper 8 (Institution Decision) at 37-38.

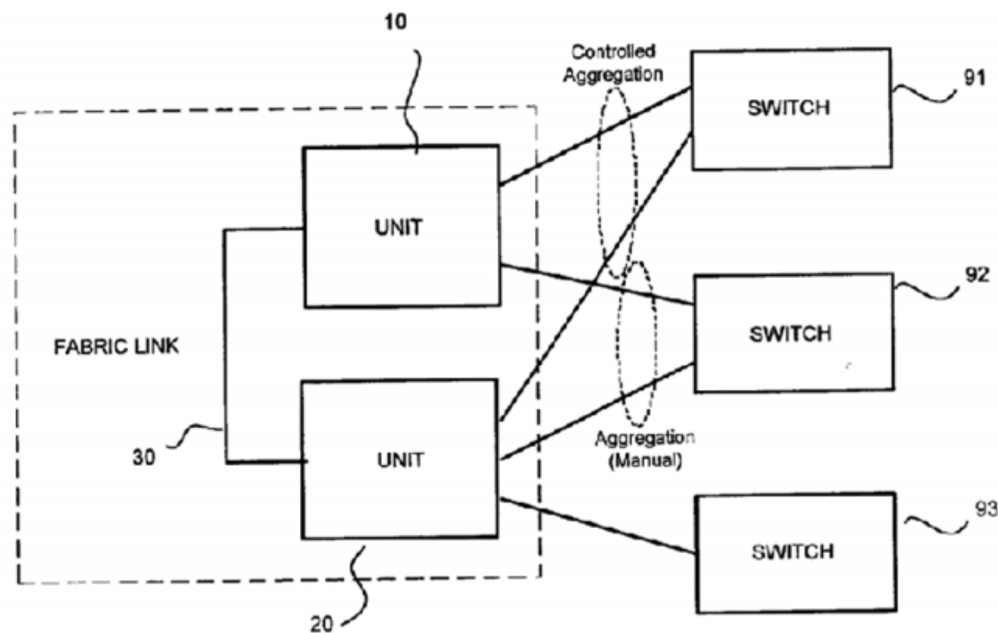


FIG.6

2. Obvious to modify Blease in view of Hu

PO argues that a POSITA would have modified Blease by “adding a higher speed link instead of adding the complexity of a LAG group.” POR, 24. However, adding a high-speed link, as PO suggests, would also incur costs. It has been “long recognized that obviousness ‘does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art.’”

Honeywell Int'l Inc. v. 3G Licensing, S.A., 124 F.4th 1345, 1355-56 (Fed. Cir. 2025). Thus, while PO's expert could conceive of another obvious way to transfer data, that opinion is irrelevant to the actual question of whether it would have been obvious to modify Blease in view of Hu and does not make aggregation any less obvious to a POSITA.

PO further states that Blease "does not suffer from congestion that a typical multicast system would" and suggests that Blease avoids all traffic issues by "only transmitting traffic for every unique multicast stream." POR, 24. Blease is, of course, functional for what it discloses, including its own explicit aggregation teaching. Blease, 4:18-27; Pet., 26. PO ignores, however, all other potential benefits of using LAGs, including increased quality of service and accommodation for variable video bitrates. Pet., 27; Hu, 1:16-19, 1:58-62. A system with reduced traffic or with limited numbers of streams (as PO's expert describes Blease) is not free of all traffic problems, and it is baseless to argue that a POSITA would never look to analogous systems for improvement. *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1380-81 (Fed. Cir. 2023) ("That [two prior art references] address the same problem and that [one of the references] was a known way to address that problem is precisely the reason that there's a motivation to combine under *KSR* and our precedent.").

D. Claim limitations

PO's arguments that particular claim limitations are not met by the prior art fall with their limited definition of "distributed" and their arguments that Blease, Weyman, and Hu are deficient or incompatible, as discussed above. Additional limitations are also discussed below.

1. Interconnected processing units and ports

PO's arguments regarding the claimed "multiple interconnected processing units and multiple ports" (POR, 25-26) rely on its faulty definition of "distributed," its misinterpretation of Blease as being centralized, and its arguments improperly requiring the bodily incorporation of Weyman's system into Blease. These arguments fail for the reasons discussed above in at least §§II.A (PO's definition of distributed is incorrect), II.B.1 (Blease is not limited to a centralized architecture), II.B.2 (consideration of Blease in view of Weyman does not require a bodily incorporation of Weyman's exact architecture, including its fabric link, into Blease), and because they attack the references individually, rather than their combined teachings.

2. Storing lists in each processing unit

PO's arguments regarding the claimed "storing... lists" (POR, 27-31) rely on its misinterpretation of Blease as being centralized, its misinterpretation of Blease as ignoring requests, and its misinterpretation of the '349 claim scope as

apparently requiring responsive action to more than one request and/or every request.¹¹ These arguments fail for the reasons discussed above in at least §II.B.1 (Blease is not limited to a centralized architecture), II.B.2 (Weyman is not limited to local port information), and because they attack the references individually, rather than their combined teachings.

Further regarding “list” information, PO argues that Blease does not disclose forwarding information in a “list” and that such information could have been stored in, *e.g.*, a tree data structure. POR, 29-30. However, lists are the only data structure type disclosed by Blease for mapping information. Blease, 6:62-63, 8:29-30 (disclosing “groups listed in OIF map”); Pet., 38. Data related to multicast forwarding information would have used the same. Blease, 11:1-2, 11:18-19 (OIF maps and multicast forwarding information also commonly include data as entries), 14:16-17 (mapper adding mapping interface to multicast forwarding information). Blease need not explain list formats, which are in no way the focus

¹¹ In a footnote, PO also references “multiple interconnected ports” purportedly unaddressed or insufficiently addressed. POR, 31-32, fn. 8 (citing Pet. at 55). However, neither Petition references multiple ports at page 55. Moreover, no claim in the ’394 requires “multiple interconnected ports.” PO’s argument is wholly unclear.

of Blease's invention nor claimed in detail by the '394. That PO can point to a different type of data structure (that is not in Blease) is irrelevant and, moreover, ignores what Blease does disclose.

3. Distributing the request and updating respective lists

PO argues, regarding the claimed “distributing” and “updating” (POR, 31-34), that “Petitioner broadens the term ‘request’ to include ‘results of processing the request,’” and so Blease, Weyman, and Hu fail to meet the claim language. However, Petitioner's discussions regarding processing the request were presented *in addition* to Petitioner's explanation that Blease in view of Weyman teach that the request is distributed to each control unit for processing. Pet., 41-42. PO ignored those discussions.

There has been no attempt to broaden the meaning of “request.” The Petition merely referenced dependent claim 4 (and related 14) of the '394, which describes how the distributing (of independent claims 1 and 11) may be achieved—*i.e.*, by “distributing... an identity of an ingress port...” EX1001, claim 4. Processing the request and distributing the processing results is how the prior art distributes the request as claimed. Pet., 40-42. Petitioner does not require the same exact process from the claims.

Finally, PO's purported technical arguments regarding the request and list (POR, 33-34) rely on its misinterpretation of Blease as being a centralized

architecture, its misinterpretation of the '349 claim scope as apparently requiring responsive action to more than one request and/or every request, and incorrect interpretation of Blease's lists. These arguments fail for the reasons discussed above in at least §§II.B.1 (Blease is not limited to a centralized architecture), II.B.2 (Weyman is not limited to local port information), II.B.3 (Blease in view of Weyman teach a distributed architecture), II.D.2 (Blease discloses lists), and because they attack the references individually, rather than their combined teachings.

4. Selectively forwarding

PO argues, regarding the claimed "forwarding" (POR, 34-36), that there is "no evidence that Blease's multicast packet streams are identified in the multicast forwarding information prior to forwarding them to the IFCs." POR, 34-35. As explained in the Petition, Blease teaches that an OIF mapper updates multicast forwarding information 48 by, *e.g.*, "add[ing] an unmapped interface to multicast forwarding information 48" so that "[t]he unmapped interface may transmit the requested multicast stream substantially similar to conventional transmission techniques." Pet., 44; Blease, 14:10-20; *see also* Pet., 44-45; Blease, 8:64-67 ("control unit 44 forwards the packet... in accordance with multicast forwarding information 48"), 10:49-52 ("Multicast forwarding information 48 controls replication and forwarding of multicast packets to subscriber devices").

To the extent PO is arguing that *sometimes* the multicast forwarding information is not updated, PO's argument misunderstands Blease, as discussed above in at least §II.B.3 (PO's reference to Blease's disclosure refers to "currently forwarded" status; the '394 claims do not require every request to change the list). PO and Dr. Olivier argue that the multicast forwarding information "remains unchanged unless the requested multicast packet stream... is unique." POR, 36; EX2005, ¶85. That means that the multicast forwarding information *is* changed in at least some situations. The '394 claims require nothing more from the prior art. "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." *Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1326 (Fed. Cir. 2003); *see also ParkerVision, Inc. v. Qualcomm Inc.*, 903 F.3d 1354, 1361 (Fed. Cir. 2018).

5. Aggregating ports

PO argues, regarding the claimed "aggregating" (POR, 36-37), that a POSITA would have no reason to modify Blease in view of Hu to include LAGs because, *e.g.*, a POSITA would have added a higher capacity link instead. POR, 36-37. These arguments fail for the reasons discussed above in at least §II.C (Blease in view of Hu teaches aggregation).

6. Dependent claims

PO's arguments regarding claims 2, 4, 12, and 14 (POR, 37-38) stand or fall with the above independent claim discussions.

III. Ground 1.2: Blease, Weyman, Hu, Deng¹²

A. Dependent claim 16 (tracking and removing a permission)

Dependent claim 16 recites, in part, “track[ing] a use of a permission to forward a certain multicast packet stream... by monitoring requests..., and... remov[ing] the permission” if “the permission is aged.”

PO argues that Hu teaches a “better” technique than Deng, and a POSITA would have no reason to include Deng because Deng is “worse.” POR, 39-40. These arguments are irrelevant to obviousness, which “‘does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art.’” *Honeywell*, 124 F.4th at 1355. “Rather, ‘the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness,’ of the claimed invention.” *Honeywell*, 124 F.4th at 1356.

PO's additional arguments regarding Blease, Hu, and Deng's individual systems and alleged resulting incompatibility fail for considering the prior art

¹² EX1008

individually, rather than their combined teachings, and PO's conclusory expectation of success argument (linked to their motivation arguments; POR, 25) fail for the same reasons. *See also Eleкта Ltd. v. ZAP Surgical Sys., Inc.*, 81 F.4th 1368, 1376-77 (Fed. Cir. 2023) (expectation of success implicitly shown via prior art and obviousness analysis).

IV. Ground 2.1: Blease, Weyman

A. Claims 8 and 18 (initializing a processing unit)

Claims 8 and 18 recite “initializing a new processing unit added to the network element.”

PO argues that Petitioner misunderstands Weyman. POR, 40-41. Regarding adding units, Weyman states, in part:

[T]o operate as a single distributed router every defined router configuration should be identical on all units in the fabric.... [W]hen a unit with a default configuration joins the fabric, it needs to update its configuration to that of the distributed router. If a unit with a non-default configuration joins the fabric then there should be a selection mechanism which determines the distributed router's configuration.

Weyman, [0069] (emphasis added).

PO relies on its expert, who insists that Weyman's recitation of a “non-default configuration” in [0069] is a typo and must instead refer back to the earlier

“default configuration.” POR, 40-41; EX2005, ¶60; EX1026, 25:3-26:13.

“Default” and “non-default” options also appear in Weyman at [0156], which PO’s expert reasoned must *also* be a typo during deposition but ignored altogether in his declaration. EX1026, 25:21-26:13.

Weyman’s disclosure is not confusing—and not so confusing that it must be assumed to contain errors. Simply put, if a new unit has a “default configuration,” it will be updated to the configuration already in use by the distributed router. On the other hand, **if** a new unit has a “non-default configuration” (*e.g.*, different from the default), **then** a “selection mechanism” determines which configuration to use—*e.g.*, the existing configuration or that of the new card. Weyman, [0069], [0156]. That is, a “non-default” configuration may have been non-default for a reason (*e.g.*, an operator set that non-default configuration to be used by all cards going forward). Weyman’s disclosure is clear that “[configuration] changes must be made to all the units within the fabric.” Weyman, [0156].

No attempt at providing a technical rationale for this alleged typo was even attempted. There is no basis for treating Weyman’s language—in two different sections—as a typo, other than PO’s expert’s arbitrary preference that Weyman’s “non-default” language cease to exist.

Even if Weyman included a typo, PO's argument that Weyman teaches ways to add a processing unit so that a POSITA need not look anywhere else¹³ is unavailing. While Weyman describes a high-level overview for adding processing units, it does not provide detailed implementation descriptions on how the cards are electrically processed until coming online, which would have motivated a POSITA to rely on their knowledge (including prior art) for understanding and implementation. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (POSITA "presumed to know the relevant prior art"). For example, because new cards were known to have configurations different from that of the existing distributed system (discussed above), it would have been obvious to a POSITA to only activate those cards when properly configured and ready for operation in the distributed system (default or otherwise). -989 Pet., 25.

¹³ PO's conclusion is that a "POSITA would not have looked to the teachings in Blease to add a processing unit in Weyman's system...." POR, 41. However, the Petition shows it would have been obvious to add a processing unit to Blease's system (not Weyman's) because, *e.g.*, processing units may become disabled. PO's argument does not address the Grounds.

V. Ground 2.2: Blease, Weyman, Hu

PO's arguments regarding claim 9 (POR, 43) fail for the same reasons discussed above in at least §II.C.

VI. Ground 2.3: Blease, Weyman, Hu, Deng

PO's arguments regarding claim 10 (POR, 43-44) fail for the same reasons discussed above in at least §III.

VII. Ground 2.4: Blease, Weyman, Rao¹⁴

PO's arguments regarding claims 8 and 18 (POR, 44-45) suppose that a POSITA would not have even considered Rao because Blease, Weyman, and Rao are not in the same field as the '394. According to PO, Rao is "unlike" Blease and Weyman because Rao discloses "control... in a master slave set of centralized processors" and fails to disclose a "list" or "all of the multicast pairings." POR, 44-45. PO's arguments are confusing, at best.

A reference qualifies as prior art "when analogous to the claimed invention," *e.g.*, being "from the same field of endeavor." *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). Rao is in the same field as the '394 because, *e.g.*, it relates to "multicast data packet forwarding" and routers. -989 Pet., 63. PO argues that "a POSITA would disagree" that "Rao [is] in the same field as the '394 Patent" by

¹⁴ EX1024

arguing Rao is “[u]nlike Blease and Weyman.” POR, 44 (emphasis added). PO does not address Rao’s status as analogous art with respect to the ’394, and so its argument fails.¹⁵ PO provides no other evidence regarding the ’394’s field, Rao’s field, or why they are supposedly different to a POSITA; PO instead pointed out that Rao has features allegedly different from the ’394’s claims. POR, 44-45. Fields of endeavor establishing analogous art do not require complete identity.

Finally, PO additional arguments regarding Rao again attack it as prior art, individually, instead of properly considering its combined teachings with Blease and Weyman, and fail for that reason.

VIII. Ground 2.5: Blease, Weyman, Rao, Hu/Deng

PO’s arguments regarding claims 9-10 (POR, 46) fail for the same reasons discussed above in at least §§VI-VII.

IX. Conclusion

PO’s arguments are baseless and fail to appreciate the combined teachings of the prior art. The Challenged Claims should be canceled.

¹⁵ PO’s expert also states that “Like Weyman, Rao teaches away....” EX2005, ¶110 (emphasis added). It is unclear whether PO believes Rao is similar or dissimilar to Weyman, or to the ’394 or any other reference, and/or whether PO also believes Weyman, “like” Rao, is also not in the same field.

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CERTIFICATE OF SERVICE UNDER 37 C.F.R. §42.6 (e)(4)

I certify that on August 1, 2025, a copy of the foregoing document, including any exhibits filed therewith, is being served via electronic mail, as previously consented to by Patent Owner, upon the following:

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24, the undersigned certifies that the foregoing Petitioner's Reply 5,594 words excluding a table of contents, a table of authorities, a listing of facts, a certificate of service or word count, or appendix of exhibits. Petitioner has relied on the word count feature of the word processing system used to create this paper in making this certification.

Date: August 1, 2025

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