

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

JUNIPER NETWORKS, INC.,
Petitioner,

v.

PORTSMOUTH NETWORK CORP.,
Patent Owner.

Case No. IPR2024-00893
Patent No. 6,917,986

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

TABLE OF CONTENTS

I.	Gai in View of IEEE 1999 Renders Obvious All Claims Addressed in Ground 1 of the Petition	2
A.	The Independent Claims (1, 12, 13, and 24)	2
1.	The POR Does Not Dispute that, If Gai's Dummy Messages Are Sent Downstream, Gai Meets Every Limitation of the Independent Claims	2
2.	The POR Erroneously Argues that Ground 1 Bodily Incorporates IEEE 1999's Teardown Messages to Replace Gai's Dummy Messages	4
3.	The POR Does Not Meaningfully Dispute that IEEE 1999 Would Have Motivated POSAs to Send Network Reconfiguration Messages (<i>e.g.</i> , Gai's Dummy Messages) Both Upstream and Downstream	5
4.	Conclusion for Independent Claims	6
B.	The Dependent Claims	7
1.	Dependent Claims 6, 11, 18, and 23	7
2.	Dependent Claims 2-3, 7-10, 14-15, and 19-22	9
II.	Gai in View of IEEE 1999, Further in View of Jain, Renders Obvious the Claims Addressed in Ground 2 of the Petition	9

The Petition explained that, if Gai's network reconfiguration messages (which Gai calls "dummy messages") are sent downstream as well as upstream, Gai meets every limitation of the claims in Ground 1. The Patent Owner Response ("POR") does not meaningfully dispute this. Thus, the essential question for decision on Ground 1 is whether POSAs would have been motivated to send Gai's dummy messages downstream as well as upstream.

The Petition explained that POSAs would have had that motivation from IEEE 1999, which taught sending network reconfiguration messages ("teardown messages") both upstream and downstream to improve the reconfiguration process (*e.g.*, faster speed) for a switched Ethernet network, which Gai also addresses.

Unable to dispute that IEEE 1999 discloses sending network reconfiguration messages in both directions to improve reconfiguration, and further unable to dispute that this teaching would have motivated POSAs to send Gai's dummy messages in both directions for the same reasons (Petition, 25-30), the POR attacks Ground 1 by misrepresenting that the ground proposed bodily incorporation of IEEE 1999's teardown messages into Gai, replacing Gai's dummy messages. The Institution Decision ("ID") correctly explained that Ground 1 is not based on such bodily incorporation. ID, 36 ("We do not understand Petitioner to be arguing that the teardown message itself should be taken from IEEE 1999 and combined with Gai's rapid reconfiguration process, as Patent Owner seems to contend.").

Despite the ID noting that the Patent Owner Preliminary Response (“POPR”) attacked a straw man, the POR doubles down on that same straw man. Critically, the POR never disputes the ID’s conclusion, based on the Petition’s evidence and argument, that “the same principle” underlying IEEE 1999’s disclosure of sending teardown messages both upstream and downstream applies “to the dummy traffic being sent out during the rapid recovery process in Gai.” *Id.* Accordingly, the Board should find the claims addressed in Ground 1 obvious over Gai in view of IEEE 1999.

The dispute over Ground 2 is similar. The POR attacks a straw man and ignores the actual ground as set forth in the Petition.

I. Gai in View of IEEE 1999 Renders Obvious All Claims Addressed in Ground 1 of the Petition

A. The Independent Claims (1, 12, 13, and 24)

1. The POR Does Not Dispute that, If Gai’s Dummy Messages Are Sent Downstream, Gai Meets Every Limitation of the Independent Claims

The Petition explains in Ground 1 that Gai in view of IEEE 1999 renders obvious claims 1-3, 6-15, and 18-24 of the ’986 patent. Petition, 21-61. The Petition explains that “when modified in view of IEEE 1999’s disclosure that it was advantageous to send self-healing messages both upstream and downstream... Gai’s backbone switch / edge switch / bridge sends dummy traffic downstream to Gai’s access switch / bridge, as recited in the challenged claims.” Petition, 29.

The POR does not dispute that the '986 patent's dummy traffic is the same as Gai's dummy messages.¹ Petition, 4.

Further, the POR disputes Ground 1's analysis of the independent claims only as to limitations [1E], [12E], [13C], and [24C], which require, expressly or implicitly, sending dummy messages downstream ("Downstream Limitations"). The POR's failure to dispute Ground 1's analysis for the remaining limitations of the independent claims is consistent with the ID's preliminary conclusion that such limitations are satisfied. ID, 25-31, 38-42, 44-45.

Other than arguing that the Downstream Limitations require downstream directionality (POR, 9-10, 12-16)—with which Petitioner agrees—the POR focuses on arguing that (a) IEEE 1999's teardown messages are not the same as Gai's dummy messages (POR, 7-9, 14), and, relatedly, that (b) IEEE 1999's teardown messages fail to meet certain claim limitations (POR, 11). However, as the Board has already explained, IEEE 1999 is relied upon in Ground 1 simply for teaching the known benefits of upstream and downstream message transmission for reconfiguration—not for the content and/or format of the messages themselves. Ground 1 relies on Gai for teaching the claimed "dummy traffic."

¹ Indeed, the '986 patent incorporates Gai's disclosure of dummy messages for written description support. EX1001, 3:15-35.

PO's arguments are thus irrelevant for the same reason the Board explained in the ID: the Petition does not map the claimed "dummy traffic" to IEEE 1999's teardown messages. Rather, the Petition cites IEEE 1999's disclosure of sending teardown messages both upstream and downstream (EX1009 at 167) solely to provide a motivation for similarly sending Gai's dummy messages both upstream and downstream. In the ID, the Board correctly credited that "a POSITA would apply the teaching from IEEE 1999 that sending messages for reconfiguring the network after a link failure both upstream and downstream can reduce the network downtime to the rapid reconfiguration process in Gai." ID, 36.

In short, if the Board confirms its conclusion in the ID that IEEE 1999 would have motivated POSAs to send Gai's dummy messages downstream as well as upstream—which the POR does not meaningfully dispute, *see infra* §I.A.3—the POR offers no reason why the independent claims should be found patentable.

2. The POR Erroneously Argues that Ground 1 Bodily Incorporates IEEE 1999's Teardown Messages to Replace Gai's Dummy Messages

As noted above, the POR attempts to rewrite Ground 1 to rely on bodily incorporation of IEEE 1999's teardown messages. This is plainly wrong. The POR argues that "Petitioner...specifically identifies IEEE 1999's teardown messages as the appropriate message to modify filtering databases" as recited in the independent claims, and cites Petition pp. 26-29 and 46 as support. POR, 10.

However, the cited pages establish the opposite. *E.g.*, Petition, 26 (“In view of IEEE 1999, POSAs would have had reason to modify Gai’s technique by sending ***Gai’s dummy traffic*** downstream.”), 29 (“when modified in view of IEEE 1999’s disclosure...Gai’s backbone switches (*i.e.*, the claimed ‘edge switches’ and ‘bridges’) send ***Gai’s dummy traffic***...downstream”), 46 (“when modified in view of IEEE 1999’s disclosure...Gai’s backbone switches send ***Gai’s dummy traffic***...downstream”). The Board correctly rejected Patent Owner’s arguments in the ID. ID, 37 n.11 (“it is Gai’s dummy message being sent downstream that Petitioner relies on for meeting limitation 1e, not IEEE 1999’s teardown message”).

3. The POR Does Not Meaningfully Dispute that IEEE 1999 Would Have Motivated POSAs to Send Network Reconfiguration Messages (*e.g.*, Gai’s Dummy Messages) Both Upstream and Downstream

While the POR nominally asserts that “a POSA would not have been motivated to apply IEEE 1999’s transmission of teardown messages to Gai’s system as proposed by Petitioner” (POR, 9) its actual arguments have nothing to do with the expressed motivation of Ground 1. Instead, the POR emphasizes differences between Gai’s dummy messages and IEEE 1999’s teardown messages (POR, 7-9, 14) and alleged failure of IEEE 1999’s teardown messages to meet certain claim limitations (POR, 11)—all of which are irrelevant to Ground 1’s actual mapping, as discussed above, since the Petition does not bodily incorporate IEEE 1999’s teardown messages in any combination.

At the same time, the POR ignores IEEE 1999's teaching that the network reconfiguration process can advantageously be accelerated by sending messages both upstream and downstream. It is this fundamental teaching, ignored by the POR, that the Petition explained would have motivated POSAs to send Gai's dummy messages downstream and upstream. Petition, 26 (sending messages both upstream and downstream offers the benefit of "reducing the time needed for network self-healing"), 29 ("Doing so achieves Gai's goal (shared by IEEE 1999) of reducing the time taken to rectify network failures, including between an edge switch and an access switch.")). The POR's only response to the motivation articulated in the Petition is utterly conclusory and thus entitled to no weight. POR, 7 ("Petitioner's arguments are flawed.")).

Since the POR does not even attempt to dispute that IEEE 1999 teaches the value of sending network reconfiguration messages both upstream and downstream after detecting a link failure, the Board should adopt its preliminary conclusion in the ID that IEEE 1999 would have motivated POSAs to send Gai's dummy messages both upstream and downstream.

4. Conclusion for Independent Claims

The POR addresses independent claims 1 and 12 together. POR, 9-14. The POR states that independent claims 13 and 24 are "substantially similar" to claims 1 and 12, respectively, and hence rise and fall together with them. POR, 14-16.

For the reasons explained above, all of the independent claims are unpatentable over Gai in view of IEEE 1999.

B. The Dependent Claims

1. Dependent Claims 6, 11, 18, and 23

Patent Owner addresses dependent claims 6, 11, 18 and 23 in an independent section of the POR because, separately from the independent claim language discussed above, these claims require (expressly or by implication) that dummy messages be sent downstream. POR, 19-21; claims 6, 11, 18, 23. The downstream-related arguments presented for these dependent claims fail for the same reasons discussed above.

With respect to dependent claims 6 and 18, the POR also offers a passing suggestion, in a portion of a single sentence, that Gai fails to disclose its “backbone switch” sending dummy messages as explained in the Petition. POR, 20; Petition, 48. This argument, which is derivative of the POR’s wooden argument that Gai only sends dummy messages upstream (POR, 13), ignores the Petition. The Petition painstakingly explained Gai’s disclosure that dummy messages can be sent by its backbone switches since Gai’s dummy multicast message mechanism, rapid reconfiguration entity 234, is implemented in Gai’s backbone switches just as it is implemented in Gai’s access switches. Petition, 42-43; EX1005, 8:66-9:3 (“the rapid reconfiguration entity 234 of the selected backbone switch 120”),

12:59-66 (“Switch 114, via rapid reconfiguration entity 234, preferably informs the other devices of its new forwarding port by transmitting dummy multicast packets through the new port”); EX1003, ¶169. In view of the motivation from IEEE 1999 to send dummy messages downstream as well as upstream upon detecting a link failure, Gai’s backbone switch would execute its built-in capability to do exactly that: send dummy messages both upstream and downstream. Petition, 45-46; ID, 35-36. The POR simply ignores this evidence and argument.

The POR offers one other argument for claims 6 and 18: that Gai fails to disclose sending data frames (*i.e.*, messages, EX1005, 7:32-33) from an edge switch (*i.e.*, Gai’s backbone switch, Petition, 28; ID, 21-22 n.8 & 34 n.10) having source addresses corresponding to other network entities accessible to the access switches via the edge switch. POR, 20. Once again, this argument ignores Gai’s disclosure. Gai discloses that “dummy multicast messages carry the source address of each entity that is directly coupled to the device with the new active port or downstream thereof (relative to the root) and are received by other devices in the computer network.” Petition, 48 (citing EX1005, 5:54-60). The POR does not dispute the Petition’s logic that “[s]ince such entities directly coupled to the device (*e.g.*, backbone switch 122) or downstream thereof are entities in the network accessible to access switches via the device, Gai’s backbone switch 122 sends the dummy traffic as claimed,” meeting claims 6 and 18. Petition, 48; ID, 47-48.

Unlike claims 6 and 18, the POR makes no additional arguments for claims 11 and 23. Rather, the POR concedes that the issues for claims 11 and 23 are identical to those for claim 1. POR, 21 (citing Section II.B.1 of the POR, which concerns limitation [1E]). Thus, claims 11 and 23 rise or fall with claim 1.

2. Dependent Claims 2-3, 7-10, 14-15, and 19-22

The POR does not separately address the remaining claims in Ground 1 (*i.e.*, claims 2-3, 7-10, 14-15, and 19-22), and thus provides no independent reason why these claims would avoid a finding of obviousness for the reasons set forth in the Petition.

II. Gai in View of IEEE 1999, Further in View of Jain, Renders Obvious the Claims Addressed in Ground 2 of the Petition

The Petition explained that Jain discloses updating a switch's forwarding database by transferring information from a failed port to a backup port, which becomes active, when a link failure is detected. Petition, 62. The Petition explained that Jain thus discloses the key additional limitation of dependent claims 4, 5, 16 and 17. The POR does not dispute any of this.

The POR only disputes whether POSAs would have been motivated, as the Petition explained, to incorporate Jain's technique into Gai's backbone switch to update the backbone switch's filtering database after the backbone switch detects a failure at a port. Petition, 63; POR, 17-19.

The POR argues that POSAs would not have been motivated to make this modification because “Gai already describes a solution to this problem by sending dummy multicast messages [to a recipient switch].” POR, 17. The POR argues that when one of Gai’s dummy messages is “*received*,” new location information is entered into the receiving switch’s filtering database. POR, 18. According to the POR, this disclosure in Gai renders unnecessary the use of Jain’s technique. *Id.*

However, the POR misses the mark because the disclosure in Gai to which it points pertains to updating the filtering database of the switch that *receives* Gai’s dummy message, whereas the Petition argued that Jain’s technique would have been obvious to use in the switch that *sends* Gai’s dummy messages—as claims 4, 5, 16, and 17 require. Petition, 63 (“The modification would result in a backbone switch’s...database [being] updated prior to notifying other network switches of the newly-activated backup port.”).

Thus, the POR once again mischaracterizes the trial ground of the Petition and erroneously argues that Gai’s “solution” renders Jain’s approach “unnecessary.” POR, 17-19.

Since the POR’s sole response misapprehends Ground 2, the POR provides no reason why claims 4, 5, 16, and 18 would avoid a finding of obviousness for the reasons set forth in the Petition.

Respectfully submitted,

Date: May 29, 2025

/Michael N. Rader/

Michael N. Rader, Reg. No. 52,146
WOLF, GREENFIELD & SACKS, P.C.

Counsel for Petitioner

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24, the undersigned certifies that the foregoing **PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE** contains 2,293 words, excluding: a table of contents, a table of authorities, a certificate of service or word count, or appendix of exhibits or claim listing. Petitioner has relied on the word count feature of the word processing system used to create this paper in making this certification.

Date: May 29, 2025

/MacAulay Rush/
MacAulay Rush
Paralegal
WOLF, GREENFIELD & SACKS, P.C.

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

I certify that on May 29, 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:

James R. Nuttall

jnutall@steptoe.com

Katherine D. Cappaert

kcappaert@steptoe.com

Date: May 29, 2025

/MacAulay Rush/

MacAulay Rush

Paralegal

WOLF, GREENFIELD & SACKS, P.C.