

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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JUNIPER NETWORKS, INC.,  
Petitioner,

v.

PORTSMOUTH NETWORK CORP.,  
Patent Owner.

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Case IPR2024-00893

Patent 6,917,986

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**PATENT OWNER RESPONSE**

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Pursuant to 37 C.F.R. § 42.120, Patent Owner Portsmouth Network Corp. (“Patent Owner”) respectfully submits this Response to the Petition filed by Petitioner Cisco Systems, Inc. (“Petitioner”) regarding U.S. Patent No. 6,917,986 (EX1001, “’986 patent”).

## **I. Introduction**

The ’986 patent claims a novel and non-obvious system to provide rapid reconfiguration of a network in response to network topology changes. In a network containing multiple interconnected switches, a failure in one switch may disrupt communication throughout the network. The ’986 patent’s system uses redundant ports and links to connect switches together so that data transmissions may continue in case a particular port or link fails. For example, when a switch detects a failure in one of its ports, it may activate a backup port and begin transmitting data through the link connected to the backup port. The ’986 patent discloses techniques and methods to detect and respond to a network failure without needing to modify existing standards or use special commands.

The Petition raises two obviousness grounds. However, Petitioner fails to establish that the challenged claims are unpatentable.

As will be described in more detail below, Petitioner’s obviousness combination Gai in view of IEEE 1999 does not disclose sending dummy traffic from the edge switch over the second link to the one or more access switches, so as

to cause each of the one or more access switches to modify its respective database responsive to the second port being in the active state, as required by claim limitation [1E]. Additionally, Petitioner's combination of Gai, IEEE 1999, and Jain does not disclose sending dummy traffic from the first bridge over the second link downstream to the second bridge, so as to cause the second bridge to modify its database responsive to the second port being in the active state, as required by claim limitation [12E].

#### **A. Grounds and Challenged Claims**

The Board instituted review on the following obviousness ground. Paper 12 at 57.

| <b>Ground</b> | <b>Claims Challenged</b> | <b>35 U.S.C. § 103</b> | <b>References/Basis</b> |
|---------------|--------------------------|------------------------|-------------------------|
| 1             | 1–3, 6–15, 18–24         | 103                    | Gai, IEEE 1999          |
| 2             | 4, 5, 16, 17             | 103                    | Gai, IEEE 1999, Jain    |

The challenged claims include four independent claims: 1, 12, 13 and 24. Independent claim 1 is provided below. For purposes of this Response, Patent Owner uses the same claim limitation numbering as the Petition.

[1PRE] A method for network communication, comprising:

[1A] coupling an edge switch in a network to one or more access switches via at least first and second redundant links, respectively connected to first and second ports of the edge switch;

[1B] placing the first port in an active state, while placing the second port in a blocking state;

[1C] conveying communication traffic over the first link while the first port is in the active state, thereby causing each of the switches to build a respective database for use in forwarding the traffic;

[1D] responsive to a failure associated with the first link, placing the second port in the active state and the first port in the blocking state; and

[1E] sending dummy traffic from the edge switch over the second link to the one or more access switches, so as to cause each of the one or more access switches to modify its respective database responsive to the second port being in the active state.

Independent claim 12 is a method claim that includes limitations similar to claim 1. However, claim 12 does not recite “an edge switch” or “one or more access switches” and instead recites “a first bridge” and “a second bridge.” Furthermore, claim 12 recites that the second bridge must be located “downstream” of the first bridge and that dummy traffic from the first bridge must be sent “downstream to the second bridge. Claim 12 is reproduced below:

[12A] A method for network communication, comprising:

coupling a first bridge in a network to a second bridge located downstream of the first bridge, by connecting at least first and second redundant links to respective first and second ports of the first bridge so as to communicate with the second bridge;

[12B] placing the first port in an active state, while placing the second port in a blocking state;

[12C] conveying communication traffic over the first link while the first port is in the active state, thereby causing the bridges to build respective databases for use in forwarding the traffic;

[12D] responsive to a failure associated with the first link, placing the second port in the active state and the first port in the blocking state; and

[12E] sending dummy traffic from the first bridge over the second link downstream to the second bridge, so as to cause the second bridge to modify its database responsive to the second port being in the active state.

Independent claim 13 is an apparatus claim that includes similar limitations to method claim 1, which recites a network switching device that is adapted to be coupled to a core switch and to one or more access switches.

Independent claim 24 is an apparatus claim that includes similar limitations to method claim 12, which recites a bridge device having a spanning tree root that is coupled to an upstream root and to a further bridge device located downstream in the network relative to the root.

**B. Claim Construction**

For purposes of this Response, Patent Owner will apply the ordinary and customary meaning to the '986 patent's claim terms. Petitioner also asserts that no claim requires express construction for the grounds presented in the Petition. Petition at 20.

**C. Person of Ordinary Skill in the Art**

Petitioner proposes a definition of a person of ordinary skill in the art ("POSA") as of the priority date of the '986 patent (January 7, 2002). *Id.* For purposes of this Response, Patent Owner uses the same definition of a POSA.

**D. Legal Framework**

Petitioner must prove that the '986 patent's claims are obvious by a preponderance of the evidence. 35 U.S.C. § 316(e). Obviousness requires a showing that (1) all of the claimed limitations are found in the prior art reference(s) and (2) a POSA would have been motivated to modify or combine the prior art reference(s) to achieve the claimed limitation. *Univ. of Strathclyde v. Clear-Vu Lighting LLC*, 17 F.4th 155, 160 (Fed. Cir. 2021); 35 U.S.C. § 103(a) (pre-AIA). A prior art reference must be considered in its entirety, including portions that would lead away from the claimed invention. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir. 1987).

An IPR petition must state “[h]ow the construed claim is unpatentable under [35 U.S.C. § 103],” and “must specify where each element of the claim is found in the prior art.” 37 C.F.R. § 42.304(b)(4). Conclusory statements alleging a motivation to modify or combine the references are insufficient to demonstrate obviousness. *See e.g., SAS Inst., Inc. v. ComplementSoft, LLC*, IPR2013-00581, 2013 WL 8595535, at \*6 (PTAB Dec. 30, 2013) (rejecting alleged motivation that “[the combination] would increase the functionality of the [primary reference]”); *Exacq Techs., Inc. v. JDS Techs., Inc.*, IPR2016-00568, 2016 WL 4987613 (PTAB June 14, 2016) (“Simply stating that the combination ‘would merely be the use of known validation techniques to improve a similar network camera system in the same way,’ ... without evidence, is not sufficient.”). “[H]indsight bias” cannot be “the thread that stitches together prior art patches into something that is the claimed invention.” *Metalcraft of Mayville, Inc. v. Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017).

#### **E. Institution Decision**

The Institution Decision preliminarily determined that Petitioner’s showing was adequate based on the then-current record and for the purposes of institution. *See* Paper 12 at 57. This Response explains why Petitioner’s grounds fail to render the challenged claims unpatentable.

**II. Ground 1: Gai in View of IEE 1999 Does Not Render Obvious Claims 1–3, 6–15, and 18–24****A. A POSA Would Not Have Combined Gai and IEEE 1999**

A POSA would not have been motivated to combine the teachings of Gai and IEEE 1999 to send dummy traffic downstream or to send dummy traffic to modify a database responsive to the second port being in the active state, as recited in the independent challenged claims of the '986 patent. EX2002, ¶ 46. Petitioner appears to acknowledge that Gai discloses sending dummy traffic upstream but does not disclose sending dummy traffic downstream. *See* Petition at 26–27; EX2002, ¶ 47; *see also* EX2004 (McNair Dep. Tr.) at 26:18–20. Petitioner instead proposes modifying Gai with IEEE 1999 to address the deficiency. *See* Petition at 26. Petitioner argues that a POSA would be motivated to modify Gai with IEEE 1999 to send Gai's dummy traffic downstream after a downstream link failure because such a modification “has the same benefit already described in Gai, *i.e.*, reducing the time needed for network self-healing.” Petition at 26; *see* EX2002, ¶ 47. Petitioner's arguments are flawed. EX2002, ¶¶ 46–47.

For example, Petitioner argues that Gai could be modified to send dummy traffic downstream because IEEE 1999 discloses sending such messages upstream and downstream. Petition at 27. However, Petitioner acknowledges that IEEE 1999 describes its messages as “teardown messages” and not dummy messages. *Id.*; *see* EX2002, ¶ 47. IEEE 1999's fault detection recovery mechanism detects a fault in a

link and performs the following functions: (1) discard all best effort traffic, (2) terminate all connections going through the faulty link, (3) rebuild the spanning tree, and (4) reestablish the connections that were torn down. *See* EX1009 at 166; EX2002 ¶ 47. IEEE 1999’s teardown messages are transmitted to host computers to tear down connections going across the faulty link and are not received by switches in the network. EX2002, ¶ 47; *see* EX2004 at 39:22–40:2 (“A. No, that’s not the intent of the tear down message. It is to tear down. It is a tear down message. It is to tear down a connection.”). Additionally, IEEE 1999’s teardown messages are not used to learn a MAC address. Rather, they are used to inform host computers that the network is unstable and that their particular connections have been torn down. *Id.* The transmission of teardown messages also happens before the spanning tree is reconfigured and before each switch begins forwarding traffic along new routes. *See* EX1009 at 166, 167; EX2002, ¶ 47.

Gai’s dummy messages are different. EX2002, ¶ 47. Gai discloses that dummy multicast messages are transmitted “[u]pon transition to the new forwarding port” and are sent so that “other devices within the network learn to utilize the new forwarding port, rather than the failed port, when directing messages to these entities.” EX1005 at 5:54–6:5. Therefore, Gai is clear that its dummy multicast messages are transmitted as part of the reconfiguration process and only transmitted once a device has already successfully transitioned to a new forwarding port. *See*

EX2002, ¶ 47. As such, Gai’s dummy messages are sent at a different time and serve a different purpose than IEEE 1999’s teardown messages. *Id.*

Therefore, a POSA would understand that IEEE 1999’s transmission of teardown messages differs from Gai’s transmission of dummy messages. *Id.*, ¶ 48. Because the purpose and timing of the messages differ in both IEEE 1999 and Gai, a POSA would not have been motivated to apply IEEE 1999’s transmission of teardown messages to Gai’s system as proposed by Petitioner. *See id.*

## **B. Independent Claims 1 and 12**

As explained in section II.A, a POSA would not have modified Gai with IEEE 1999 to arrive at the ’986 patent’s claimed inventions. *See supra* section II.A; EX2002, ¶¶ 38, 46. Further discussed below are particular reasons why Gai and IEEE 1999 fail to render obvious claims 1 and 12.

- 1. Gai in view of IEEE 1999 does not teach or render obvious sending dummy traffic “from the edge switch over the second link to the one or more access switches, so as to cause each of the one or more access switches to modify its respective database responsive to the second port being in the active state” (claim limitation [1E])**

Claim 1 recites “sending dummy traffic from the edge switch over the second link to the one or more access switches, so as to cause each of the one or more access switches to modify its respective database responsive to the second port being in the active state.” Although claim 1 does not explicitly recite sending dummy traffic “downstream,” Petitioner’s arguments refer to downstream transmissions. *See*

Petition at 44–46. For example, Petitioner clearly states that claim 1 requires downstream transmission from an edge switch to an access switch. Petition at 28 (“Claim 1 of the ’986 patent requires an ‘edge switch’ to send dummy traffic **downstream** to an access switch.”) (emphasis added). Petitioner appears to acknowledge that Gai does not disclose sending dummy multicast messages from an edge switch to one or more access switches to modify the respective databases of devices located further downstream. See Petition at 45 (“With reference to **downstream directionality**, it would have been obvious to POSAs to send dummy multicast messages both upstream, as explained above, as well as downstream.”) (emphasis added); *see also* EX2002, ¶ 54. Petitioner argues that Gai modified by IEEE 1999 achieves such a result. See Petition at 45–56. However, Petitioner’s arguments fail. EX2002, ¶ 54.

Petitioner relies on IEEE 1999 to disclose the transmission of self-healing messages from an edge switch to one or more access switches and specifically identifies IEEE 1999’s teardown messages as the appropriate message to modify filtering databases. See *e.g.*, Petition at 26–29, 46.<sup>1</sup> However, as previously mentioned in section II.B, IEEE 1999’s teardown messages are sent to the sources

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<sup>1</sup> It is not clear why Petitioner has renamed IEEE 1999’s teardown messages as “self-healing” messages. IEEE 1999 does refer to teardown messages as “self-healing” messages. See *generally* EX1005; *see also* EX2002, ¶ 55.

of the connections (e.g. the hosts) and are not sent to modify filtering databases of any switches or reconfigure the spanning tree. *See supra* section II.A; EX2002, ¶ 55. IEEE 1999 instead teaches that teardown messages are sent to host computers to tear down existing connections. *See* EX2002, ¶ 55.

IEEE 1999 is clear that its fault detection recovery mechanism detects a fault in a link and performs the following functions: (1) discard all best effort traffic, (2) terminate all connections going through the faulty link, (3) rebuild the spanning tree, and (4) reestablish the connections that were torn down. EX1009 at 166; EX2002, ¶ 56. As the name suggests and as outlined in IEEE1999, the teardown messages are specifically transmitted to tear down specific connections at the source of these connections, before the spanning tree is reconfigured and before each switch begins forwarding traffic along new routes. *See supra*, section IX.A; *see also* EX1009 at 166, 167. A POSITA would therefore understand that the teardown messages play no role in modifying or updating filtering databases in the switches. EX2002, ¶ 56.

Accordingly, the Petition fails to establish that the combination of Gai and IEEE 1999 teaches or renders obvious “sending dummy traffic from the edge switch over the second link to the one or more access switches, so as to cause each of the one or more access switches to modify its respective database responsive to the second port being in the active state.” *See* EX2002, ¶ 57.

2. **Gai in view of IEEE 1999 does not teach sending dummy traffic “from the first bridge over the second link downstream to the second bridge, so as to cause the second bridge to modify its database responsive to the second port being in the active state.” (claim limitation [12E])**

Gai in view of IEEE 1999 does not teach “sending dummy traffic “from the first bridge over the second link downstream to the second bridge, so as to cause the second bridge to modify its database responsive to the second port being in the active state.” EX2002, ¶ 63.

Petitioner relies on the same arguments for claim limitation [1E] to support its discussion of claim limitation [12E]. Petition at 54 (“Gai meets [12E] for the same reasons as [1E].”); see EX2002, ¶ 58. As previously mentioned in section II.B.1, Petitioner’s arguments for claim limitation [1E] fail. See *supra* section II.B.1. Additionally, Petitioner’s arguments fail for the reasons set forth below.

The ’986 patent explicitly references and distinguishes Gai as part of the ’986 patent’s discussion of the background of the invention. See EX1001, 3:15–41; EX2002, ¶ 59. The ’986 patent discloses that “[Gai’s] method assumes that the switches in the network, including both core and access switches, have multiple trunk ports providing connectivity to the STP root via trunk switches ... ***The switch then transmits dummy multicast messages toward the root (upstream)*** through the newly-active trunk port, each containing the source address of a network entity that is coupled to the switch itself or is downstream of the switch.” EX1001, 3:18–33

(emphasis added). Thus, the '986 patent expressly distinguishes Gai from the claims by stating that Gai transmits dummy multicast messages towards the root upstream and that the source address comes from an entity downstream of the switch. *Id.*; see EX2002, ¶ 59.

In other words, the '986 patent distinguishes Gai from the claimed invention by stating that Gai's method is limited to only transmitting dummy multicast messages upstream and that Gai does not disclose sending any transmissions downstream. EX2002, ¶ 60. As claim limitation [12E] explicitly requires downstream transmission, the '986 patent's differentiation establishes that Gai does not disclose this limitation and that Gai does not render the '986 patent's claims obvious. *Id.*

Not only does the '986 patent explain that Gai is limited to upstream transmissions, but Gai's own disclosure confirms this. See EX2002, ¶ 61. For example, Gai discloses that upon failure of the current root port, the access switch is configured to transition to one of its blocked trunk ports to the forwarding state and to begin transmitting dummy multicast messages through the new port. See EX1005 at 6:42–50. Gai also discloses utilizing a “better path toward the root.” *Id.*

Additionally, IEEE 1999 does not cure Gai's deficiency. EX2002, ¶ 62. Petitioner states that “IEEE 1999 discloses sending such messages both upstream and downstream” and that “IEEE 1999 describes the messages as ‘teardown

messages.’” Petition at 27. However, as previously mentioned in sections II.A and XII.B.1, IEEE 1999’s teardown messages are sent to the source of these connections to terminate them. *See supra* sections II.A, II.B.1. IEEE 1999’s teardown messages are not received by or operated by any switches which may pass the message through to modify their databases. *See* EX2002, ¶ 62. Therefore, even assuming that IEEE 1999’s teardown messages are sent downstream, they are not sent downstream “to cause the second bridge to modify its database responsive to the second port being in the active state.” *See id.*

Therefore, Petitioner fails to establish that the combination of Gai and IEEE 1999 teaches or renders obvious “sending dummy traffic from the first bridge over the second link downstream to the second bridge, so as to cause the second bridge to modify its database responsive to the second port being in the active state.” *See* EX2002, ¶ 63.

### **C. Independent Claim 13**

As explained in section II.B, Gai in view of IEEE 1999 fails to render obvious the challenged claims. *See supra* sections II.B.1–2. Additionally, Gai in view of IEEE 1999 fails to render obvious claim 13, and Petitioner’s analysis for claim 13 fails, for the same reasons discussed in section II.B.1 regarding claim 1, as claim 13 is substantially similar to claim 1. *See* EX2002, ¶¶ 64–65. That is, limitation 13c is

substantially similar to limitation [1E]. A comparison of the limitations [1E] and [13C] is provided below.

|                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [1E] sending dummy traffic from the edge switch over the second link to the one or more access switches, so as to cause each of the one or more access switches to modify its respective database responsive to the second port being in the active state | [13C] a protocol processor, adapted to [...] send dummy traffic through the second access port over the second link to the one or more access switches, so as to cause each of the one or more access switches to modify its respective access switch database responsive to the second access port being in the active state |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Petitioner expressly relies on its analysis of the limitations for claim 1 for purposes of analyzing the limitations of claim 13. *See* Petition at 56–57. For example, Petitioner expressly cites to its analysis of limitation [1E] for purposes of limitation 13c. *Id.* However, Petitioner’s argument does not cure the deficiencies of Petitioner’s analysis in connection with claim 1. *See* EX2002, ¶ 66. Thus, claim 13 is non-obvious for the same reasons as claim 1. *See* EX2002, ¶¶ 66–67.

#### **D. Independent Claim 24**

As explained in sections II.B and II.C, *Gai* fails to render obvious the challenged claims. *See supra* sections II.B–C.

Additionally, *Gai* fails to render obvious claim 24, and Petitioner’s analysis for claim 24 fails, for the same reasons discussed in section II.B.2 regarding claim 12, as claim 24 is substantially similar to claim 12. *See supra* section II.B.2; EX2002, ¶¶ 68–69. That is, limitation [24C] is substantially similar to limitation

[12E]. EX2002, ¶ 69. A comparison of the limitations 12e and 24e is provided below.

|                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [12E] sending dummy traffic from the first bridge over the second link downstream to the second bridge, so as to cause the second bridge to modify its respective database responsive to the second port being in the active state | [24C] the protocol processor being further adapted [...] to send dummy traffic over the second link downstream to the further bridge device, so as to cause the further bridge device to modify its database responsive to the second downstream port being in the active state |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Petitioner expressly relies on its analysis of limitations [1B]–[1E] for purposes of limitation 24c, which is also repeated in Petitioner’s analysis for claim 12. *See* Petition at 61, 55, 56. Petitioner does not present any new arguments in its analysis of limitation 24c. Thus, claim 24 is non-obvious for the same reasons as claim 12 and claim 1. *See* EX2002, ¶¶ 70–71.

### **III. Ground 2: Gai in View of IEE 1999 and Further in View of Jain Does Not Render Obvious Claims 4, 5, 16, and 17**

Dependent claims 4, 5, 16, and 17 are non-obvious based on Petitioner’s failure to establish obviousness of the underlying independent claims from which they depend, as explained in sections II.A–D. *See supra* sections II.A–D; EX2002, ¶ 79. Additionally, as discussed in more detail below, a POSA would not have combined Gai, IEE 1999, and Jain. EX2002, ¶ 80. Therefore, Petitioner has failed to show that claims 4, 5, 16, and 17 of the ’986 patent are obvious over Gai, IEE 1999, and Jain. *See* EX2002, ¶ 81.

**A. A POSA Would Not Have Combined Gai and IEEE 1999**

A POSA would not have been motivated to combine Gai’s teachings with IEEE 1999 and Jain to update the database of the edge switch, as recited in the dependent challenged claims of the ’986 patent. *See* EX2002, ¶ 49. As previously discussed in section II.A, a POSA would not have been motivated to combine Gai and IEEE 1999. *See supra*, section II.A. Furthermore, a POSA would not have been motivated to incorporate Jain’s techniques to Gai’s system for the reasons below. EX2002, ¶ 49.

Petitioner asserts that “Gai expresses concern that messages may be misdirected or lost” and that “POSAs would have been motivated to modify Gai by incorporating Jain’s technique of updating a filtering database responsive to a link failure for the benefit of reducing the possibility of misdirected/lost data messages during the self-healing operation.” Petition at 63. The Petition specifies that the modifications to Gai “would be implemented by remapping entries from the failed port to a backup port” and that the update “would be implemented before receiving communication traffic on the backup port to reduce the possibility of the backup port misdirecting or losing received messages using outdated database information.” *Id.* But Gai already describes a solution to this problem by sending dummy multicast messages. EX1005 at 12:62–66; EX2002, ¶ 50.

Petitioner’s proposed modifications are therefore unnecessary and taught away by Gai. EX2002, ¶ 51. While Gai does mention the risk of messages being lost or misdirected, Gai presents its own solution to avoid that outcome. *Id.* For example, Gai discloses that when access switch 114 transitions from initial port number three to back-up root port number four, “the identity of the new root port (e.g., port number four) must be propagated to the other devices, such as access switches 115-116 and backbone switches 120-125 to prevent messages from being lost or misdirected.” EX1005 at 12:59–62. Gai further discloses that when a dummy multicast message 400 is received at a new source port, “this new location information is entered by backbone switch 124 into its filtering database, replacing the previous information that was stored therein.” *Id.* at 13:34–38. By doing so, Gai’s dummy multicast message 400 “effectively apprises backbone switch 124 of the change in forwarding ports that occurred at access switch 114.” *Id.* at 13:43–45. Gai’s transmission of dummy multicast messages records the location information of the new root port and propagates that information to other devices in the system so that filtering databases can be updated. *See* EX2002, ¶ 51. As a result, Gai already provides its own solution so that messages are not lost or misdirected when a switch transitions to a new port. *Id.*

Therefore, a POSITA would not have been motivated to incorporate Jain’s techniques of updating a filtering database responsive to a link failure to Gai’s

system when Gai already provides a solution for the issues identified by Petitioner.

*Id.*, ¶ 52.

#### IV. Dependent Claims

Dependent claims 2–3, 6–11, 14–15, and 18–23 are non-obvious based on Petitioner’s failure to establish obviousness of the underlying independent claims from which they depend, as explained in sections II.B–D. Additionally, the limitations of specific dependent claims are discussed below.

**A. Gai in view of IEEE 1999 does not teach or render obvious “wherein [sending] the dummy traffic comprises [sending] data frames originating at the edge switch while having source addresses corresponding to network addresses of other entities in the network that are accessible to the access switches via the edge switch” (claims 6, 18)**

Petitioner relies on the same arguments for claims 6 and 18. Petition at 48, 58. For reference, a comparison of dependent claims 6 and 18 is provided below.

|                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [6] A method according to claim 1, wherein sending the dummy traffic comprises sending data frames originating at the edge switch while having source addresses corresponding to network addresses of other entities in the network that are accessible to the access switches via the edge switch. | [18] A device according to claim 13, wherein the dummy traffic comprises data frames originating at the edge switch while having source addresses corresponding to network addresses of other entities in the network that are accessible to the access switches via the edge switch. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Gai in view of IEEE 1999 does not teach “wherein [sending] the dummy traffic comprises [sending] data frames originating at the edge switch while having source addresses corresponding to network addresses of other entities in the network

that are accessible to the access switches via the edge switch.” EX2002, ¶¶ 72–73.

Petitioner relies on its arguments for claim limitation [1E] to argue that it would have been obvious for backbone switch 122 to send and originate dummy multicast messages. *See* Petition at 48; EX2002, ¶ 73. Petitioner’s argument fails for the same reasons as discussed in section II.B.1, and no portion of Gai actually discloses backbone switch 122 sending dummy multicast messages. *See supra* section II.B.1; EX2002, ¶ 73. Furthermore, because Gai itself does not disclose sending data frames originating at the edge switch while having source addresses corresponding to other network entities accessible to the access switches via the edge switch, a POSA would understand that Gai does not disclose claims 6 or 18. EX2002, ¶ 74. Furthermore, IEEE 1999 does not cure the deficiencies in Gai for the same reasons as previously discussed in sections II.A and II.B.1–2. *See supra* sections II.A and II.B.1–2; EX2002, ¶ 74.

Accordingly, Gai in view of IEEE 1999 fails to teach or render obvious claims 6 and 18, and Petitioner has failed to establish that claims 6 and 18 are rendered obvious. *See* EX2002, ¶ 75.

**B. Gai in view of IEEE 1999 fails to teach or render obvious “wherein [sending the dummy traffic comprises sending data frames downstream]/[the dummy traffic comprises data frames sent downstream] from the edge switch toward the access switches” (claims 11, 23)**

Petitioner groups its arguments for claims 11 and 23 together. Petition at 53, 60. For reference, a comparison of dependent claims 11 and 23 is provided below.

|                                                                                                                                                                 |                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| [11] A method according to claim 1, wherein sending the dummy traffic comprises sending data frames downstream from the edge switch toward the access switches. | [23] A device according to claim 13, wherein the dummy traffic comprises data frames sent downstream from the edge switch toward the access switches. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|

Petitioner solely refers to its arguments in connection with claim 1 for its analysis of claims 11 and 23. *See id.*; EX2002, ¶ 77. Gai in view of IEEE 1999 fails to disclose “wherein [sending the dummy traffic comprises sending data frames downstream]/[the dummy traffic comprises data frames sent downstream] from the edge switch toward the access switches” for the same reasons as discussed in section II.B.1. *See supra* section II.B.1; EX2002, ¶ 77. Accordingly, Gai in view of IEEE 1999 fails to teach or render obvious dependent claims 11 and 23 and thus fails to render obvious claims 11 and 23. *See* EX2002, ¶ 78.

**V. Conclusion**

For the foregoing reasons, Petitioner has not established that any challenged claims of the '986 patent are obvious, and the Board should affirm the patentability of the challenged claims.

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Respectfully submitted,

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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 5,742 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 RESPONSE was served on March 6, 2025 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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