

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CISCO SYSTEMS, INC.,
Petitioner

v.

PORTSMOUTH NETWORK CORP.,
Patent Owner

Case No. IPR2024-00503

U.S. Patent No. 7,035,279

PATENT OWNER'S RESPONSE

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2001	Docket Navigator – E.D. Tex. Time to Trial Statistics
2002	E.D. Tex. Civil Case No. 2:23-cv-441; Cisco Initial Invalidity Contentions (w/o exhibits) (Served February 20, 2024)
2003	US Patent 5,461,611
2004	Expert Declaration of Dr. James Olivier
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2006	Deposition Transcript of Dr. Nader Mir
2007	Joint Claim construction and Prehearing Statement, D.I. 72, <i>Portsmouth Network Corporation v. Cisco Systems, Inc.</i> No. 23-cv-0044 (EDTX).

Pursuant to 37 C.F.R. § 42.107, Patent Owner Portsmouth Network Corporation (“Portsmouth”) submits this Response to the Petition for *Inter Partes* Review (“IPR”) of U.S. Patent No. 7,035,279 (the “’279 Patent”) (Paper 1).

I. INTRODUCTION

The Petition is defined by a misunderstanding and a misarticulation of the ’279 Patent and the references that Petitioner alleges render it obvious. The ’279 Patent teaches a system that allows for dynamic traffic management by means of a dispatcher node that can assess network resource availability while the system is running in order to efficiently manage load control. The prior art references cited by Petitioner articulate a completely different network architecture and are directed to different issues than the ’279 Patent. Thus, Petitioner fails to provide any valid reasoning that would render the limitations of the ’279 Patent obvious.

As an initial matter, Petitioner fails to articulate any valid basis for combining the prior art it relies on for each of the grounds asserted in the Petition. The primary references Petitioner relies on teach disparate methodologies for managing network traffic. Not only does Petitioner fail to reconcile these differences in arguing that a POSITA would be motivated to combine these references, the primary motivation it discloses is laden with hindsight and does not provide a basis for why a POSITA would modify and combine the references in the way Petitioner suggests.

Even outside of the reference combinations, Petitioner fails to disclose crucial elements of the independent claims as it misunderstands the nature of the data flow disclosed in the '279 Patent.

Accordingly, Patent Owner respectfully requests that the Board find the '279 Patent valid.

II. Grounds and Challenged Claims

The Board instituted review on the following obviousness grounds:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1-5, 9-18	103(a)	Kovvali, Kalman
6	103(a)	Kovvali, Kalman, and Masters
7-8	103(a)	Kovvali, Kalman, and RFC2892

As it pertains to this Patent Owner's Preliminary Response, claim 1 (a method claim) is representative of claim 15 (an apparatus claim). Claim 1 recites:

[1.0] In a communication network that includes a plurality of nodes interconnected by links, the nodes including at least first and second nodes, a method for routing a data flow, comprising:

[1.1] allocating a respective number of quanta of one or more resources in the network to each of the nodes;

[1.2] receiving a request at the first node to use a portion of the resources so as to carry the data flow between the first and second nodes over one of a plurality of paths therebetween, each such path comprising a respective sequence of the links;

[1.3] and in response to the request: if the resources already allocated to the first node on one of the paths are sufficient, directing the data flow from the

first node to the second node over the one of the paths without requesting additional resources;

[1.4] and if the resources already allocated to the first node are insufficient, performing the following steps:

[1.5] requesting an increase in an allocation to the first node of the requested resources;

[1.6] determining, for the links comprised by each of the paths, respective levels of use of the requested resources due to communications in progress over the network;

[1.7] selecting which of the paths is to carry the data flow responsive to the determined levels of use of the requested resources on the links comprised in each of the paths;

[1.8] and increasing the allocation of the resources to the first node on the selected path by a predetermined quantum.

As demonstrated below, Ground 1 of the Petition fails to teach limitations

[1.1]-[1.8] and [15.1]-[15.8].

III. CLAIM CONSTRUCTION

A court “‘look[s] to the words of the claims themselves...to define the scope of the patented invention.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). A claim term is generally given its “ordinary and customary meaning,” which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1312-13. While courts may deviate from the plain and ordinary meaning in some circumstances, there is a

“heavy presumption that a claim term carries its ordinary and customary meaning.” *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (internal quotations omitted). Under this “exacting” standard, any departure from a claim’s ordinary meaning must be based on language that is “so unmistakable as to be unambiguous[.]” *Dealertrack Inc. v. Huber*, 674 F.3d 1315, 1322 (Fed. Cir. 2012) (citations omitted). Here, at this stage in the proceeding, Patent Owner will apply the ordinary and customary meaning to the ’279 Patent’s claim terms.

Patent Owner also notes that in the co-pending district court litigation, Petitioner has asserted specific claim constructions for the following terms:

Term	Claims	Petitioner’s District Court Proposed Construction
“predetermined”	1, 10, 14-16, 18	“determined before the data flow request”
“quantum”	1, 15	“an amount of a requested resource by which to increase or decrease”

Ex. 2007.

In its Petition, however, Petitioner has failed to address these constructions or explain how the combinations of (1) Kovvali and Kalman, (2) Kovvali, Kalman, and Masters, or (3) Kovvali, Kalman, and RFC2892 disclose or render obvious the challenged claims under these constructions.

IV. PERSON OF ORDINARY SKILL IN THE ART

Petitioner contends that a person having ordinary skill in the art (“POSITA”) in January 2001 “would have had a master’s degree in computer science, computer engineering, or an equivalent, and two years of professional experience relating to network communications and resource allocations.” Pet. at 12. The Petition further notes that “[a]dditional work experience can substitute for specific educational background, and vice versa.” *Id.*

For the purposes of this Preliminary Response, Patent Owner does not dispute Petitioner’s definition of a POSITA.

V. LEGAL FRAMEWORK

To satisfy its burden of proving obviousness, “a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). The Federal Circuit has repeatedly cautioned against hindsight reconstruction of the references in an obviousness analysis. *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066 (Fed. Cir. 2016) (“Although the KSR test is flexible, the Board must still be careful not to allow hindsight reconstruction of references ... without any explanation as to how or why the references would be combined to produce the claimed invention.”) (internal quotation marks omitted).

Hindsight is particularly in play where the Petitioner uses “the invention to define the problem that the invention solves.” *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1377 (Fed. Cir. 2012) (explaining that “the inventive contribution lies in defining the problem in a new revelatory way. In other words, when someone is presented with the identical problem and told to make the patented invention, it often becomes virtually certain that the artisan will succeed in making the invention.”). Rather than relying on the invention itself to provide a roadmap for its obviousness analysis, the Petitioner must “prove by clear and convincing evidence that a person of ordinary skill in the [network communications] arts at the time of the invention would have recognized the [...] problem recognized by the inventors and found it obvious to [address that problem using the] structure disclosed [by] the [’279] patent[.]” *Id.*; see also *In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991) (“It is impermissible [...] simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps.”).

VI. ARGUMENT

While Petitioner challenges all the ’279 Patent’s claims across Grounds 1-3, Petitioner challenges independent claims 1 and 15 in Ground 1 only. In that Ground, Petitioner argues that claims 1 and 15 are rendered obvious by a combination of U.S. Patent No. 6,920,113 (“Kovvali”) and U.S. Patent No. 6,680,912 (“Kalman”). Pet.

at 13. These references, however, fail to render obvious the challenged claims as (1) the Petitioner fails to articulate a valid motivation to combine the references, (2) a POSITA would not find it obvious to combine the references, and (3) even if it were obvious to combine the references, the combination fails to disclose crucial limitations that set up the framework of the '279 Patent's independent claims.

A. Overview of '279 Patent

The '279 Patent is directed to an improved method for routing data flow in a network. As described in the Patent, prior art systems did not teach “how IP flows should be assigned to high priority levels or how load control should be accomplished for such high-priority packets,” nor did they provide “any means or basis for updating the costs [of data transmission] automatically, while the network is running, in response to network resource constraints.” Ex. 1001, 1:45-48, 60-67; Ex. 2004, ¶32. To address these issues, the '279 Patent teaches a system that “provide[s] the means to select one of a plurality of possible paths through a network between a pair of nodes based on a dynamic assessment of network resource availability that is made by the dispatcher, rather than static link ‘costs’ or other factors used in protocols known in the art,” which allows for a more efficient means to manage load control. Ex. 1001, 2:38-43; Ex. 2004, ¶32.

B. Overview of Kovvali and Kalman

Kovvali is titled “Transport of Isochronous and Bursty Data on a Sonet Ring,” and was issued on July 19, 2005. Kovvali is directed to systems and methods for accommodating data that does “not match the SONNET signal hierarchy” or that “exhibit[s] bursty or time-varying rates.” Ex. 1005, 4:32-34. The invention provides that “[s]tatistical multiplexing and over-subscription is achieved by using a centralized bandwidth arbiter.” *Id.* at 7:31-32. Kovvali further teaches that “[r]equests to assign dynamic channels for communication between particular nodes are sent from a client node to the arbiter. The arbiter responds to the requests by assigning dynamic channels to particular nodes, and by adjusting the allocated rates for the dynamic channels.” *Id.*, at 9:6-11, Ex. 2004, ¶35.

Kalman is titled “Selecting a Routing Direction in a Communications Network Using a Cost Metric,” and was issued on January 20, 2004. Kalman is directed to a “network protection and restoration technique...that efficiently utilizes the total bandwidth in the network to overcome the drawbacks of [prior art] networks, that is not linked to a specific transport protocol such as SONET, and that is designed to meet the Telcordia 50 millisecond switching requirement.” Ex. 1006, 2:56-61, Ex. 2004, ¶36.

To achieve this objective, Kalman teaches that during normal operations, “data between nodes flows on the ring that provides the lowest-cost path to the

destination node,” and that “[e]ach node determines the lowest-cost path from it to every other node on the ring,” which requires each node to “know the network topology.” Ex. 1006, 3:1-9; Ex. 2004, ¶37.

Specifically, Kalman teaches that each node “monitors the status of each link for which it is at the receiving end...to detect a fault.” Ex. 1006, 3:10-12, Ex. 2004, ¶38. In the event of a fault, the node sends a broadcast message to all nodes, which results in “reconfiguration of a routing table within each node so as to identify the optimum routing of source traffic to the destination node after the fault.” Ex. 1006, 3:15-18; Ex. 2004, ¶38. Kalman repeatedly emphasis that its system requires that “all nodes know the status of the network and all independently identity the optimal routing path to each destination node when there is a fault in any of the links,” as this allows the processing “to be extremely efficient to maximize switching speed.” Ex. 1006, 3:13-22; Ex. 2004, ¶38.

C. Petitioner fails to articulate a valid motivation to combine Kovvali with Kalman

As discussed above, Kovvali and Kalman are directed to different methods for data routing. Kalman teaches a distributed routing algorithm in which all nodes independently identify the optimal path, while Kovvali teaches a central arbiter to identify the optimal path between the terminal nodes identified by the communication request. Ex. 2004, ¶40.

Kovvali, teaches a centralized system in which “the requesting node communicates a request to establish a new communication session to the arbiter,” and the “arbiter node receives the request” and “responds to the requests by assigning dynamic channels to particular nodes, and by adjusting the allocated rates for the dynamic channels.” Ex. 1005, 13:29-36; 9:6-11; Ex. 2004, ¶42. This aligns with Kovvali’s stated goal of accommodating bursty data, which prior art digital signal hierarchy systems could not efficiently handle. Ex. 1005, 3:32-35; 4:25-34. By featuring an arbiter that functions as a centralized bandwidth manager, Kovvali teaches a system that can achieve “[s]tatistical multiplexing and over-subscription,” and thus, can accommodate bursty data by reorganizing bandwidth as necessary. *Id.*, at 7:32-33. Kovvali is not concerned with maximizing the efficiency of each available path in the ring network system, but rather with creating a communication network in which resources can be dynamically managed to handle irregular streams of data. Ex. 2004, ¶42.

Kalman, on the other hand, is directed to “acheiv[ing] fast protection in a ring network while providing for efficient network capacity utilization.” Ex. 1006, 4:20-22. While Kovvali utilizes the centralized arbiter node to manage network capacity, Kalman does not suggest the use of a “dispatcher” or ring-leader node, but rather teaches that each node monitors the status of each link that it’s connected to, and in the event of a link failure, broadcasts the failure to all nodes triggering a

reconfiguration of path routing within each node. *Id.*, at 3:10-18. The Kalman system thus teaches that “all nodes know the status of the network and all **independently identify the optimal routing path** to each destination node when there is a fault in any of the links.” *Id.*, at 3:17-20 (emphasis added); Ex. 2004, ¶41.

In fact, not only does Kalman not suggest using an arbiter node, using one would, in fact, interfere with Kalman’s goal of fast failure protection by adding in multiple layers of communication into the system. Ex. 2004, ¶41. Kalman’s strength is that it does not have a monitoring node slowing down transmission routing, and thus, to implement an arbiter node into this system, as suggested by Petitioner, would interfere with the purpose of this system. Ex. 2004, ¶41.

Despite this, Petitioner argues that a POSITA would be motivated to combine the two references because (1) they “provide complementary ideas for the efficient transmission of data in a ring network,” (2) the combination would be obvious as it represents “use of Kalman’s known technique for selecting a preferred path on a ring network to improve Kovvali’s multi-path ring network for transmitting dynamic frames in the same way,” (3) it would result in the “efficient transmission of dynamic frames in a ring network using a lowest-cost path,” and (4) it would improve Kovvali’s “multi-path ring network” by “centralizing path selection decisions at the arbiter, [resulting in a] more efficient utilization of available network capacity.” Pet.

at 23-24. None of these reasons articulates a viable motivation to combine the references without hindsight.

As discussed above, Kovvali and Kalman are directed to different methods for data routing. Kalman teaches a distributed routing algorithm in which all nodes independently identify the optimal path. Kovvali, on the other hand, teaches a central arbiter to identify the optimal path between the terminal nodes identified by the communication request. Despite asserting that a POSITA would be motivated to combine these systems, Petitioner does not identify disclosures in Kovvali or Kalman that would lead to a POSITA combining the references.

Instead, Petitioner relies entirely on its expert's declaration to articulate its motivation to combine. Pet. at 24. Petitioner's expert declaration, in turn, simply relies on generalizations on why a POSITA would be motivated to combine the references, including because it would improve "Kovvali's multi-path ring network" by resulting in a "more efficient utilization of available network capacity." Ex. 1003, ¶53.

But simply stating that combining these two references would result in increased efficiency is relying on the problem already articulated in the '279 Patent to provide the motivation to combine disparate references. This is hindsight, and is impermissible. The "pertinence of the reference as a source of solution to the inventor's problem must be recognizable with the foresight of a person of ordinary

skill, not with the hindsight of the inventor's successful achievement.” *Sci. Plastic Prod., Inc. v. Biotage AB*, 766 F.3d 1355, 1359 (Fed. Cir. 2014). Petitioner points to no disclosure in the references or any other basis to show that a POSITA looking at Kovvali and Kalman would arrive at the claimed invention. *See also e.g., In re Gorman*, 933 F.2d at 987 (“It is impermissible [...] simply to engage in a hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps.”). Kovvali’s and Kalman’s methods of managing communications over ring networks are quite different, and Petitioner fails to identify why and how a POSITA would combine these teachings without using hindsight.

D. A POSITA WOULD NOT COMBINE KOVVALI WITH KALMAN

Not only does Petitioner fail to provide sufficient motivation to combine Kovvali with Kalman, but, as Dr. Olivier states, a POSITA would not combine Kovvali with Kalman because of their fundamental differences. Ex. 2004, ¶43. For example, in Kalman “[t]he processing is designed to be extremely efficient to maximize switching speed” by ensuring that “all nodes know the status of the network and all **independently identify the optimal routing** path to each destination node when there is a fault in any of the links.” Ex. 1006, 3:18-22. Kalman’s structure is not compatible with the network structure disclosed in

Kovvali, which requires each node to communicate with an arbiter node rather than all other nodes and it is the arbiter which identifies the optimal path. Ex. 2004, ¶43.

In fact, Kovvali specifically teaches that “not all nodes on [the] SONET ring...need to recognize the internal structure of dynamic frame 510; only nodes that terminate particular channels in the dynamic frame, and the arbiter node, need to recognize the structure.” Ex. 1005, 9:39-43. This is contrary to the teaching in Kalman, which mandates that “each node must know the network topology.” Ex. 1006, 3:9. Thus, the communication and network structure in Kovvali is completely different than that in Kalman, and is designed to achieve different outcomes. Ex. 2004, ¶43.

Accordingly, a POSITA would not have been motivated to combine the references. Nor would a POSITA have had a reasonable expectation of success in making the combination. While Petitioner asserts that there would be a reasonable expectation of success, its argument is based on the assertion that “the path selection techniques described in Kalman are applicable to Kovvali.” Pet. at 26. However, this is simply not the case, because, as discussed above, the path selection techniques in the two references are different and are directed to different outcomes, i.e., efficient switchovers during a node failure vs. accommodating unpredictable data flows.

E. Petitioner’s Cited References Fail to Render Obvious Claims 1 and 15

As explained above, the proposed combination of Kalman and Kovvali fails to render obvious the challenged claims. Further, as discussed below, even if viewed in combination, the proposed combination fails to render obvious claims 1 and 15. Thus, Petitioner fails to show a “reasonable likelihood” that independent claims 1 and 15 are obvious under Ground 1, the only basis for Petitioner’s challenge to these claims. 35 U.S.C. § 314(a).

1. **Ground 1 should be denied because Kovvali does not disclose “receiving a request at the first node to use a portion of the resources so as to carry the data flow between the first and second nodes over one of a plurality of paths therebetween, each such path comprising a respective sequence of the links;” AND “and in response to the request: if the resources already allocated to the first node on one of the paths are sufficient, directing the data flow from the first node to the second node over the one of the paths without requesting additional resources;” (claim limitations [1.2], [1.3], [15.4], [15.5])**

Petitioner argues that Kovvali alone renders limitations [1.2], [1.3], [15.4] and [15.5] obvious. Pet. at 32-39. These limitations generally relate to the receipt of the request from the client node and the subsequent response to the request. In arguing that Kovvali discloses these limitations, Petitioner identifies Kovvali’s Node B or Node C as the “first node” that receives the request “to carry data flow between the first and second nodes”. Pet. at 35. However, as explained further below, Kovvali teaches that it is the *arbiter* node and *not* other nodes in the system (e.g., Node B or Node C) that receive a request to carry data between certain nodes. Ex. 2004, ¶46.

The claim language and the specification of the '279 patent teaches that a node on the network system “receives a request from one of its clients to send data to another node.” Ex. 1001, 6:11-28. The '279 Patent further teaches that after receiving this request, the node “first checks to determine whether it has sufficient resources already allocated to it in order to service the request.” *Id.*, 6:11-28. Only if the “allocated resources are inadequate,” the node communicates with the dispatcher to request additional resources. *Id.*, at 6:11-28; Ex. 2004, ¶47. These steps are mapped in the claim limitations of claim 1 of the '279 Patent.

Kovvali, on the other hand, teaches that requests for transmission from the client nodes are communicated only to the arbiter node. Specifically, as Petitioner’s expert acknowledged, Kovvali explains that “[r]equests to assign dynamic channels for communication between particular nodes are sent from a client nodes to the arbiter. The arbiter responds by assigning dynamic channels to particular nodes.” Ex. 1005, 9:1-11; Ex. 2006 (Mir Dep. Tr.), 74:11-75:3. After the receipt of this request, the arbiter assigns a dynamic channel to handle the traffic of the requested data flow. Ex. 2004, ¶48. Thus, it is clear that Kovvali teaches that the arbiter node receives the data transmission request from the client, and that the dynamic channels are assigned prior to traffic flowing on them. Ex. 2004, ¶48, Ex. 2006 (Mir. Dep. Tr.) at 79:6-9.

Moreover, while Petitioner states that “[a] POSITA would have understood that the receipt of data from local dynamic channels by a node (e.g. Node B or Node C) for transmission to another node renders obvious “receiving a request at the first node to use a portion of the resources” because it is a request for the node to process (e.g. queue, schedule, police) and multiplex the data onto the portion of network resources allocated by the arbiter (as discussed in [1.1]) to the node for the respective dynamic channels in the dynamic frame” its assertion is incorrect. Pet. at 34; Ex. 2004, ¶49. A POSITA would understand that merely receiving data at a node for transmission to another node is not a request to use a portion of a resource for a number of reasons. Ex. 2004, ¶¶49-52.

First, merely receiving and processing data is not a *request* to use any resource. Ex. 2004, ¶50. A POSITA would understand that receiving, processing data and then multiplexing it to another node are operations of data transfer, not requesting resources. A POSITA would understand that if receiving and processing data constituted a request for a portion of resource, then every bit processed would be considered a “request” and Node B or Node C would be receiving millions of requests per second. In fact, Petitioner agrees that queuing, scheduling, and policing are mechanisms for receiving and processing data and handling traffic. *See* Pet. at 34 (noting that “[p]acket processor 644 includes buffers and other mechanisms to implement appropriate queuing, scheduling and policing processes necessary to

handle outgoing packet traffic.”) (emphasis added). Ex. 2004, ¶51. However, handling traffic is completely different from *requesting* traffic. Ex. 2004, ¶51

Second, as described above in Kovvali, if the node is processing the data, it has already been assigned by the arbiter to process that dynamic channel. Ex. 2004, ¶52. That is to say, the data flow is already passing through it. *Id.* It is clear from claim 1 that the request to use a portion of the resource occurs prior to the data actually flowing. In other words, the node that Petitioner points to as the one “receiving the request...to use a portion of the resources ...to carry the data flow” does not in fact receive any such request, but rather is assigned to carry the data flow by the arbiter component in Kovvali. Ex. 2004, ¶52. Thus, Kovvali does not disclose or render obvious limitations [1.2], [1.3], [15.4] and [15.5].

Accordingly, for the above reasons, Petitioner has failed to establish that Kovvali and Kalman render obvious the claims challenged in Ground 1.^{1, 2}

¹ As Grounds 2 and 3 challenge only dependent claims, the fact that Kovvali and Kalman fail to render obvious the claims in Ground 1 equally applies to the claims in Grounds 2 and 3.

² Additionally, Petitioner fails to establish that the combination of Kovvali and Kalman discloses independent claims 1 and 15 under the constructions it proposes for “predetermined” and “quantum” in the co-pending district court case. Ex. 2007.

- F. Ground 3 fails to render obvious claim 7 (“A method according to claim 1, wherein selecting which of the paths is to carry the data flow comprises comparing an amount of the one or more resources requested to a resource budget assigned to the first node, and permitting the data flow only if allocating the requested resources will not cause a total of the resources allocated to the first node to exceed the budget”), AND claim 8 (“A method according to claim 7, wherein comparing the amount of the one or more resources comprises comparing the amount of each of the resources requested to the resource budget assigned for each of the resources, and wherein permitting the data flow comprises permitting the flow only if all of the resources requested for at least one of the paths are within the budget”)**

Ground 3 asserts that claims 7 and 8 are invalid based on the combination of Kovvali, Kalman and RFC2892. As discussed above, it would not have been obvious to combine Kovvali and Kalman and thus, for this reason alone Ground 3 fails. Additionally, Ground 3 fails because the combination of Kovvali, Kalman and RFC2892 does not disclose claims 7 and 8. As an initial matter, Petitioner provides no tangible reason for a POSITA to combine the three references beyond a vague characterization of RFC2892 as relating to “efficient use of bandwidth.” Pet. at 75. Furthermore, the parameters described by the RFC2892 reference are not aligned with the node budget described in claims 7 and 8. Ex. 2004, ¶53.

Claims 7 and 8 relate the path selection step carried out by the dispatcher component in the '279 Patent. The claims provide that the dispatcher component selects which path is to carry the data flow based on the resource budget allocated to each node.

The '279 Patent provides the following definitions for its node budget requirements:

node_budget_In-Maximum amount of the resource that the node can receive on the inner ring.

node_budget_Out-Maximum amount of the resource that the node can receive on the outer ring.

Ex. 1001 ('279 Patent) at 5:18-21.

The '279 Patent teaches that when a node submits a resource request to the dispatcher, the dispatcher, at the availability checking step, checks whether there are “sufficient unallocated resources left in the specific node budget and unused resources left on the appropriate segments of at least one of the rings” before granting the node’s resource request. Ex. 1001, 6:13-23; Ex. 2004, ¶55.

Neither Kovvali nor Kalman disclose this aspect of claims 7 and 8. Thus, Petitioner adds in a third reference, RFC2892. RFC2892 is a Cisco reference that provides details on the “Spatial Reuse Protocol” (SRP) in relation to a ring network. Ex. 1018, 1. “With respect to claims 7 and 8, in its Petition, Petitioner points to RFC2892’s “max_usage” or “MAX_ALLOWANCE” requirements and asserts that those the “resource budget” requirement articulated in the '279 Patent. Pet. at 77. Those requirements, however, do not relate to the resource budget as articulated in claims 7 and 8, which allows the dispatcher to “track[] the use of resources in [the] network.” Ex. 1001, 4:46. “Max_usage,” as discussed in the RFC2829 reference, is

a per node parameter which limits the maximum amount of low priority traffic. Ex. 1018, 29 (“Each node can send up to max_usage. Max_usage is a per node parameter than limits the maximum amount of low priority traffic a node can send.”) As such, it **cannot** be used to limit data flows which are not low priority traffic. Ex. 1018, 9. (“High priority traffic **does not follow** SRP-fa rules and may be transmitted at any time as long as there is sufficient transit buffer space is sufficient transit buffer space.”) (emphasis added); Ex. 2004, ¶55. “MAX_ALLOWANCE” is used in the SRP Fairness algorithm and is used in controlling low priority traffic. Those parameters correspond to congestion management and internode communication, unlike the resource management parameters outlined in the ’279 Patent that are in place to allow the dispatcher to “track[] the use of resources in [the] network.” Ex. 1001, 4:46; Ex. 1018, 29; Ex. 2004, ¶55.

Thus, the combination of Kovvali, Kalman, and RFC2892 does not render claims 7 and 8 obvious.

VII. CONCLUSION

For the foregoing reasons, the Board should find the ’279 Patent valid and not obvious.

Date: November 12, 2024

Respectfully submitted,
/James R. Nuttall, Reg. No. 44,978/
James R. Nuttall, Reg. No. 44,978
Sadaf Misbah, Reg. No. 79,583
STEPTOE LLP

227 West Monroe, Suite 4700
Chicago, Illinois 60606
Tel: (312) 577-1260
Fax: (312) 577-1370

Katherine D. Cappaert, Reg. No. 71,639
STEPTOE LLP
1330 Connecticut Avenue, NW
Washington, DC 20036-1795
Tel: (202) 429-3000
Fax: (202) 429-3902

Counsel for Portsmouth Network Corp.

CERTIFICATION UNDER 37 C.F.R. § 42.24(d)

This Response complies with 37 C.F.R. § 42.24(b)(2). As calculated by the “Word Count” feature of Microsoft Word 2010, it contains 4,949 words, excluding the words contained in the following: Table of Contents, Table of Authorities, List of Exhibits, Certification Under 37 C.F.R. § 42.24(d), and Certificate of Service.

Date: November 12, 2024

By: / James R. Nuttall, Reg. No. 44,978/

James R. Nuttall, Reg. No. 44,978

STEPTOE LLP

227 West Monroe, Suite 4700

Chicago, Illinois 60606

Tel: (312) 577-1260

Fax: (312) 577-1370

Counsel for Portsmouth Network Corp.

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies service of PATENT OWNER'S RESPONSE on the counsel of record for the Petitioner by filing this document through PTAB E2E system on November 12, 2024 and served a true and correct copy of the foregoing by electronic mail on the following counsel:

Via Email:

Theodore Foster
ipr.theo.foster@haynesboone.com
Brian Kwok
brian.kwok.ipr@haynesboone.com
David McCombs
David.mccombs.ipr@haynesboone.com

Date: November 12, 2024

By: / James R. Nuttall, Reg. No. 44,978/

James R. Nuttall, Reg. No. 44,978
STEPTOE LLP
227 West Monroe, Suite 4700
Chicago, Illinois 60606
Tel: (312) 577-1260
Fax: (312) 577-1370

Counsel for Portsmouth Network Corp.