NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

JUNIPER NETWORKS, INC.,
Appellant

v.

CORRECT TRANSMISSION, LLC,
Appellee

2023-1046, 2023-1236

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. IPR2021-00469, IPR2021-00682.

Decided: July 24, 2024

R. WILLIAM SIGLER, Fisch Sigler, LLP, Washington, DC, argued for appellant. Also represented by MATTHEW R. BENNER, ALAN M. FISCH, JEFFREY MATTHEW SALTMAN.

JEFFREY A. STEPHENS, Carter Arnett Bennett & Perez, Dallas, TX, argued for appellee. Also represented by JOSHUA BENNETT, BRADLEY D. LIDDLE, MICHAEL CLAYTON POMEROY.

Before DYK, REYNA, and STARK, *Circuit Judges*.

DYK, *Circuit Judge*.

Juniper Networks, Inc. ("Juniper"), appeals the Patent Trial and Appeal Board's (the "Board") decisions in two inter partes review proceedings in which the Board declined to find claims of U.S. Patent No. 7,283,465 (the "'465 patent") (IPR-2021-00682) and U.S. Patent No. 7,983,150 (the "'150 patent") (IPR-2021-00469) unpatentable as obvious. We *affirm*.

BACKGROUND

Correct Transmission, LLC, ("Correct Transmission") owns the '465 patent and the '150 patent, both of which pertain to improvements in communications networks. Specifically, both patents provide mechanisms to protect against failures in communications networks.

I. IPR-2021-00682

The '465 patent concerns protecting against network failures in virtual private networks ("VPN"), including virtual private local area network services ("VPLS"). A preferred embodiment of the network is shown in Fig. 1 of the patent, reproduced here:

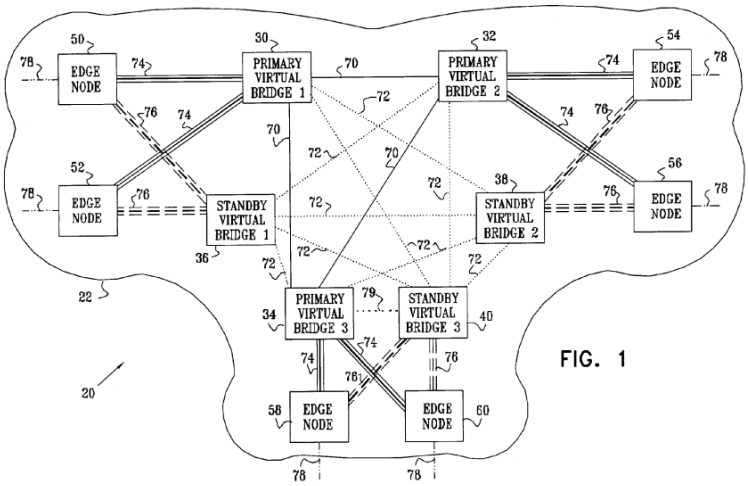

FIG. 1

J.A. 103 (Fig. 1). For every primary core node (i.e., data communication device) in the network, the patent describes having "one or more standby core nodes," where "[e]ach standby core node has the same topological image in the network (i.e., the same connections) as a corresponding primary core node which it protects." J.A. 107, col. 4, ll. 60–63. "[I]f the primary core node fails, the remaining nodes in the network simply redirect all connections from the failed primary core node to the corresponding standby core node." *Id.*, col. 4, ll. 64–66.[1]

The specification explains that the forwarding tables (i.e., the databases of known addresses for each node) of the primary and standby nodes can be synchronized regularly using "[a] simple communications protocol" to keep the forwarding table of the standby node updated with all the

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[1] "Every node in a VPLS acts as a virtual bridge," which has endpoints or "virtual ports" for the different connections in the VPLS. J.A. 107, col. 3, ll. 19–21. The primary core nodes are thus associated with the primary virtual bridges and the standby core nodes are associated with backup virtual bridges.

addresses in the primary node. J.A. 109, col. 8, ll. 63–67. This way, if the primary core node were to fail, the standby core node would know all the same addresses as the primary core node, except those learned by the primary core node after the last update. Because the standby core nodes have the same connections as their corresponding primary core nodes, the other nodes in the network may seamlessly connect to it without there being a change in the network topology.

Independent claim 1 is representative of the relevant claims in the '465 patent.

1. A data communication network, comprising:

> a plurality of primary virtual bridges, interconnected by primary virtual connections so as to transmit and receive data packets over the network to and from edge devices connected thereto; and
>
> a plurality of backup virtual bridges, each such backup virtual bridge being paired with a corresponding one of the primary virtual bridges and connected by secondary virtual connections to the other primary virtual bridges,
>
> wherein the primary virtual connections define a respective primary topology image for each of the primary virtual bridges, and wherein each of the backup virtual bridges is connected to the other primary virtual bridges by secondary virtual connections that are identical to the primary virtual connections of the corresponding one of the primary virtual bridges, thus defining a respective secondary topology image that is identical to the respective primary topology

> image of the corresponding one of the primary virtual bridges, and
>
> wherein each of the primary and backup virtual bridges is adapted to maintain a respective forwarding table, and to forward the data packets in accordance with entries in the respective forwarding table, and wherein each of the backup virtual bridges is adapted to periodically synchronize its forwarding table by copying contents of the forwarding table of the corresponding one of the primary virtual bridges with which it is paired,
>
> whereby upon a failure of the corresponding one of the primary virtual bridges, each of the backup virtual bridge forwards and receives the data packets over the network via the secondary virtual connections, in accordance with the synchronized forwarding table, in place of the corresponding one of the primary virtual bridges.

J.A. 111, col. 11, l. 35 – col. 12, l. 3 (emphasis added).

Juniper argued that claims 1–7, 9, 12–16, 27, and 28 of the '465 patent were unpatentable as obvious over two combinations of prior art: (1) U.S. Patent No. 7,269,132 ("Casey") and U.S. Patent No. 7,430,735 ("Balakrishnan") and (2) U.S. Patent No. 7,209,435 ("Kuo") and Balakrishnan. Juniper contended that Kuo and Casey, individually, recited every limitation in claim 1, except the limitation of periodically synchronizing the forwarding tables between the primary and backup virtual bridges. Juniper argued that "such periodic synchronization would have been obvious to [the skilled artisan] in view of Balakrishnan's teachings" of periodically synchronizing forwarding tables or "in

conjunction with what was generally known in the art." J.A. 61 (alteration in original); *see also* J.A. 81–82.

The Board determined that the prior art disclosed the patented features, and that Juniper had provided evidence of a motivation to combine the features. The parties, however, apparently only disputed whether there was a reasonable expectation of success. In that respect, the Board concluded that Juniper had not shown "a reasonable expectation of success in modifying [Casey or] Kuo [with Balakrishnan] to periodically synchronize forwarding tables." J.A. 78; *see also* J.A. 84.

II. IPR-2021-00469

The '150 patent, like the '465 patent, relates to communications networks. The '150 patent specifically pertains to methods and systems for communicating over a bi-directional ring network that includes a VPLS. In a bi-directional ring network, individual nodes (i.e., devices) are organized in a ring, where data can be transferred between any pair of connected nodes in either direction around the ring. Bi-directional ring networks were known in the prior art, but the prior art did not disclose pairing bi-directional ring networks with VPLS. The patent claims that combination, as illustrated in Figure 1 of the patent, reproduced here:

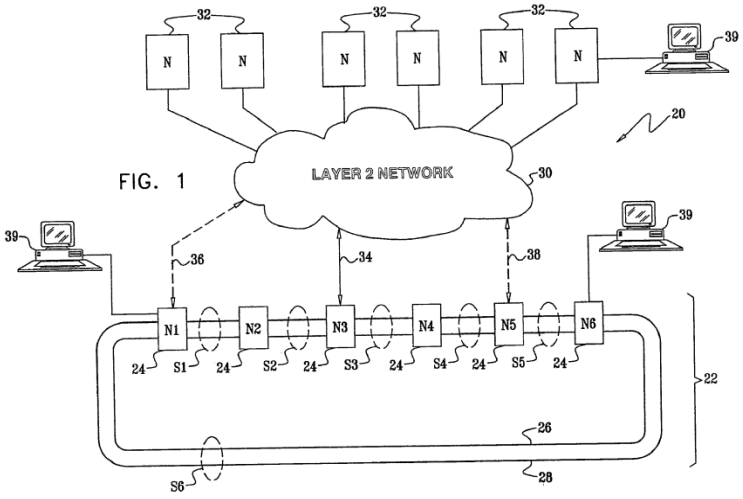

FIG. 1

J.A. 90 (Fig. 1). "The VPLS includes connection termination points [("CTP")] provisioned respectively on a plurality of the nodes [of the network] so as to connect each of the plurality of nodes to a second network external to the ring network." J.A. 88, Abstract. As long as the nodes, and the connections between them, in the ring network are fully operational, all but one of the CTPs are deactivated (the one active CTP maintains a connection between the first and second networks). If a failure occurs that results in one or more nodes becoming severed from the rest of the network ("segmented"), one or more CTPs are activated, connecting the segmented portion to the second network, thereby protecting the network from failing.

Independent claim 1 is representative of the relevant claims in the '150 patent:

> 1. A method for communication over a bi-directional ring network that includes nodes connected by spans of the ring network, the method comprising:
>
> > provisioning a virtual private local area network service (VPLS) to serve users over the bi-directional ring network, the VPLS

> comprising connection termination points provisioned respectively on a plurality of the nodes so as to connect each of the plurality of the nodes to a second network external to the ring network;
>
> activating a selected connection termination point, to establish a connection between the bi-directional ring network and the second network;
>
> as long as the nodes and spans are fully operational, maintaining all of the connection termination points except the selected connection termination point in a deactivated state, so that only the selected connection termination point to the second network is active;
>
> exchanging messages among the nodes indicative of:
>
> > a failure in at least two spans of the ring network causing a segmentation of the ring network and leading to an isolation of a first node of the ring network from at least one second node of the ring network; and
>
> responsively to the messages, activating at least one of the deactivated connection termination points so as to overcome the segmentation and maintain connectivity of the first node with the at least one second node of the ring network, without creating a loop in the VPLS via the second network.

J.A. 99, col.9, ll. 31–58 (emphasis added).

Before the Board, Juniper argued that claims 1–5, 8–15, and 18–20 of the '150 patent were obvious over prior art Japanese Patent Application Publication No. 2003-258822 ("Togazaki") and U.S. Patent Publication No. 2007/0008982 ("Voit").[2] Juniper argued that "Togazaki discloses every element recited in claim[] 1 . . . , except that it doesn't expressly disclose provisioning a VPLS," and "provisioning a VPLS would have been obvious in view of the general knowledge of [a person of ordinary skill in the art ('POSA')] or in view of Voit's teachings." J.A. 10 (citation omitted).

The Board found that the patented features were disclosed in the prior art. The Board noted that the parties only disputed reasonable expectation of success, and, in this respect, the Board determined that Juniper failed to show the claims were unpatentable as obvious because Juniper did not carry its burden in showing a reasonable expectation of success in modifying Togazaki with Voit to provision a VPLS.

Juniper appeals the Board's decisions. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

"In reviewing the Board's determination on the question of obviousness, we review the Board's legal conclusions de novo and its factual findings for substantial evidence." *Becton, Dickinson & Co. v. Baxter Corp. Englewood*, 998 F.3d 1337, 1339 (Fed. Cir. 2021) (internal quotation marks, citation, and alterations omitted). "The presence or absence of a reasonable expectation of success is . . . a

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[2] Juniper also argued that the claims were obvious over Togazaki and U.S. Patent Publication No. 2003/0154315 ("Sultan"). The Board disagreed. Juniper does not appeal this determination.

question of fact." *Novartis Pharms. Corp. v. W.-Ward Pharms. Int'l Ltd.*, 923 F.3d 1051, 1059 (Fed. Cir. 2019) (citation omitted). "Obviousness does not require absolute predictability of success." *In re O'Farrell*, 853 F.2d 894, 903 (Fed. Cir. 1988).

Juniper raises three arguments on appeal. None has merit.

I

On appeal, Juniper argues that the Board erred in each proceeding by "unduly focus[ing] on whether Dr. Yang [(Juniper's expert)] expressly used the term 'reasonable expectation of success,' while ignoring the opinions relevant to this issue that she provided and Juniper repeatedly cited." Appellant Principal Br. 30–31. The Board did appear to criticize Juniper for not using the "reasonable expectation" terminology. J.A. 10–11 ("Neither the Petition nor the declaration from Dr. Yang that accompanied the Petition analyzed whether an ordinary skilled artisan would have had reasonable expectation of success in provisioning a VPLS in Togazaki."); *see also* J.A. 63, 83.

A party does not need to use the phrase "reasonable expectation of success," "likelihood of success," or some other set of magic words, to establish a reasonable expectation of success. We have held that "[u]nlike a motivation to combine determination, which requires an explicit analysis, a finding of reasonable expectation of success can be implicit." *Elekta Ltd. v. ZAP Surgical Sys.*, Inc., 81 F.4th 1368, 1376 (Fed. Cir. 2023) (first citing *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007); and then citing *Merck & Cie v. Gnosis S.P.A.*, 808 F.3d 829, 836 (Fed. Cir. 2015)). If a party has made the substance of the expectation of success argument, that is sufficient.

We do not think the Board required the use of magic words, and the Board did not reject Dr. Yang's opinion for

failing to use terms like "reasonable expectation of success." As we discuss in Section III below, the Board squarely addressed the substance of Dr. Yang's expert declaration and deposition testimony to determine whether the substance of it established a reasonable expectation of success. *See* J.A. 13–15 (addressing parts of Dr. Yang's declaration and testimony); J.A. 69–73 (same); J.A. 84.

II

Juniper next argues that the Board legally erred in each proceeding by concluding that Dr. Yang's testimony was conclusory and not persuasive. Juniper contends that Dr. Yang testified in both proceedings that the prior art combinations were simple and would have led to predictable results, which is sufficient to establish a reasonable expectation of success. *See Keynetik, Inc. v. Samsung Electronics Co.*, No. 2022-1127, 2023 WL 2003932, at *2 (Fed. Cir. Feb. 15, 2023) (non-precedential) ("Dr. Abowd's testimony detailing the modified function of the code and that implementing such a modification would be 'simple' and 'straightforward' was sufficient to establish a reasonable expectation of success."). Juniper contends that because Dr. Yang's testimony is "substantially similar" to the testimony in *Keynetik*, the Board erred by "affording it no weight." Appellant Principal Br. 25.

We see no legal error. In *Keynetik*, we held that expert testimony stating that certain software modifications were "straightforward" and "simple" was sufficient to establish a reasonable expectation of success. 2023 WL 2003932, at *1–2. However, in *Keynetik* there was no challenge to the expert's testimony as being conclusory or not credible, and the expert testimony was uncontradicted. *See id.* at *2 ("While Dr. Abowd's testimony is brief, in the absence of any contradictory evidence, it constitutes substantial evidence to support the Board's finding." (emphasis added)). As we discuss in the next section, in both proceedings, the

Board concluded that Dr. Yang's testimony was conclusory and not credible and relied on contradictory testimony by Correct Transmission's expert, Dr. Akl. *Keynetik* does not require the Board to credit Dr. Yang's testimony.

III

Juniper argues that the Board's determinations that Juniper failed to show a reasonable expectation of success are not supported by substantial evidence. We consider the two patents separately.

A. The '465 Patent

In IPR-2021-00682, Juniper relied on two combinations of prior art: (1) Kuo and Balakrishnan and (2) Casey and Balakrishnan. Before the Board, Juniper conceded that neither Casey nor Kuo disclosed the limitation "wherein each of the backup virtual bridges is adapted to periodically synchronize its forwarding table," but argued that a POSA would be able to apply the teachings of Balakrishnan to satisfy the limitation. The question at issue is whether a POSA would have had a reasonable expectation of success in making the combinations. The Board found that Juniper failed to carry its burden in establishing a reasonable expectation of success. We conclude the Board's determination was supported by substantial evidence.

Dr. Yang testified that Kuo and Casey could both be modified to periodically synchronize forwarding tables, and this would lead to "predictable results" because the networks in Kuo and Casey provide multipoint connectivity similar to Balakrishnan. Dr. Yang further testified that "it would be very simple" for a POSA to periodically synchronize the forwarding tables in Casey, J.A. 71 (citing J.A. 7081), and that copying "another node's forwarding table" was "very well known," J.A. 7110. The Board found Dr. Yang's testimony to be conclusory and not credible.

Dr. Akl also provided contradictory testimony. Dr. Akl testified that applying Balakrishnan to Kuo "would not be a simple implementation, but instead would require a complete redesign." J.A. 74 (quoting J.A. 7210, ¶ 99). Dr. Akl further explained that implementing Balakrishnan's teachings into such systems "would not be successful." *Id.* (quoting J.A. 7210, ¶ 99)). Dr. Akl testified that both Casey and Kuo were similar in that they both were designed for flooding. The Board noted that "[t]he parties rel[ied] on the same or substantially the same evidence and arguments (or lack thereof) concerning 'reasonable expectation of success' for provisioning Casey to periodically synchronize forwarding tables as for Kuo." J.A. 83; *see also* J.A. 84 ("[W]e determine that our findings and conclusions concerning 'reasonable expectation of success' for provisioning Kuo to periodically synchronize forwarding tables . . . apply equally to Casey."); *see generally* J.A. 81–85 (noting the same deficiencies in Juniper's evidence). On appeal, Juniper does not dispute the appropriateness of treating the Kuo and Casey combinations as raising the same issue.

Dr. Akl's testimony directly contradicted Dr. Yang's testimony, and Dr. Yang failed to address the issues identified by Dr. Akl. The Board credited Dr. Akl's testimony over Dr. Yang's.[3] This is substantial evidence supporting the Board's conclusion that Juniper failed to show a reasonable expectation of success. "The [Board] [i]s entitled to weigh the credibility of the witnesses." *Elbit Sys. of Am., LLC v. Thales Visionix, Inc.*, 881 F.3d 1354, 1358 (Fed. Cir. 2018) (second alteration in original); *see also Inwood*

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[3] While Dr. Yang testified that synchronizing forwarding tables was "very well known," J.A. 7110, that testimony alone does not demonstrate a reasonable expectation of success in combining these particular prior art references, let alone that the Board's conclusion was not supported by substantial evidence.

Lab'ys, Inc. v. Ives Lab'ys, Inc., 456 U.S. 844, 856 (1982) ("Determining the weight and credibility of the evidence is the special province of the trier of fact."). We affirm the Board's decision as to the '465 patent.

B. The '150 Patent

In IPR-2021-00469, Juniper conceded that Togazaki does not disclose provisioning a VPLS, as required by the claims. Juniper relied on Voit for this limitation. Juniper's theory is that provisioning a VPLS in Togazaki would be a simple modification, and it relied on Dr. Yang's testimony for evidentiary support. The Board found Juniper failed to meet its burden in establishing a reasonable expectation of success. We conclude the Board's determination is supported by substantial evidence.

Dr. Yang testified that (1) "[m]odifying Togazaki's system to provision a VPLS would have led to predictable results given that Togazaki's network provides multipoint connectivity similar to Voit," J.A. 13 (alteration in original) (citation omitted); (2) the modifications required to Togazaki's packet formatting to provision a VPLS are minor; and (3) many of Togazaki's features already exist in VPLS. Juniper argues that this supports its argument that provisioning a VPLS in Togazaki would be a simple modification such that a POSA would have a reasonable expectation of success.[4] However, the Board concluded that Dr. Yang's testimony was conclusory and not credible.

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[4] Juniper also contends that "the Board found . . . that seven prior art publications disclose provisioning VPLS on a network," but ignored the full scope of these teachings, causing the Board to err in its analysis. Appellant Opening Br. 20, 34. We see no error. That other prior art references disclose provisioning a VPLS on a network

Dr. Akl also testified to the contrary, explaining that provisioning a VPLS into Togazaki would require significant reconfigurations to be made rather than being a simple modification. Dr. Akl opined that "Togazaki utilizes a ring network, while Voit uses a mesh network. A POS[A] would understand that a ring network and a mesh network do not automatically work together and would need significant configurations to be compatible." J.A. 6122, ¶ 53. Dr. Akl further testified "a reconfiguration of packet headers would be required to even be able to functionally send messages using Togazaki's network topology" and that "Togazaki's junction nodes as presently configured cannot send VPLS messages as the junction nodes are not able to process VPLS formatted messages." *Id.*, ¶ 54.

Thus, Dr. Akl's testimony directly contradicts Dr. Yang's testimony, and Juniper's theory, that provisioning a VPLS in Togazaki would be simple. The Board determined that based on Dr. Akl's testimony, and Dr. Yang's failure to address the issues raised by Dr. Akl, Juniper failed to establish that there would be a reasonable expectation of success. *See* J.A. 17 ("Dr. Yang's failure to address the issues raised by the . . . testimony by Dr. Akl, when [Juniper] had the opportunity to have her do so, further weighs in favor of a finding that [Juniper] has not demonstrated a reasonable expectation of success.").

To be sure, testimony that combining references would be difficult or require substantial work does not, in and of itself, establish a lack of reasonable expectation of success. Such a finding also requires evidence demonstrating that making the combination would be beyond the skill level of

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does not establish a reasonable expectation of success in combining the particular prior art references here.

a POSA or lead to unpredictable results.[5] Dr. Akl did not testify that the combination was not possible or that making the claimed combination (although difficult) was beyond the skill of an ordinary artisan. Nonetheless, it was Juniper's burden to offer proof that the combination could be made with a reasonable expectation of success. In this case, Dr. Akl's testimony rebuts Juniper's theory that a POSA would have a reasonable expectation of success because the required combination was simple. Juniper's evidence that making the combination would be "very simple" was found not credible. *See Koito Mfg. Co. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1152 (Fed. Cir. 2004) ("General and conclusory testimony . . . does not suffice as

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[5] *See, e.g.*, *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1367 (Fed. Cir. 2007) ("This is not to say that the length, expense, and difficulty of the techniques used are dispositive since many techniques that require extensive time, money, and effort to carry out may nevertheless be arguably 'routine' to one of ordinary skill in the art." (citing *Verlander v. Garner*, 348 F.3d 1359, 1368 (Fed. Cir. 2003)); *In re Applied Materials, Inc.*, 692 F.3d 1289, 1297 (Fed. Cir. 2012) ("The Board correctly found that there was no indication that obtaining the claimed dimensions was beyond the capabilities of one of ordinary skill in the art or produced any unexpectedly beneficial properties, further supporting the Board's finding that the optimization of the dimensions was obvious." (emphasis added)); *Surgalign Spine Techs., Inc. v. LifeNet Health*, No. 2021-1117, 2022 WL 1073606, at *8 (Fed. Cir. Apr. 11, 2022) (non-precedential) (finding no reasonable expectation of success due to "difficulties" in substituting a bone pin for a metal screw because the bone pin is "significantly weaker" and expert testimony stated it was "considered unfeasible" for such uses).

substantial evidence . . . ."). It was Juniper's burden to establish a reasonable expectation of success, and Juniper presented no theory other than that the combination was simple. We conclude the Board's decision to credit Dr. Akl's testimony and reject Juniper's theory was supported by substantial evidence, and that it was not error to conclude that Juniper had not established a reasonable expectation of success.

CONCLUSION

We affirm the Board's decisions that the challenged claims of the '150 patent and '465 patent are nonobvious.

AFFIRMED

COSTS

Costs to appellee.