

Request for Director Review

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ARISTA NETWORKS, INC.,

Petitioner,

v.

ORCKIT CORPORATION,

Patent Owner.

Case No. IPR2024-01238

Patent 8,830,821 B2

PETITIONER'S REQUEST FOR DIRECTOR REVIEW

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I. INTRODUCTION

Pursuant to 37 C.F.R § 42.75, Arista Networks, Inc. (“Petitioner”) requests Director Review of the decision denying institution of *inter partes* review (“IPR”) of claims 14-16 of U.S. Patent No. 8,830,821 (the “’821 Patent”). See Paper 7 (“Decision”).¹ The Board denied institution based on its conclusion that a relied upon prior art reference—Ashwood Smith (EX1037)—failed to disclose limitation 14[d] of claim 14 under an alleged “implicit” construction purportedly advanced by Petitioner. Decision at 22. The Board found that “Petitioner implicitly construes ‘digital logic . . . configured to determine a probability of concurrent failure of said working entity and said protection entity’ to require ‘calculat[ing] the probability of concurrent failure of the paths’” and adopted that construction. *Id.* However, neither party proposed this construction (implicitly or expressly), and the Board’s interpretation is inconsistent with its position that it “need not construe any claim terms and phrases to resolve the controversy before us.” *Id.* at 8.

The Board committed legal error and abused its discretion by adopting this narrowing construction, which it incorrectly attributed to Petitioner, and denying institution. The Board’s construction lacks support in the claim language and

¹ Although the Petition challenged claims 1-20 of the ’821 Patent, only claims 14-16 were at issue at the time of the Institution Decision.

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improperly incorporates embodiments from the specification, contrary to established precedent. The Board also erred and abused its discretion when it misapprehended the disclosure in Ashwood Smith to support its conclusion that the combination of references failed to teach limitation 14[d] (under the plain claim language or the Board's improper narrowing construction). The Board also erred when it credited Patent Owner's unsupported attorney argument over the testimony of Petitioner's technical expert, Dr. Min, which was grounded in the disclosure of the prior art.

Accordingly, the Director should grant Petitioner's request for review, vacate the decision denying institution, and institute IPR of claims 14-16 or, at a minimum, vacate the decision and remand to the Board for consideration of Petitioner's obviousness challenge under the correct interpretation of the claims.

II. LEGAL STANDARD

"Requests for Director Review of a Board's decision on institution under 35 U.S.C. §§ 135, 314, or 324, or decisions granting rehearing of such a decision, shall be limited to decisions presenting (a) an abuse of discretion, (b) important issues of law or policy, (c) erroneous findings of material fact, or (d) erroneous conclusions of law." See USPTO, Director Review Process at 2.B, Availability of Director Review: Proceedings under part 42 of 37 C.F.R. (last modified March 18, 2025), <https://www.uspto.gov/patents/ptab/decisions/director-review-process#RIDRP>.

"An abuse of discretion is found if [a] decision: (1) is clearly unreasonable, arbitrary,

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or fanciful; (2) is based on an erroneous conclusion of law; (3) rests on clearly erroneous fact finding; or (4) involves a record that contains no evidence on which the Board could rationally base its discretion.” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367 (Fed. Cir. 2016) (quoting *Bilstad v. Wakalopulos*, 386 F.3d 1116, 1121 (Fed. Cir. 2004) (citations omitted)).

III. BACKGROUND

The '821 Patent describes a system and a method for selecting Multiprotocol Label Switching (MPLS) network transport entities between a first and a second endpoint and protecting against network failures by using a “working entity” and a “protection entity.” Petition at 9; EX1003, ¶44; EX1001, Abstract, 3:15-18, 4:14-16, 4:29-33. Claim 14 recites “[a] system for selecting entities within an MPLS network.” EX1001, 8:42-43; Petition at 6. Limitation 14[d] recites “digital logic configured to select said working entity and said protection entity from said plurality of transport entity descriptors, comprising: logic configured to determine a probability of concurrent failure of said working entity and said protection entity.” EX1001, 8:48-52; Petition at 6. As can be seen from the plain language, claim 14 does not require the use of any particular technique to determine a probability of concurrent failure of the working entity and the protection entity.

The Petition challenged claims 14-16 of the '821 Patent as obvious based on Doshi (EX1005) in view of Guichard (EX1006) and Ashwood Smith (EX1037).

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Petition at 8. Doshi describes a similar use of backup network paths as described in the '821 Patent. EX1005, [0052]-[0054], [0266]-[0267], Figs. 10-11; Petition at 13-15; EX1003, ¶¶66-68. Furthermore, Ashwood Smith describes protecting against network failures by determining which backup paths to use for a given main path, adding details as to what a person of ordinary skill in the art (“POSITA”) would consider when selecting a backup path. EX1037, Abstract, 2:15-25, 3:16-23, 7:15-21, 7:27-33, 8:13-22, 10:21-11:9; Petition at 18, 67-68; EX1003, ¶¶76-77, 234-37.

The specification of the '821 Patent describes how “an overall cost for each pair of the plurality of transport entities is determined” and a pair, comprising a “working entity” and a “protection entity,” is “selected to minimize an overall cost.” EX1001, 4:14-16, 4:29-33; Petition at 9; EX1003, ¶44. The patent discloses that “the entity pair may be selected to minimize the probability of a span or node failure simultaneously affecting the working and protection entities[,]” which the patent refers to as a “simultaneous failure probability (SFP)[.]” EX1001, 5:41-47, 5:56-61, 5:66-6:4 (“the term ‘simultaneous failure’ encompasses concurrent failures of the working and protection entities”). The patent discloses that “[t]he probability of simultaneous failure” in two entities “*can be* expressed as shown in Eq. 1,” but this is not limiting. EX1001, 6:5-11 (emphasis added), 7:39-45. Indeed, the specification states that “[s]pan failure probabilities *may be assigned...manually* by a network operator based on network knowledge.” EX1001, 6:20-33. Thus, the

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Board's requirement that the claims be limited to a particular calculation are flawed, and its decision denying institution on that basis should be corrected.

IV. ARGUMENT

A. The Board erred and abused its discretion by adopting an overly narrow construction that it incorrectly attributed to Petitioner.

1. The Petition did not construe “determine” to require “calculating,” implicitly or otherwise.

The Board's conclusion that the Petition “implicitly construe[d]” limitation 14[d] lacks support in the record. Decision at 22. First, the Petition expressly states that it “interprets the claims ‘in accordance with the ordinary and customary meaning...as understood by one of ordinary skill in the art.’” Petition at 12.

Second, the Board's finding that Petitioner implicitly construed claim 14 “**to require** ‘calculat[ing] the probability of concurrent failure of the paths’” misapprehends the Petition's analysis. Decision at 22 (emphasis added). The Board overlooked that Petitioner presented alternative theories for limitation 14[d], including theories based on disclosure in Doshi and based on Doshi in combination with Ashwood Smith. See Petition at 74-78. For example, the Petition argued that “[s]ince Doshi explains that the ‘probability of occurrence’ of two such failures is ‘**very insignificant**,’ a POSITA would have understood that determining that two paths are disjoint with no nodes or links in common is also a determination that the paths have a ‘very insignificant’ probability of failing concurrently.” Petition at 74-75; see also *id.* at 75 (“determining path disjointedness ... corresponds to

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‘*determin[ing] a probability of concurrent failure*’”). This theory, based on a determination of disjointedness—rather than a calculation of a probability of failure—contradicts the Board’s conclusion that Petitioner implicitly construed limitation 14[d] to require calculating the probability of concurrent failure.

Third, the Board’s finding that Petitioner implicitly construed limitation 14[d] relied on an isolated reference to calculating in the discussion of Ground 3. *See* Decision at 22 (citing Petition at 77). However, in the context of the combination with Doshi’s path selection and calculation process, the Petition repeatedly referred to Ashwood Smith as ***teaching determining*** and explained that a POSITA would have been motivated ***to determine*** the probability of concurrent failure when implementing Doshi’s calculation and selection process. *See, e.g.*, Petition at 77-78 (“[A] POSITA would have found it obvious to determine the probability of concurrent failure, as taught by Ashwood Smith, when implementing Doshi’s calculation and selection techniques and would have been motivated to determine the probability of concurrent failure to achieve a more refined selection between pairs of paths that have the same level of disjointedness.”). A single reference to calculating probability of concurrent failure in the context of the combination does not amount to an implicit construction that determining requires calculating.

Fourth, the Board cited the Petition’s analysis of a different limitation—limitation 14[e]—which recites “determine an entity cost,” to support its finding that

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Petitioner implicitly construed limitation 14[d] to require calculating the probability of concurrent failure of the two paths. Decision at 22 (citing Petition at 78). Again, the Board misapprehends the Petition. The Petition argued that Doshi's disclosure of calculating the cost of each LSP path of candidate LSP pairs discloses "determine an entity cost" as recited in limitation 14[e], not that the recitation of "determine" in limitation 14[e] requires "cost calculation." Petition at 78.

In short, nothing the Board identified amounts to an implicit construction of "determine a probability of concurrent failure of said working entity and said protection entity" to require calculating the probability of concurrent failure.

2. The construction adopted by the Board is legally erroneous.

The Board committed legal error when it construed limitation 14[d]. It is well-established that, absent express evidence to the contrary, claim terms are to be given "the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). The Board did not provide any explanation as to why the plain meaning of "determine" in limitation 14[d] requires "calculat[ing]."

Rather, the Board "agree[d]" with the purported implicit construction because it was allegedly "consistent with the claim language and the '821 Patent Specification which discloses a simultaneous failure probability (SFP) function (Eq. 1) and SFP values calculated by a concurrent failure probability matrix." Decision

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at 22 (citing EX1001, 3:44-47, 6:5-11, 6:39-40). As an initial matter, the Board did not explain how replacing “determine” with “calculate” is “consistent with the claim language,” which expressly recites “determine a probability of concurrent failure of said working entity and said protection entity.” It is not. Moreover, a construction is not correct merely because it is “consistent with” the specification. Decision at 22. It is black letter law that particular embodiments are not to be read into the claims. See *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012) (“We do not read limitations from the specification into claims; we do not redefine words. Only the patentee can do that.”).

Regarding the “simultaneous failure probability (SFP) function (Eq. 1)” identified in the Decision (Decision at 22), the ’821 Patent merely states that probability of simultaneous failure “can be expressed” using that equation, not that it must. EX1001, 6:5-11. Similarly, the ’821 Patent discusses SFP values calculated by a concurrent failure probability matrix in connection with “[a] first exemplary embodiment” and discloses that it “may be” used in selecting a pair of entities. EX1001, 3:30-53, 6:34-43. Claim 14 does not recite a simultaneous failure probability (SFP) function, let alone Equation 1, or SFP values calculated by a concurrent failure probability matrix. See EX1001, 8:42-63. It merely recites “logic configured to determine a probability of concurrent failure of said working entity and said protection entity” (*id.*, 8:50-52), and the Board erred when it adopted

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a narrow construction restricting the claim scope to ***calculating*** probability of concurrent failure of the paths without expressly construing the claims.²

B. The Doshi-Guichard-Ashwood Smith combination in Ground 3 teaches limitation 14[d].

The Board’s finding that Petitioner “does not direct us to any disclosure in Ashwood of digital logic configured to determine or calculate the probability of failure at a common point” constitutes an erroneous finding of material fact and therefore an abuse of discretion. Decision at 23. As detailed in the Petition, and supported by Dr. Min’s testimony, Ashwood Smith teaches digital logic configured to determine a probability of concurrent failure because it expressly discloses a computer-implemented method “to take into account the actual probability of failure at a common point” shared by two paths and “to consider . . . a probability of failure at the common point” as part of the path selection process. EX1037, 10:21-11:9; Petition at 67; EX1003, ¶¶233-234. The Petition explained why a POSITA would have been motivated to combine Ashwood Smith’s teachings with Doshi and Guichard to arrive at claim 14 with an expectation of success. Petition at 66-69,

² Director review is appropriate where, as here, “the Board did not expressly construe any claim term but addressed ‘the parties’ implicit claim constructions’ in its merits analysis.” *PLR Worldwide Sales Ltd. v. FLIP Phone Games Inc.*, IPR2024-00133, Paper 12, at 6 (P.T.A.B. Aug. 22, 2024) (vacating institution decision).

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74-78; *see also* Decision at 19-21.

Indeed, even Patent Owner acknowledged that “Ashwood-Smith discusses the concept of a ‘probability of failure’ in the context of working and backup entities” and that “Ashwood Smith discusses the probability of failure at a particular point in the network.” Paper 6 (“POPR”) at 2, 12. It is beyond dispute that the “particular point in the network” that Ashwood Smith describes is shared by two paths. Patent Owner did not dispute the Petition’s explanation of why a POSITA would have been motivated to combine, and could have combined, Ashwood Smith’s teachings with Doshi and Guichard.

The Board also erred and abused its discretion when it credited Patent Owner’s unsupported attorney argument that Ashwood Smith’s disclosure fails to teach limitation 14[d], because Patent Owner’s arguments attack Ashwood Smith individually, instead of the combination of Doshi, Guichard, and Ashwood Smith, and they are not commensurate with the scope of the claims. Although Patent Owner conceded that “Ashwood Smith discusses the concept of a ‘probability of failure’ in the context of working and backup entities,” Patent Owner argued that “it has nothing to do with determining a probability of concurrent failure of a working entity and a protection entity.” POPR at 2. Even if Patent Owner were correct, its argument fails to address the Petition’s explanation of how Ashwood Smith’s teachings would be applied to the process for selecting a pair of paths including a

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working entity and a protection entity taught by Doshi and Guichard. *See* Petition at 66-69, 76-78; EX1003, ¶¶231-37, 259-65; *see also In re Keller*, 642 F.2d 413, 426 (CCPA 1981) (Where obviousness is based on a combination of references, “one cannot show non-obviousness by attacking references individually.”). The Board similarly addressed Ashwood Smith’s disclosure in isolation, without regard for the combination with Doshi and Guichard proposed in the Petition. Decision at 22-23.

Furthermore, the Board made an erroneous finding of material fact when it credited Patent Owner’s suggestion that determining the probability of failure of a single point shared by two paths “is not determining the probability of failure for a network path (e.g., a network route composed of multiple different segments and nodes), let alone the probability of failure for two different paths that may not even share a common point.” Decision at 21-22 (quoting POPR at 18). First, Patent Owner’s argument is not commensurate with the scope of claim 14. Limitation 14[d] recites “determine ***a probability of concurrent failure*** of said working entity and said protection entity.” It does not recite determining a probability of failure for a network path composed of different segments and nodes, nor does it recite determining separate probabilities of failure for two different paths.

Second, a probability of failure of a common point shared by two paths is within the scope of “a probability of concurrent failure” and the Board’s contrary finding was error. Patent Owner’s argument, and the Board’s agreement with it,

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ignores the logical fact that a failure anywhere along a path would result in a failure of the whole path, and thus determining a probability of failure at a common point shared by two paths necessarily determines “a probability of concurrent failure” as claimed. See Petition at 77; EX1003, ¶260 (Dr. Min opining that “Ashwood Smith teaches to take into account the ‘actual probability of a failure at a common point’ shared by two paths (i.e., a probability of concurrent failure of the two paths) when selecting a backup path.”).

Indeed, failure of a common point shared by two paths is precisely the problem the '821 Patent purports to solve. The patent explains that “in network environments where span **or node** failure likelihood is relatively high, existing MPLS-TP linear protection mechanisms may not meet operator availability requirements since they may not protect **against one or several failures affecting both the working entity and the protection entity.**” EX1001, 1:61-66 (emphasis added); Decision at 3. The alleged invention purports “[t]o overcome the abovementioned shortcomings and meet operator requirements in such an environment[.]” EX1001, 1:66-2:3; see also EX1001, 3:47-50 (“[A] pair having multiple spans and/or nodes in common may be more likely to simultaneously fail than a pair having no spans or nodes in common.”); Decision at 3-5.

Finally, the Board’s reliance on “Ashwood Smith’s disclosure that the probability of failure at a common point is allocated (i.e., distributed, assigned, given

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out) by the data transport network operator” as purportedly distinguishing it from claim 14 constitutes error and an abuse of discretion. Decision at 23. Ashwood Smith discloses that a probability of failure at the common point may be “allocated by the data transport network operator **or otherwise**,” which suggests that its disclosure is not limited to probabilities allocated by the operator. EX1037, 11:1-9 (emphasis added). In any event, “taking into account the actual probability of failure at a common point” in a computer implemented method would involve determining that probability (so that it may be taken into account), regardless of whether the probability is allocated by the operator. The Board failed to provide any reasoning supporting this alleged distinction. Rather, the Board acknowledged that the ’821 Patent similarly discloses that “[s]pan failure probabilities **may be assigned...manually by a network operator**” and “[n]ode failure probabilities may be configured by the operator[.]” Decision at 23 (quoting EX1001, 6:20-23, 6:29-33). This disclosure confirms, contrary to the Board’s Decision, that a probability of failure of a common point shared by two paths, allocated by a network operator, is within the scope of the claimed “a probability of concurrent failure”.³

³ The Board purported to distinguish Ashwood Smith’s operator allocation of failure probabilities based on the same erroneous reasoning. Decision at 22-23; EX1037, 11:4-6.

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Thus, the Board's conclusion that logic configured for determining a probability of failure of a common point shared by a working entity and a protection entity—as taught by the combination of Doshi, Guichard, and Ashwood Smith—is not within the scope of “determine a probability of concurrent failure of said working entity and said protection entity” was legal error and an abuse of discretion.

C. Ashwood Smith teaches calculating the probability of concurrent failure of the paths under the Board's erroneous construction.

The Doshi-Guichard-Ashwood Smith combination teaches limitation 14[d] even under the Board's legally incorrect, narrow construction. The Board states that “calculating” the probability of concurrent failure is not taught by Ashwood Smith, in part because Ashwood Smith describes its probability of failure as “fairly low,” “highly unlikely,” and “below a certain level.” Decision at 22. The Board states that this is “[s]imilar to Doshi's description of the probability of failure in terms of ‘very insignificant,’” while overlooking important distinctions. Decision at 22. For example, the Board ignores the reality that, in the context of a computer implemented method such as the one taught by Ashwood Smith, a determination that a probability of failure at a common point is “below a certain level” requires at least a basic mathematical comparison (i.e., a calculation). Furthermore, checking to see if the probability of concurrent failure falls “below a certain level” suggests that a probability must have been calculated in order to have something that falls “below” that set level. Thus, insofar as the Board has read a requirement that a calculation

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be made, Ashwood Smith teaches it.

Additionally, as discussed, the '821 Patent's disclosure that span failure probabilities and node failure probability may be assigned or configured by an operator suggests that Ashwood Smith's disclosure, combined with Doshi and Guichard as set forth in the Petition, is within the scope of the claims. *Supra*, IV.B. Furthermore, the Board ignores (without explanation) the possibility that the data transport network operator could contain the digital logic recited in limitation 14[d].

Therefore, even under the Board's legally incorrect construction, the Doshi-Guichard-Ashwood Smith combination renders obvious calculating the probability of concurrent failure of the paths and the Board's conclusion otherwise was error.

V. CONCLUSION

For the reasons set forth herein, individually and cumulatively, Petitioner respectfully requests Director Review of the Board's decision.

Respectfully Submitted,

April 24, 2025

/Eliot D. Williams/
Eliot D. Williams (Reg. No. 50,822)
BAKER BOTTS L.L.P.
700 K Street, N.W.
Washington, D.C. 20001-5692
Tel: 202-639-1334
eliot.williams@bakerbotts.com
Attorneys for Petitioner, Arista Networks, Inc.

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CERTIFICATE OF SERVICE

In accordance with 37 C.F.R. § 42.6(e), the undersigned certifies that on April 24, 2025, a complete and entire copy of the **PETITIONER'S REQUEST FOR DIRECTOR REVIEW** was served on Patent Owner at the correspondence addresses below:

James T. Carmichael
jim@carmichaelip.com

Stephen McBride
stevemcbride@carmichaelip.com

Minghui Yang
mitch@carmichaelip.com

ORCKIT-IPRS@CARMICHAELIP.COM

Date: April 24, 2025

/Eliot D. Williams/
Eliot D. Williams (Reg. No. 50,822)
BAKER BOTTS L.L.P.
700 K Street, N.W.
Washington, D.C. 20001-5692
Tel: 202-639-1334
eliot.williams@bakerbotts.com

*Attorneys for Petitioner, Arista Networks,
Inc.*