United States Court of Appeals for the Federal Circuit

ARISTA NETWORKS, INC.,
Appellant

v.

CISCO SYSTEMS, INC.,
Cross-Appellant

2017-1313, 2017-1380

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2015-00975.

Decided: March 28, 2018

LAUREN ANN DEGNAN, Fish & Richardson, PC, Washington, DC, argued for appellant. Also represented by MICHAEL J. MCKEON, RALPH ADAM PHILLIPS.

JASON M. WILCOX, Kirkland & Ellis LLP, Washington, DC, argued for cross-appellant. Also represented by JOHN C. O'QUINN, CALVIN ALEXANDER SHANK; JON WRIGHT, Sterne Kessler Goldstein & Fox, PLLC, Washington, DC.

Before NEWMAN, TARANTO, and STOLL, *Circuit Judges*.

TARANTO, *Circuit Judge*.

Arista Networks, Inc. challenged various claims of Cisco Systems, Inc.'s U.S. Patent No. 8,051,211 in an inter partes review. The Patent Trial and Appeal Board of the Patent and Trademark Office determined that Arista failed to show that certain claims are unpatentable for obviousness. Because the Board did not adequately explain its reasoning on a point that was central to its analysis, we vacate the Board's determination as to the appealed claims and remand for further proceedings.

I

A

The '211 patent describes and claims methods and systems for "multi-bridge LAN aggregation." '211 patent, Abstract; col. 13, lines 14–26; col. 14, lines 21–38. The patent defines "LAN," "host," "frame," and "bridge." "Although a LAN may refer to a computer network organized in a given locale [(*i.e.*, a local area network)], as used herein, the term 'LAN' is used to refer to a physical connection between one or more hosts (e.g., a LAN Segment)." *Id.*, col. 1, lines 42–45; *see id.*, col. 1, lines 15–16. "[T]he term 'host' refers to an end-station which is the source of, or destination of, frames transmitted over a network." *Id.*, col. 1, lines 45–47. "[A] frame refers to information which is transferred between a host and a bridge and/or between multiple bridges." *Id.*, col. 1, lines 22–23. And "[b]ridges are intermediate network devices which can be used to interconnect LANs at the link layer to enable computers on one LAN to communicate with the computers of another LAN." *Id.*, col. 1, lines 30–33.

The patent states that the invention combines two ideas. One is "[l]ink aggregation (also known as trunking)," which groups LANs together and treats the group "as a single link with the capacity of all the links com-

bined." *Id.*, col. 2, lines 28–32. The other is redundancy of a host's connections to a separate computer network, by use of multiple intermediate network devices such as bridges, routers, or switches. *Id.*, col. 1, lines 29–33, 48–50, 62 through col. 2, line 1; *see id.*, col. 4, lines 22–25.

One aspect of the claimed invention is "tunneling." The patent says: "As used herein, tunneling is used to refer to transmitting a frame without examination." *Id.*, col. 5, lines 59–61. It contrasts tunneling with what it says is the way that bridges generally move frames: "when a bridge receives a frame, it generally examines the frame to determine the corresponding LAN Segment to forward the frame to." *Id.*, col. 5, lines 61–63. Describing Figure 3B, the patent continues: "However, in accordance with the present invention, bridge 342 is configured to internally transmit a frame between bridge interconnect port 366 and port A0 directly, without such examination. Thus, port A0 on bridge [342] is slaved through sub-port A99.0 to sub-port B99.0 of bridge 344. Bridge 342 is essentially transparent to bridge 344 and host 356." *Id.*, col. 5, line 65 through col. 6, line 4.

B

On April 1, 2015, Arista petitioned for an inter partes review of claims 1, 2, 6–9, 12, 13, and 17–20 of the '211 patent. On October 6, 2015, the Board, acting for the Director of the Office, instituted a review of independent claims 1 and 12, for anticipation by U.S. Patent No. 6,910,149 (Perloff), and of dependent claims 2, 6–9, 13, and 17–20, for obviousness over the combination of Perloff and U.S. Patent No. 6,931,529 (Kunzinger). *Arista Networks, Inc., v. Cisco Sys. Inc.*, IPR2015-00975, 2015 WL 5895790, at *7 (P.T.A.B. Oct. 6, 2015). All of the dependent claims contain a limitation that requires "tunneling."

Perloff discloses "multi-device link aggregation," which provides increased bandwidth and redundancy by

linking multiple network devices together. Perloff, col. 1, lines 7–14, 55–60; col. 5, lines 9–17. Kunzinger discloses a method to establish "tunnels" using the IP Security Protocol (IPSec) to protect "datagrams (i.e. packets) traveling through the network." Kunzinger, col. 1, lines 8–12; col. 2, lines 30–32, 53–59; col. 3, lines 7–18. According to Kunzinger, "[t]unneled packets in IPSec have an outer IP header . . . and an inner IP header." *Id.* col. 3, lines 7–14. "When IPSec is used in 'tunnel' mode, the complete inner packet, which is comprised of both the inner header and the payload, is protected as the packet travels through the tunnel. However, the outer header remains in clear text form as the packet travels through the tunnel." *Id.* Arista, in its petition, relied on Kunzinger to disclose the tunneling limitation common to all of the dependent claims on appeal. J.A. 96–101, 109–10.

In its October 5, 2016 Final Written Decision, the Board determined that claims 1 and 12 were anticipated by Perloff. *Arista Networks, Inc., v. Cisco Sys. Inc.*, IPR2015-00975, Paper No. 36, at 17 (P.T.A.B. Oct. 5, 2016) (*Final Written Decision*). Cisco has not cross-appealed the anticipation finding.[1] As to claims 2, 6–9, 13, and 17–20, the Board determined that Arista had failed to show unpatentability. It concluded that Arista did not prove a premise of its obviousness challenge to those claims, namely, that the tunneling limitation is disclosed in Kunzinger. *Id.* at 25.

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[1] Cisco has, however, cross-appealed the Final Written Decision, but it has done so only to preserve a constitutional challenge to the inter partes review regime, recognizing that our precedent forecloses the challenge but that the issue is pending before the Supreme Court in *Oil States Energy Servs., LLC v. Greene's Energy Grp., LLC*, No. 16-712, *cert. granted*, 137 S. Ct. 2239 (2017).

Arista timely appeals the Board's patentability determination regarding claims 2, 6–9, 13, and 17–20. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II

We agree with Arista that the Board has not adequately explained its finding that Kunzinger does not disclose the tunneling limitation of claims 2, 6–9, 13, and 17–20 of the '211 patent.

Claim 2 requires "tunneling said first LAN with a third LAN through said first intermediate network device." '211 patent, col. 13, lines 27–30. Based on the language of the written description quoted above, the Board construed "tunneling" to mean "transmitting a frame *without examination*, including in layer 2 and layer 3 communications." *Final Written Decision*, at 10 (emphasis added). The Board then found that Kunzinger does not teach that limitation because Kunzinger's use of the outer header for directing movement of a frame is an "examination" excluded from "tunneling." *Id*. at 24–25.

But the required analysis of Kunzinger is not that simple, because, as the Board explained, the proper understanding of "examination" is more complicated. The Board recognized that "claim 11 further defines tunneling to comprise encapsulating a frame, transmitting the frame, de-encapsulating the frame, and directly transmitting the frame." *Id*. at 8 (citing '211 patent, col. 14, lines 11–20). On that basis, the Board concluded that "encapsulation and de-encapsulation of a frame are not 'examination' of a frame, as the '211 patent uses that term." *Final Written Decision*, at 9. In short, while "transmitting a frame" during "tunneling" must be "without examination," certain kinds of activities involving encapsulation and de-encapsulation are not part of the excluded "examination"—hence may be present in what still qualifies as "tunneling" under the '211 patent.

Arista's contention on appeal is that the Board improperly overlooked that complication of the "without examination" portion of the "tunneling" construction when considering Kunzinger. Most specifically, Arista focuses on the '211 patent's explanation that "bridge-interconnect port 412 encapsulates (e.g., includes a tag within, or appended to, frame 500) and de-encapsulates (e.g., examines fields in frame 500 and/or removes tags from frame 500)" the frame. '211 patent, col. 9, lines 14–18. The tag, shown in Figure 5 as 506, provides information about the destination for a frame. *Id.*, col. 7, lines 38–42; col. 9, lines 29–47. Arista argues that the Kunzinger-taught examination of the outer header of an encapsulated packet is not relevantly different from the use of fields and tags of the encapsulated frame in the '211 patent, the latter not constituting an "examination" excluded from "tunneling." Consequently, Arista concludes, Kunzinger teaches the "tunneling" limitation, contrary to the Board's finding. At the least, Arista contends, the Board did not adequately explain why Kunzinger's examining activities, involving the outer header, are relevantly different from actions permitted to be part of "tunneling" by the '211 patent, a crucial premise of the Board's finding that Kunzinger does not teach that limitation.

We review the Board's final written decisions "to ensure that they are not 'arbitrary, capricious, an abuse of discretion, . . . otherwise not in accordance with law . . . [or] unsupported by substantial evidence.'" *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 992 (Fed. Cir. 2017) (quoting 5 U.S.C. § 706(2)(A), (E)). "[I]n order to allow effective judicial review, . . . the agency is obligated to provide an administrative record showing the evidence on which the findings are based, accompanied by the agency's reasoning in reaching its conclusions." *Id.* (quoting *Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1322 (Fed. Cir. 2016), *overruled in another respect by Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir.

2017), and *In re Lee*, 277 F.3d 1338, 1342 (Fed. Cir. 2002)) (internal quotation marks omitted). "For judicial review to be meaningfully achieved within these strictures, the agency tribunal must present a full and reasoned explanation of its decision." *Lee*, 277 F.3d at 1342.

We agree with Arista to the following extent (and we go no further here): the Board did not adequately explain why "transmission of the IPSec packet" in Kunzinger includes an "examination" excluded from the "tunneling" claimed in the '211 patent, even while the described use of fields and tags in the '211 patent is not such an excluded "examination." *Final Written Decision*, at 25. The '211 patent's tunneling process "internally routes data . . . depending on, for example, information associated with the data (e.g., an encapsulation tag . . .)." '211 patent, col. 7, lines 38–42. At one level of generality, in that situation, as in Kunzinger, a portion of a frame is transmitted through the tunnel without examination, while another portion is examined to route the data to its proper destination. That general description of what is similar may well omit critical differences. The Board implicitly must have so found in determining that Kunzinger shows a forbidden "examination." But the Board's decision is lacking in explanation on this key element of its analysis. The decision "does not address, or at least does not clearly address," the difference between the examination of tunneled packets in Kunzinger and the type of examination that is permissible in the tunneling process of the '211 patent. *See Pers. Web*, 848 F.3d at 993.

Cisco seeks to explain the distinction in this court. Some Board explanations can suffice even if brief, as when the patent and the art are both clear and readily understandable. *Id.* at 994. In addition, "we will uphold a decision of less than ideal clarity if the agency's path may reasonably be discerned." *Bowman Transp., Inc. v. Ark.–Best Freight Sys., Inc.*, 419 U.S. 281, 286 (1974); *see In re NuVasive, Inc.*, 842 F.3d 1376, 1382–83 (Fed. Cir.

2016). But, understood in light of our scrutiny of the patent and the prior art, the Board's "own explanation must suffice for us to see that the agency has done its job and must be capable of being 'reasonably . . . discerned' from a relatively concise [Board] discussion." *In re NuVasive*, 842 F.3d at 1383. In this case, Cisco's attempt to explain the distinction at issue has not sufficiently enabled us to see an adequate explanation in the Board's opinion.

III

We vacate the Board's decision as to the appealed claims and remand the matter for further proceedings.

No costs.

VACATED AND REMANDED