

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

**CISCO SYSTEMS, INC., HEWLETT PACKARD
ENTERPRISE CO.,**
Appellants

v.

K.MIZRA LLC,
Appellee

2022-2290, 2023-1183

Appeals from the United States Patent and Trademark
Office, Patent Trial and Appeal Board in Nos. IPR2021-
00593, IPR2022-00081, IPR2022-00084.

Decided: August 16, 2024

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

REYNA, *Circuit Judge*.

Cisco Systems, Inc. appeals from the final written decision of the Patent Trial and Appeal Board in an inter partes review. The Board determined that Cisco failed to demonstrate the obviousness of claims 1–3, 5–13, and 15–19 of the ’705 patent based solely on a lack of motivation to combine two prior art references. Because the Board erred in failing to address Cisco’s non-benefits-based motivation to combine arguments and the Board’s finding that Cisco failed to establish a motivation to combine is unsupported by substantial evidence, we vacate and remand.

BACKGROUND

Appellee K.Mizra LLC (“K.Mizra”) owns U.S. Patent No. 8,234,705 (“’705 patent”). This patent describes a system and method for ensuring that a host, e.g., a computer, cannot connect to a protected network and spread harmful viruses throughout the network. One way the ’705 patent proposes to solve this problem is with a system that can determine whether the computer should be quarantined while trying to connect to a protected network. If quarantined, the computer is allowed limited access to the protected network through a remediation server able to take certain remedial actions, such as downloading a software patch, installing software, or running diagnostics. Other access requests are redirected to a quarantine server, which responds with a quarantine notification webpage informing the user (1) that the device is quarantined and (2) of instructions on how to carry out remediation.

Claim 1 of the '705 patent is representative on appeal and recites in relevant part:

1. A method for protecting a network, comprising:

[1.1] detecting an insecure condition on a first host that has connected or is attempting to connect to a protected network, wherein detecting the insecure condition includes [1.2] contacting a trusted computing base associated with a trusted platform module within the first host, [1.3] receiving a response, and [1.4] determining whether the response includes a valid digitally signed attestation of cleanliness, [1.5] wherein the valid digitally signed attestation of cleanliness includes at least one of an attestation that the trusted computing base has ascertained that the first host is not infested, and an attestation that the trusted computing base has ascertained the presence of a patch or a patch level associated with a software component on the first host;

[1.6] when it is determined that the response does not include a valid digitally signed attestation of cleanliness, quarantining the first host, including by preventing the first host from sending data to one or more other hosts associated with the protected network, wherein preventing the first host from sending data to one or more other hosts associated with the protected network includes [1.7] receiving a service request sent by the first host, [1.8] serving a quarantine notification page to the first host when the service request comprises a web server request, [1.9] and in the event the service request comprises a DNS query, providing in response an IP address of a quarantine server configured to serve the quarantine notification page if a host name that is the subject of the DNS query is not associated with a remediation host configured

to provide data usable to remedy the insecure condition; and

[1.10] permitting the first host to communicate with the remediation host.

J.A. 77, 19:57–20:23.¹

I. Prior Art

There are two prior art references at issue: Gleichauf² and Lewis.³ Gleichauf relates to controlling a computer's access to a network depending on the computer's security status. Similar to the '705 patent, Gleichauf teaches a method for quarantining an infected computer that is attempting to connect to a protected network. Unlike the '705 patent, Gleichauf does not disclose a quarantine server. Rather, Gleichauf teaches that the quarantined device is only allowed access to a remediation server and that the remediation server displays messages to the user indicating that the device has been quarantined. Gleichauf does not specify how the messages are displayed to a user. *See, e.g.*, J.A. 1164, 21:5–8 (“[T]he message may be displayed to the user . . . indicating that the device has been quarantined.”).

Lewis describes a “system for ensuring that machines having invalid or corrupt states are restricted from accessing network resources.” J.A. 1234, 4:7–9. Lewis discloses a quarantine server that determines whether the device is infected. If infected, the device is quarantined. Lewis's quarantine server then displays a message to the user via a webpage that the device has been quarantined.

¹ The bracketed numbers refer to the parties' designations of the claim limitations.

² U.S. Patent No. 9,436,820 to Gleichauf et al.

³ U.S. Patent No. 7,533,407 to Lewis et al.

II. The Board's Decision

Appellant Cisco Systems, Inc. (“Cisco”) filed a petition for inter partes review (“IPR”) of the ’705 patent.⁴ In its petition, Cisco challenged claims 1–3, 5–13, and 15–19 of the ’705 patent (“the challenged claims”) as obvious over one ground: the combination of Gleichauf, Lewis, and Ovadia.⁵ J.A. 149. Relevant to this appeal is Cisco’s proposed combination of Gleichauf and Lewis as disclosing claim limitations 1.8 and 1.9 listed above, which relate to a quarantine server sending a quarantine notification over a webpage.

In its petition, Cisco presented several arguments that a skilled artisan would have been motivated to combine Gleichauf’s remediation method with Lewis’s quarantine server and quarantine notification webpage to arrive at limitations 1.8 and 1.9. J.A. 158–61. On appeal, Cisco characterizes its motivation to combine arguments in its petition as five separate and distinct “rationales.” Appellant Br. 25–26, 39–40. The first and second rationales allegedly focused on the “predictability” of the combination of Gleichauf and Lewis. *Id.* at 33, 39–40. The third, fourth, and fifth rationales allegedly focused on the benefits of such combination. *Id.* at 25–26.

Particularly relevant to this appeal, Cisco’s “fourth rationale” for combining Gleichauf with Lewis was that Lewis’s quarantine notification message via a webpage could be displayed in a browser that the user already had

⁴ Appellant Hewlett Packard Enterprise Co. (“HPE”) also filed a petition for IPR of the ’705 patent and sought to join the Cisco-initiated IPR. The Board joined HPE as a petitioner in the Cisco-initiated IPR.

⁵ U.S. Patent No. 7,747,862 to Ovadia. Because Cisco’s arguments concerning Ovadia are not at issue on appeal, we do not discuss Ovadia’s teachings.

open. Thus, Cisco’s petition argued that Lewis did not require separate software components to display a notification message, as was purported to be required by Gleichauf. The Board, however, found that Gleichauf’s notification message provided the same benefit as Lewis’s disclosed method, such that a skilled artisan would not be motivated to combine the two references. The Board reasoned that Gleichauf “indicates that the notification messages may be displayed on a browser using XML pages” or that a skilled artisan “could implement a webpage as part of the notification” even if Gleichauf did not disclose such a webpage. J.A. 32.

The Board concluded that Cisco did not carry its burden of showing a motivation to combine Gleichauf and Lewis because “Gleichauf provides all of the Petitioner-identified benefits or advantages of the proposed combination of Gleichauf and Lewis.” J.A. 30. This determination was the sole basis for the Board’s overall conclusion that Cisco failed to establish the unpatentability of all challenged claims of the ’705 patent. J.A. 34–35. The Board did not reach Cisco’s other obviousness arguments in its petition. Cisco appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

DISCUSSION

Obviousness is a question of law with underlying factual findings. *Acoustic Tech., Inc. v. Itron Networked Sols., Inc.*, 949 F.3d 1366, 1373 (Fed. Cir. 2020). Whether a skilled artisan would have been motivated to combine prior art references is a question of fact. *Id.* We review the Board’s legal conclusions de novo and its factual findings for substantial evidence. *Id.* Substantial evidence is “such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938).

We review de novo whether the Board improperly relied on new arguments not contained in the petition.

Corephotonics, Ltd. v. Apple Inc., 84 F.4th 990, 1008 (Fed. Cir. 2023). We review for an abuse of discretion the Board’s determination whether a reply or sur-reply was improperly non-responsive. *Id.*

Cisco argues that the Board’s decision should be vacated and remanded for the following three independent reasons: the Board (1) legally erred by applying the law of obviousness too narrowly, (2) committed a procedural error by considering an argument K.Mizra raised for the first time in its sur-reply brief, and (3) made an unsupported factual finding as to Gleichauf that resulted in an erroneous motivation to combine analysis. We address each argument in turn.

I

Cisco argues that the Board legally erred under *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007) and *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373 (Fed. Cir. 2023) by “categorically requiring a motivation to achieve a specific benefit.” Appellant Br. 37; Reply Br. 4. According to Cisco, the limitations at issue in the ’705 patent did nothing more than rearrange “‘familiar elements’ using ‘known methods’ to yield ‘predictable results.’” Appellant Br. 40 (quoting *KSR Int’l Co.*, 550 U.S. at 416). Thus, Cisco argues, “where the prior art was so similar, and the choice of elements readily predictable, [it] did not need to show a specific motivation to improve Gleichauf to achieve a particular benefit.” *Id.* Cisco argues that for this reason alone, the Board’s decision should be vacated and remanded for an obviousness analysis under the proper legal standard. We agree with Cisco.

While an obviousness analysis should be “expansive and flexible,” *KSR Int’l Co.*, 550 U.S. at 415, “there must exist a motivation to combine various prior art references in order for a skilled artisan to make the claimed invention.” *Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 887 (Fed. Cir. 2024); *see also Belden Inc.*

v. Berk-Tek LLC, 805 F.3d 1064, 1073 (Fed. Cir. 2015). Such an analysis may include considering whether there was a benefit in combining prior art references. *KSR Int’l Co.*, 550 U.S. at 424 (“The proper question . . . was whether [a skilled artisan], facing the wide range of needs created by developments in the field of endeavor, *would have seen a benefit* to upgrading [the prior art] with a sensor.”).⁶

A tribunal, however, crosses into forbidden territory when it applies a general principal as a rigid rule. *Id.* at 419. And as we recently decided in *Intel*, a party is not rigidly required to show an improvement or benefit in combining prior art references in a “categorical sense” in order to show a motivation to combine. 61 F.4th at 1381 (citation omitted).

Here, the Board ran afoul of *KSR* and *Intel* by ignoring Cisco’s non-benefits-based, first and second motivation to combine rationales. In doing so, the Board effectively required Cisco to show a benefit in combining Gleichauf and Lewis to establish a motivation to combine. In addition to several benefits-based arguments, Cisco alleged in its petition that the proposed combination of Gleichauf and Lewis “uses the known technique of redirection of device traffic to a quarantine server that serves a webpage to the device, as in Lewis, to improve a similar method of traffic redirection, as in Gleichauf, in the same way.” J.A. 159 (citation omitted). Cisco also argued that the proposed combination “is merely the application of Lewis’s known technique of serving a webpage to a quarantined device with information and remediation instructions to Gleichauf’s . . . known method[] of providing a notification message identifying reasons for quarantine, yielding predictable results.” *Id.* (citation omitted). The Board overlooked these arguments. Instead, the Board exclusively focused its motivation to

⁶ Cisco concedes that “identifying a benefit” can be part of a motivation to combine analysis. Reply Br. 8.

combine analysis on the benefits-based arguments Cisco presented, namely whether a skilled artisan would have looked to Lewis to modify Gleichauf to achieve various benefits. J.A. 29–38. Consistent with our recent decision in *Intel*, the Board should have addressed whether Cisco showed a motivation to combine Gleichauf with Lewis independent of whether a skilled artisan would recognize any benefit in making the proposed combination. Its failure to do so was error. See *Provisur Techs., Inc. v. Weber, Inc.*, 50 F.4th 117, 125 (Fed. Cir. 2022).

The Board’s omission is legal error that requires us to vacate and remand the Board’s motivation to combine determination for further proceedings.

II

Cisco next argues that the Board procedurally erred when rejecting Cisco’s three benefits-based rationales for a motivation to combine. Appellant Br. 57. According to Cisco, the Board rejected these rationales based on an argument K.Mizra raised for the first time in its sur-reply brief—that a skilled artisan would not have combined Gleichauf with Lewis’s quarantine server because the benefits identified by Cisco would have already been present in Gleichauf, leaving no need to look to Lewis’s quarantine server. *Id.* at 29. According to Cisco, by considering this untimely argument, the Board violated 37 C.F.R. § 42.23(b) and its procedural rights under the Administrative Procedure Act (“APA”). *Id.* at 57–58. We are not persuaded by either argument.

First, the Board did not violate 37 C.F.R. § 42.23(b). This regulation provides that “[a] sur-reply may only respond to arguments raised in the corresponding reply and may not be accompanied by new evidence other than deposition transcripts of the cross-examination of any reply witness.” 37 C.F.R. § 42.23(b). Here, K.Mizra did not introduce any new evidence with its sur-reply brief concerning the Gleichauf-Lewis combination. Additionally,

K.Mizra’s argument that the benefits identified by Cisco’s petition were already present in Gleichauf was in direct response to Cisco’s reply brief. There, Cisco argued that K.Mizra was “wrong to ignore the numerous benefits identified in the Petition” for why a skilled artisan would have been motivated to incorporate Lewis’s quarantine server and webpage notification into Gleichauf’s system. J.A. 451. Cisco’s reply brief then listed the various alleged benefits of this combination. J.A. 451–53. K.Mizra directly responded by arguing that (1) “[a]ll of the rationales proffered by Petitioners” are suggested by Gleichauf and (2) that “[n]one of Petitioner’s rationales in its Reply” sufficiently explain why Lewis’s quarantine server would be needed when Gleichauf’s remediation server would suffice. J.A. 510. Because these arguments are in direct response to Cisco’s reply brief arguments concerning the benefits of a Gleichauf-Lewis combination, we see no error in the Board’s consideration of them.

Second, the Board did not violate the APA. Cisco addressed the merits of K.Mizra’s sur-reply arguments at a hearing before the Board and thus had notice and an opportunity to be heard. J.A. 553–57, 14:11–18:11. Additionally, if Cisco believed that K.Mizra raised an untimely argument in its sur-reply brief, it should have raised its objection before the Board instead of raising such objection on appeal in the first instance. *See* Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019), available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>, at 80 (“If a party believes that a brief filed by the opposing party . . . exceeds the proper scope of . . . sur-reply, it may request authorization to file a motion to strike [or] authorization for further merits briefing.”). Cisco failed to partake in available procedural mechanisms before the Board, and it cannot now fault the Board for this failure. *Parkervision, Inc. v. Vidal*, 88 F.4th 969, 981 (Fed. Cir. 2023); *see also WhatsApp, Inc. v. TriPlay, Inc.*, 752 F. App’x 1011, 1016 n.1 (Fed. Cir. 2018)

("[I]t is incumbent upon the party complaining of some procedural violation—such as the inclusion of improper rebuttal in a reply brief—to first raise the issue below." (citations omitted)).

For these reasons, we see no error in the Board's consideration of K.Mizra's sur-reply arguments.

III

Cisco finally argues that the Board made an erroneous and prejudicial fact finding when rejecting its fourth rationale for combining the prior art references. Appellant Br. 5. We agree with Cisco and thus vacate the Board's factual finding as unsupported by substantial evidence.⁷

Cisco's fourth rationale argued that a skilled artisan would have combined Gleichauf with Lewis because Lewis's quarantine notification webpage could be displayed in the browser that the user already has open, rather than through separate software components for displaying messages, as allegedly required by Gleichauf. *See* J.A. 159–60. The Board rejected this rationale by concluding that Gleichauf's quarantine notification message provides the same benefit as Lewis's quarantine notification webpage. The Board found that "Gleichauf indicates that *the notification messages may be displayed on a browser using XML pages*, without the need for additional software running on the device to receive and display the notification message

⁷ Cisco argues that the Board's determination that Gleichauf's message may be displayed on a browser using XML pages also constituted a separate, reversible, procedural error. Appellant Br. 52–53. According to Cisco, the Board came up with its theory regarding Gleichauf's use of XML "out of whole cloth." *Id.* at 54. We do not reach whether this theory is a procedural violation because we conclude that the Board's factual determination is unsupported by substantial evidence and cannot stand.

to the user.” J.A. 32 (emphasis added). Cisco argues that this finding is unsupported by substantial evidence. Appellant Br. 48–49. We agree with Cisco.

Gleichauf does not disclose a notification message via a browser. J.A. 1163, 20:54–65. Rather, Gleichauf broadly discloses that messages will be displayed to a user. J.A. 1164, 21:5–8 (“[T]he message may be displayed to the user . . . indicating that the device has been quarantined.”). Gleichauf then provides some examples of such messages, such as a notification message via a text message for display to a user or a message that may be written to a log file indicating that the device has been quarantined and needs to be remediated. J.A. 1164, 21:1–8.

Additionally, Gleichauf does not disclose a notification message displayed in *XML format* on a web browser. Rather, Gleichauf broadly states that notification messages can be configured in “extensible messaging format” such as XML format. J.A. 1163, 20:54–64. Gleichauf then discloses that XML format is a “well-defined, application-independent form for representing . . . data” that allows third-party manufactures of “posture plug-ins” to recognize the information in the notification message. *Id.* However, there is no support in Gleichauf, or the record, to indicate that an “application-independent form” could mean a web browser.

The only support the Board cited for its finding that Gleichauf’s notification messages may be “displayed on a browser using XML pages” was attorney argument made by K.Mizra’s counsel at the close of the oral hearing. J.A. 32 (J.A. 582, 43:7–15). Attorney argument cannot support the Board’s finding. *Acoustic Tech.*, 949 F.3d at 1375 (“[A]ttorney argument cannot constitute substantial evidence of a motivation to combine.” (citation omitted)).

In light of this evidentiary record, there was no basis for the Board to find that Gleichauf indicates that a notification message may be displayed on a browser using XML format. The Board’s rejection of Cisco’s fourth rationale is

thus unsupported by substantial evidence. We vacate this finding.

CONCLUSION

We have considered the parties' remaining arguments and find them unpersuasive. For the reasons discussed above, we vacate the Board's motivation to combine analysis, which was rooted in legal error and a fact finding unsupported by substantial evidence. We further vacate the Board's ultimate determination that Cisco failed to show the unpatentability of the challenged claims of the '705 patent and remand for the Board to consider the remaining issues regarding the obviousness of the challenged claims, including Cisco's non-benefits-based motivation to combine arguments and Cisco's fourth rationale.

VACATED AND REMANDED

COSTS

Costs against K.Mizra.