

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

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**ACOUSTIC TECHNOLOGY, INC.,**  
*Appellant*

v.

**ITRON NETWORKED SOLUTIONS, INC.,**  
*Appellee*

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2019-1061

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Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2017-01024.

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Decided: February 13, 2020

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MICHELLE ARMOND, Armond Wilson LLP, Newport Beach, CA, argued for appellant. Also represented by DOUGLAS R. WILSON, Austin, TX.

ADAM R. BRAUSA, Durie Tangri LLP, San Francisco, CA, argued for appellee. Also represented by MARK A. LEMLEY.

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Before MOORE, REYNA, and TARANTO, *Circuit Judges*.

REYNA, *Circuit Judge*.

On September 8, 2017, the Patent Trial and Appeal Board instituted *inter partes* review based on a petition filed by Silver Spring Networks, Inc. Nine days after institution, Silver Spring agreed to merge with Itron, Inc., an entity undisputedly time-barred under 35 U.S.C. § 315(b). Silver Spring and Itron completed the merger during the IPR proceeding. The Board later issued a final written decision and found the challenged claim unpatentable. On appeal, Acoustic asks that we vacate the Board’s final written decision on grounds that the *inter partes* review was time-barred due to Silver Spring’s and Itron’s merger-related activities. Acoustic also challenges the Board’s unpatentability findings. Because we find that Acoustic waived its time-bar argument and that substantial evidence supports the Board’s unpatentability findings, we affirm.

## BACKGROUND

### I. ’841 Patent

Acoustic Technology, Inc. (“Acoustic”) owns U.S. Patent No. 6,509,841 (“the ’841 patent”), which relates to communications systems for utility providers to remotely monitor groups of utility meters, e.g., electricity meters.<sup>1</sup> According to Acoustic, the claimed invention was “an improvement upon prior art automated meter reading systems that used expensive and problematic radio frequency (RF)

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<sup>1</sup> The ’841 patent is a continuation of U.S. Patent Application No. 08/949,440, which issued as U.S. Patent No. 5,986,574. Acoustic filed a related appeal involving U.S. Patent No. 5,986,574 on the same day it filed this appeal. *Acoustic Tech., Inc. v. Itron Networked Solutions, Inc.*, Case No. 2019-1059. We heard oral arguments in this case and Case No. 2019-1059 on December 4, 2019. We have issued opinions in both cases simultaneously.

transmitters, or systems that relied on human meter-readers using handheld or vehicle-mounted short-range wireless devices to obtain meter readings when they were in a customer's vicinity." Appellant Br. 7. Central to this appeal are the "CDMA" and "relay" claim limitations.

In one embodiment, shown in Figure 1 below, a plurality of "servicing means 16" (e.g., on-site utility meters) communicate with a "relay means 14," which in turn communicates with a "control means 12" (e.g., a remote computer at a utility facility). J.A. 94, Fig. 1; J.A. 98-99 at 2:43-3:19.

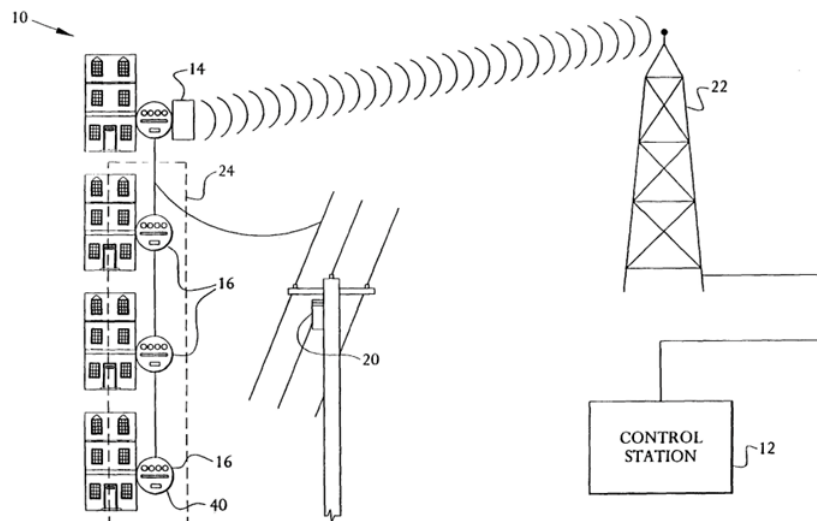


FIG. 1

The relay can be "positioned at any desired location within the communication system," including on a distribution pole or at a customer's location. The relay can communicate with the control station via a Code-Division Multiple Access ("CDMA") link. CDMA is a digital multiple access technique where all users are allowed to transmit simultaneously utilizing the same available frequency band.

Claim 8 of the '841 patent, reproduced below, is the only claim at issue on appeal:

8. A system for remote two-way meter reading comprising:

- a metering device comprising means for measuring usage and for transmitting data associated with said measured usage in response to receiving a read command;
- a control for transmitting said read command to said metering device and for receiving said data associated with said measured usage transmitted from said metering device; and
- a relay for code-division multiple access (CDMA) communication between said metering device and said control, wherein said data associated with said measured usage and said read command is relayed between said control and metering device by being passed through said relay.

J.A. 100 at 8:24–39.

## II. IPR Petition

In March 2010, Acoustic sued Itron Inc. (“Itron”) for infringement of the ’841 patent. Acoustic and Itron later agreed to settle the suit. As part of the settlement agreement, Acoustic licensed the ’841 patent to Itron. As a result of the lawsuit, Itron was time-barred from seeking *inter partes* review (“IPR”) of the ’841 patent as of March 26, 2011. *See* 35 U.S.C. § 315(b).

Six years after suing Itron, Acoustic sued Silver Spring Networks, Inc. (“Silver Spring”) for infringement of the ’841 patent. In response, on March 3, 2017, Silver Spring filed the IPR petition that gave rise to this appeal: IPR2017-01024 (“the petition”).

Several weeks before Silver Spring filed the petition, Silver Spring and Itron began privately discussing “a potential business combination.” J.A. 6556. The first contact occurred on February 12, 2017, when a representative of Itron phoned a Silver Spring board member to express Itron’s interest in a potential merger. The next day, Itron’s CEO continued the discussion with a director of Silver Spring. One week later, on February 20, 2017, Itron’s CEO requested a meeting with Silver Spring to discuss “a potential acquisition.” J.A. 6556.

Silver Spring and Itron continued to discuss a potential merger after Silver Spring filed the petition. Representatives from each company met on March 10, 2017, one week after Silver Spring filed the petition, and again on April 12, 2017.

The Board instituted *inter partes* review on September 8, 2017. Nine days later, on September 17, 2017, Silver Spring and Itron agreed to merge. Itron publicly announced the agreement the next day. Silver Spring asserts that, up until the day the parties reached an agreement, Silver Spring was exploring potential business relationships with more than a dozen other companies.

Silver Spring and Itron completed the merger on January 5, 2018, while the *inter partes* review proceeding remained underway. Acoustic learned of the merger three days later. On January 17, 2018, Silver Spring filed updated mandatory notices that listed Itron as a real-party-in-interest.

The Board entered a final written decision on August 21, 2018, nearly a year after Silver Spring and Itron agreed to merge, and seven months after they completed the merger. The Board’s final written decision found claim 8 unpatentable on all three asserted grounds: anticipated by NetComm; anticipated by Gastouniotis; and obvious in view of Nelson and Roach. Acoustic never raised a time-bar challenge to the Board.

Acoustic appeals the Board's final written decision. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

#### DISCUSSION

Acoustic raises two issues on appeal. First, Acoustic asserts that the Board's final written decision should be vacated because the underlying IPR proceeding is time-barred under 35 U.S.C. § 315(b). Second, Acoustic challenges the Board's unpatentability factual findings as not supported by substantial evidence.

##### I. Time-Bar

Acoustic argues that we must vacate the Board's final written decision because the *inter partes* review was time-barred under 35 U.S.C. § 315(b). Section 315(b) provides:

An inter partes review may not be instituted if the petition requesting the proceeding is filed more than 1 year after the date on which the petitioner, ***real party in interest***, or privy of the petitioner is served with a complaint alleging infringement of the patent.

35 U.S.C. § 315(b) (emphasis added). Congress included the “real parties in interest” provision in § 315(b) to “safeguard patent owners from having to defend their patents against belated administrative attacks by related parties.” *Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336, 1350 (Fed. Cir. 2018), *cert. denied*, 139 S. Ct. 1366 (mem.) (2019).

The Board evaluates § 315(b) at the time it decides whether to institute the proceeding. *Power Integrations, Inc. v. Semiconductor Components Indus., LLC*, 926 F.3d 1306, 1315 (Fed. Cir. 2019). In *Power Integrations*, we held that the real-party-in-interest determination must consider all relationships that arise before the date of institution, including relationships that arise after the petition filing date. *Id.* at 1314–1315 (“[Section] 315(b)

requires consideration of privity and [real-party-in-interest] relationships arising after filing but before institution.”). We expressly declined to decide whether the Board is required to reevaluate § 315(b) in view of a new real-party-in-interest that arises after institution. *Id.* at 1314 n.8 (“We do not address the impact of a change in RPI . . . occurring after institution.”).

Acoustic argues that the underlying IPR is time-barred because Itron was a real-party-in-interest “both before and after the IPR was instituted.” Appellant Br. 51. Before institution, Acoustic asserts, Itron was a real-party-in-interest because “the executives met; Itron conducted due diligence; the details of the merger were discussed; and the formal ‘merger agreement’ was prepared and negotiated.” Reply Br. 15–16. After institution, Acoustic contends, Itron was “unquestionably” a real-party-in-interest because Silver Spring became a wholly-owned subsidiary of Itron, and Itron “controlled [Silver Spring] and had a significant interest” in the *inter partes* review proceeding. *Id.* at 19–22.

Acoustic contends that Silver Spring’s post-institution status as a real-party-in-interest is important because “institution is not a static decision” and the Board has the authority to reevaluate § 315(b) when a real-party-in-interest arises after institution. Reply Br. 17–18. The Board’s ability to assess § 315(b) after institution is necessary, Acoustic explains, in order to avoid an “end-run around Section 315(b)” where parties delay their corporate deals until shortly after institution and avoid the consequences of the time-bar. *Id.* 21–22.

Itron advances several arguments in response to Acoustic’s time-bar arguments. First, Itron argues that Acoustic waived its time-bar challenge of the IPR because Acoustic did not raise those arguments before the Board. Second, Itron argues that the time bar of § 315(b) does not apply to the underlying IPR proceeding because Itron merged with Silver Spring after the Board instituted the

proceeding. Third, Itron asserts that the Board is not authorized to reevaluate § 315(b) after institution and that Acoustic's proposed reading of the statute "offers no logical stopping point" for the Board to assess the time bar. Appellee Br. 39.

We hold that Acoustic has waived its time-bar challenge to the IPR because it failed to present those arguments before the Board. We retain case-by-case discretion over whether to apply waiver. *Monsanto Tech. LLC v. E.I. DuPont de Nemours & Co.*, 878 F.3d 1336, 1342 n.8 (Fed. Cir. 2018). We have "frequently declined to hear arguments that the applicant failed to present to the Board." *In re Watts*, 354 F.3d 1362, 1367 (Fed. 2004). When a party raises arguments on appeal that it did not raise to the Board, they "deprive[] the court of the benefit of the [Board's] informed judgment." *In re NuVasive, Inc.*, 842 F.3d 1376, 1380 (Fed. Cir. 2016) (explaining the importance of "a comprehensive record that contains the arguments and evidence presented by the parties").

There is no dispute that Acoustic failed to raise § 315(b) time-bar arguments before the Board. Acoustic became aware of the merger as of January 8, 2018, more than seven months before the Board issued its final written decision. J.A. 7026. Yet, Acoustic does not provide any reason for its failure to challenge the proceeding as time-barred. Because Acoustic failed to present its time-bar arguments to the Board and "deprive[d] the court of the benefit of the [Board's] informed judgment," we exercise our discretion to apply waiver. *In re NuVasive*, 842 F.3d at 1380.

Acoustic attempts to excuse its waiver by asserting, without legal authority, that the time-bar is "jurisdictional" and thus "may be raised at any time." Appellant Br. 29. We disagree.

Acoustic is correct that we have previously described the time-bar restrictions on the Board's institution powers as "jurisdictional." Appellant Br. 32–35 (citing *Click-to-*



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*Call Techs., LP v. Ingenio, Inc.*, 899 F.3d 1321, 1325 (Fed. Cir. 2018); *Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1373 (Fed. Cir. 2018)). But our application of waiver differs between challenges to an agency’s “jurisdiction” and challenges to a federal court’s jurisdiction. *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1362 (Fed. Cir. 2018). As we explained in *PGS*:

Even if the Board could be said to have acted “ultra vires” in refusing to institute reviews of some claims and grounds . . . the Board’s error is waivable, not one we are required to notice and act on in the absence of an appropriate request for relief on that basis. Several courts of appeals have recognized the same for a challenge to an agency’s “jurisdiction,” after the Supreme Court, in *City of Arlington v. FCC*, rejected a distinction between agency “jurisdiction” errors and other errors for certain deference purposes . . . .”

*Id.* (compiling cases) (citations omitted). We hold that time-bar challenges under § 315(b) are not immune from waiver.

To permit litigants to raise § 315(b) time-bar challenges for the first time on appeal would encourage what the Supreme Court has referred to as “sandbagging,” i.e., “suggesting or permitting, for strategic reasons, that the [tribunal below] pursue a certain course, and later—if the outcome is unfavorable—claiming that the course followed was reversible error.” *Freytag v. Comm’r of Internal Revenue*, 501 U.S. 868, 895 (1991). But allowing Acoustic to raise a time-bar challenge for the first time on appeal would afford it a significant and unfair advantage: Acoustic could wait for the Board’s decision on the merits, which if favorable would have estoppel effect, and then challenge the Board’s jurisdiction on appeal only if the Board finds the claims obvious.

Although we do not address the merits of Acoustic's time-bar argument, we note Acoustic's concerns about the concealed involvement of interested, time-barred parties. But because Acoustic never raised this issue to the Board, we decline to resolve whether Itron's pre-merger activities render it a real-party-in-interest, or whether the Board has any authority or obligation to reevaluate § 315(b) post institution.

## II. Unpatentability

Acoustic argues that we should reverse the Board's unpatentability findings. Acoustic contends that the Board erred with respect to each of the three grounds on which it found claim 8 unpatentable: (A) anticipation by NetComm; (B) anticipation by Gastouniotis; and (C) obviousness in view Nelson and Roach. We address each ground in turn.

We review the Board's factual determinations for substantial evidence and its legal determinations de novo. *Liqwd, Inc. v. L'Oreal USA, Inc.*, 941 F.3d 1133, 1136 (Fed. Cir. 2019). Anticipation is a question of fact that we review for substantial evidence. *In re Hodges*, 882 F.3d 1107, 1111 (Fed. Cir. 2018). Whether an invention would have been obvious is a legal conclusion based on underlying factual findings. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Determinations about the scope and content of prior art, and whether an artisan would be motivated to modify it with a reasonable expectation of success, are questions of fact. *Id.*

### A. Anticipation by NetComm

Acoustic challenges the Board's determination that NetComm anticipates claim 8 of the '841 patent. Specifically, Acoustic claims the Board erred by finding that NetComm discloses the claimed CDMA communication limitation.

Acoustic contends that the Board's CDMA finding is not supported by substantial evidence because the Board

relied entirely on the testimony of Silver Spring's expert, Dr. Soliman. Appellant Br. 56. Acoustic explains that Dr. Soliman's testimony is not evidence of anticipation because Dr. Soliman's testimony reflects an "incorrect obviousness standard" instead of the standard for anticipation. *Id.* Acoustic points to Dr. Soliman's statement that a skilled artisan would "recognize" NetComm as disclosing CDMA. *Id.* Dr. Soliman's use of the word "recognize," Acoustic asserts, is akin to testimony about what a prior art reference "suggests"—which goes to obviousness, not anticipation. *Id.* We disagree.

In an anticipation analysis, the dispositive question is whether a skilled artisan would "reasonably understand or infer" from a prior art reference that every claim limitation is disclosed in that single reference. *Akamai Techs., Inc. v. Cable & Wireless Internet Servs., Inc.*, 344 F.3d 1186, 1192 (Fed. Cir. 2003). Expert testimony may shed light on what a skilled artisan would reasonably understand or infer from a prior art reference. *Monsanto Tech. LLC v. E.I. DuPont de Nemours & Co.*, 878 F.3d 1336, 1345 (Fed. Cir. 2018). Moreover, expert testimony can constitute substantial evidence of anticipation when the expert explains in detail how each claim element is disclosed in the prior art reference. *Koito Mfg. Co. v. Turn-Key-Tech, LLC*, 381 F.3d 1142, 1152 (Fed. Cir. 2004).

Here, Dr. Soliman conducted a detailed analysis and explained how a skilled artisan would reasonably understand that NetComm's disclosure of radio wave communication was the same as CDMA. J.A. 893–896 at ¶¶ 165–175. For example, Dr. Soliman identified specific passages in NetComm that a skilled artisan would recognize as disclosing "spread-spectrum radio communication." J.A. 894 at ¶ 169. Dr. Soliman identified other passages that a skilled artisan would recognize as disclosing that "multiple users share a band and hop between channels in that band using a pseudo-random pattern assigned to each device." J.A. 895 at ¶ 171. As a result, Dr. Soliman concluded, a

skilled artisan would recognize that NetComm discloses the CDMA limitation of claim 8. J.A. 896 at ¶ 176. Acoustic provided no evidence to rebut Dr. Soliman's testimony. J.A. 26.

We conclude that the Board's finding that NetComm discloses CDMA and anticipates claim 8 is supported by substantial evidence. *See Koito Mfg.*, 381 F.3d at 1152.

#### B. Anticipation by Gastouniotis

Acoustic challenges the Board's determination that Gastouniotis anticipates claim 8 of the '841 patent. Acoustic asserts that the Board's finding is erroneous because the Board relied on "the same structures to satisfy separate claim limitations." Appellant Br. 60. Specifically, Acoustic asserts that the Board relied on the same "remote station 6" in Gastouniotis to satisfy the "control" and "relay" limitations of claim 8. *Id.* at 57. We disagree.

Gastouniotis discloses a two-way utility meter reading system that includes a plurality of "remote stations" that communicate with a plurality of "instrument links." J.A. 968 at 4:9–46. Gastouniotis discloses that individual "remote stations" may have different functions in a given embodiment. *Id.* In finding that Gastouniotis anticipated claim 8, the Board relied on separate "remote station" structures to meet the "control" and "relay" limitations. J.A. 30.

As to the "control" limitation of claim 8, the Board relied on Gastouniotis' disclosure of at least one remote station that engages in two-way communication with the metering device: transmitting commands to the metering device and receiving usage data from the metering device. *Id.* at 4:15–17. Dr. Soliman provided un rebutted testimony that a skilled artisan would understand that these remote stations disclosed in Gastouniotis meet the "control" limitation of claim 8.

As to the “relay” limitation of claim 8, the Board relied on Gastouniotis’ disclosure of separate remote stations that function as a “relay”:

[T]he remote stations can be configured to communicate with each other as well as with the instrument links. In this way, data obtained by one remote station can be communicated to a central location *using the other remote stations as a relay*.

J.A. 968 at 4:37–42 (emphasis added). Dr. Soliman provided un rebutted testimony that a skilled artisan would understand that these remote stations disclosed in Gastouniotis meet the “relay” limitation of claim 8.

As a result, we conclude that the Board did not improperly rely on the same structure in Gastouniotis to meet the “control” and “relay” limitations of claim 8. We affirm the Board’s factual finding that Gastouniotis anticipates claim 8.

### C. Obviousness in View of Nelson and Roach

Acoustic challenges the Board’s determination that claim 8 of the ’841 patent is rendered obvious in view of Nelson and Roach. Acoustic asserts two errors in the Board’s obviousness analysis: (i) that the Board erroneously mapped Nelson onto the elements of claim 8; and (ii) that the Board’s motivation-to-combine finding is not supported by substantial evidence. We reject both arguments.

#### 1.

First, Acoustic asserts that the Board erroneously mapped “the same structure in Nelson onto multiple claim limitations.” Appellant Br. 64. Specifically, Acoustic asserts that the Board relied on the same “electronic meter reader (EMR)” in Nelson to satisfy both the “metering device” and “relay” limitations of claim 8. Appellant Br. 64–65. We disagree.

Nelson discloses a two-way meter reading system that includes a plurality of “electronic meter readers (EMRs).” J.A. 997 at 8:23–27; J.A. 1005 at 22:25; J.A. 1013 at 13:19. Nelson discloses that individual EMRs may have different functions in a given embodiment. *Id.* In finding that Nelson anticipated claim 8, the Board relied on separate EMR structures to meet the “metering device” and “relay” limitations.

To satisfy the “metering device” limitation of claim 8, the Board relied on Nelson’s disclosure that the “meter apparatus 10,” which houses an EMR, “is substantially the same as a conventional meter apparatus designed to indicate the amount of electricity consumed by a consumer’s electrical system.” J.A. 997 at 8:23–27; J.A. 1005 at 22:25. Dr. Soliman provided unrebutted testimony that a skilled artisan would recognize the metering apparatus of Nelson as meeting the “metering device” limitation of claim 8.

To satisfy the “relay” limitation of claim 8, the Board relied on Nelson’s disclosure of separate, “*intermediate* EMR devices” that operate as “communication relays” in a technique known as “meterstringing.” J.A. 1013 at 24:13–19 (emphasis added). Nelson discloses that these “[i]ntermediate EMR devices serve [the] sole purpose of communications link between the EMI device and the target EMR at the end of the communication link.” *Id.* Dr. Soliman provided unrebutted testimony that a skilled artisan would recognize that the intermediate EMR devices of Nelson meet the “relay” limitation of claim 8.

As a result, we conclude that the Board did not improperly rely on the same electronic meter reader in Nelson to satisfy both the “metering device” and “relay” limitations of claim 8.

## 2.

Second, we reject Acoustic’s argument that the Board erred in finding that a skilled artisan would be motivated

to combine Nelson and Roach. Acoustic argues that the Board “erred by not making any factual findings that one of ordinary skill would have been motivated to combine the prior art.” Appellant Br. 61. Acoustic requests that we reverse the Board’s finding because the Board relied on “attorney argument,” and “generically cited to [Dr. Soliman’s] expert testimony.” *Id.* at 61–62.

The motivation to combine prior art references can come from the knowledge of those skilled in the art, from the prior art reference itself, or from the nature of the problem to be solved. *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1365 (Fed. Cir. 2018). Acoustic is correct that conclusory expert testimony and attorney argument cannot constitute substantial evidence of a motivation to combine. *E.g., Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017). We have found expert testimony insufficient where, for example, the testimony consisted of conclusory statements that a skilled artisan *could* combine the references, not that they *would* have been motivated to do so. *TQ Delta, LLC v. CISCO Sys., Inc.*, 942 F.3d 1352, 1359–60 (Fed. Cir. 2019).

The Board’s final written decision provides a detailed discussion of Silver Spring’s arguments that a skilled artisan would have been motivated to combine Nelson and Roach. J.A. 35–36. The Board expressly found those arguments “supported by a sufficient rational underpinning” and “supported by the testimony of Dr. Soliman.” J.A. 35–36, 38. The Board cited specific pages of Dr. Soliman’s testimony, including his opinion that “one of the goals of Nelson’s system is to increase communication reliability and information access integrity,” and that the CDMA communication described in Roach was “well known” among skilled artisans as a way to achieve those goals. J.A. 34–36 (citing J.A. 914–915).

Dr. Soliman’s testimony was not conclusory or otherwise defective, and the Board was within its discretion to

give that testimony dispositive weight. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004). We have previously determined that expert testimony constituted substantial evidence of a motivation to combine prior art references, e.g., *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1003 (Fed. Cir. 2016), and we reach the same conclusion here. We affirm the Board's conclusion that claim 8 is rendered obvious by Nelson and Roach.

CONCLUSION

We have considered Acoustic's other arguments and find them unpersuasive. We affirm.

**AFFIRMED**

COSTS

No costs.