

Filed: April 25, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BMW OF NORTH AMERICA, LLC, ROBERT BOSCH LLC, VALEO SE, and
VALEO SCHALTER UND SENSOREN GMBH,
Petitioners,

v.

FORAS TECHNOLOGIES LTD.,
Patent Owner.

IPR2023-01373¹
U.S. Patent 7,502,958

AUTHORIZED RESPONSE TO DIRECTOR REVIEW REQUEST²

¹ Valeo SE and Valeo Schalter und Sensoren GMBH filed a motion for joinder and a petition in IPR2024-00823 and have been joined as petitioners in this proceeding.

² This Response was authorized by the Board's April 18, 2025, email (Exhibit 3101).

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I. Introduction

The Final Written Decision (the “Decision”) correctly found the challenged claims of U.S. Patent No. 7,502,958 unpatentable over Bigbee (Ex. 1005) combined with Nguyen (Ex. 1006). Patent Owner identifies no “erroneous finding of material fact” in the Decision; it only repeats the same argument the Board rejected. The request should be denied because the Board’s decision was not only well reasoned but also well supported by the evidence.

II. Legal Standard

37 C.F.R. § 42.75 governs the Director Review Process. Director Review may be requested if a final decision implicates (a) an abuse of discretion, (b) important issues of law or policy, (c) erroneous findings of material fact, or (d) erroneous conclusions of law. USPTO Website, *Director Review Process*, Section 5.A (last visited April 24, 2025). None of those are present here. Patent Owner simply complains that the Board disagreed with its argument about Petitioners’ Bigbee-Nguyen combination. *See* Req. 5-9. But, in fact, the Board’s analysis was well supported by the evidence and should not be disturbed.

III. Argument

A. The Board Evaluated Patent Owner’s Argument on the Allegedly Flawed “Nguyen-Bigbee” Combined System, Found That It Contradicted the Express Disclosure of the Prior Art, and Rejected It.

The Request only repeats the same argument made to the Board regarding the

“determining if the lockstep is recoverable” limitation and asks the Director to reach the opposite conclusion. This is not a valid basis for Director Review.

First, the Decision walked through—and agreed with—each argument presented in the Petition. It addressed what elements were taught by which reference: “Bigbee discloses all challenged claim limitations except ‘determining if lockstep is recoverable.’” Decision 20-25. “Nguyen addresses Bigbee’s noted deficiency by disclosing a method of determining if the lockstep of the processor pair is recoverable or non-recoverable.” *Id.* Then, it walked through the motivations to combine: “[A] person of ordinary skill in the art ‘would have been motivated to incorporate Nguyen’s determination of if lockstep is recoverable in Bigbee’s FRC logic to reduce impact of errors and increase system fault tolerance and availability and would have had a reasonable expectation of success in doing so.’” *Id.* (citing Pet. 19-72; Ex. 1002, ¶¶ 66-69, 73-180; Ex. 1005, [0016]-[0019], [0034], FIG. 4A; Ex. 1006, [0005], [0007], [0011], [0021]-[0024], [0040], [0046], [0056]-[0058], FIGS. 1, 7.). In the end, the Board concluded that not only do they agree with Petitioner’s and find Dr. Brogioli’s analysis consistent with their understanding of the references, but also noted that “Patent Owner does not challenge Petitioner’s findings in regard to the individual teachings of Bigbee or Nguyen.” Decision 25 (citing Pet. 27; POR 6-8).

Then, the Decision also evaluated—and rejected—Patent Owner’s counterargument. Patent Owner argued that “the ‘critical’ flaw in Petitioner’s Bigbee/Nguyen combination is ‘the recovery process begins after Bigbee has detected an ‘error within a first processor,’” “this means that Nguyen will never determine that lockstep is non-recoverable” and “[e]very error processed by Nguyen’s ‘determines if lockstep is recoverable’ routine will be handled the same way,” and “the Nguyen-Bigbee ‘combined system’ ..., is a system without any mechanism for handling recoverable errors differently from non-recoverable errors.” Decision 26 (citing POR 8-18; Ex. 2007, ¶¶ 26–33; PO Sur-reply 3-4). The Request repeats the same argument. Req. 8. But the Board correctly found that “Patent Owner’s arguments **contradict the express disclosure in Nguyen** that determines error recoverability and handles recoverable errors and non-recoverable errors differently.” Decision 27 (citing Pet. 23-26, 40-41; Reply 7-8; Ex. 1006, [0007]-[0008], [0022]-[0025], [0037], [0039]-[0041], [0046], [0056]-[0058]; Ex. 1002, ¶¶ 66-69, 105, 106) (emphasis added). The Board also recognized that Nguyen also “determines non-recoverable errors occur” after “the detection of an individual processor error.” Decision 26 (citing POR 12, 14; PO Sur-reply 4; Ex. 1002 ¶¶ 65-68; Ex. 1006, [0022]). And, after comparing Patent Owner’s argument to the evidence, the Board rejected it. Decision 27-28.

And having evaluated the parties' arguments, having conducted a thorough oral hearing on the matter, and having weighed the evidence, the Board concluded that "Petitioner has presented reasoning, with rational underpinnings, that a person of ordinary skill in the art would have had reasons to modify Bigbee's firmware FRC logic based upon Nguyen's teachings and would have had a reasonable expectation of success in doing so," and that "Petitioner demonstrates by a preponderance of the evidence that this element is taught or suggested by the Bigbee/Nguyen combination." Decision 29-30 (citing Pet. 33-35; Pet. Reply 10-11; Ex. 1002, ¶¶ 57-58, 94-98; Ex. 1005, [0035]-[0037], FIG. 4A; Ex. 1006 [0009], [0018], FIG. 7; Ex. 2007 ¶ 32). The Decision has no "erroneous findings of material fact."

B. The Request Identifies No Error in the Board's Decision

The Request never disputes the Decision's findings on the individual teachings of Bigbee or Nguyen. *See generally* Req.; *see also* Decision 25 (citing Pet. 27; POR 6-8). The Board found that incorporating Nguyen's determination of if lockstep is recoverable into Bigbee would "reduce impact of errors and increase system fault tolerance and availability." Decision 20-25. The Request never disputes that. Nor does the Request offer any reason why a POSITA could not combine the references or any technological incompatibility of the references. Indeed, the Request never even contends that the Board ignored any evidence. *See generally*

Req. Rather, it just disagrees with the Board’s findings on Petitioners’ combination that is well-supported by the evidence.

Patent Owner’s argument on the allegedly flawed “Nguyen-Bigbee” combined system was analyzed and rejected by the Board. Decision 26-30. Instead, the testimony of Petitioners’ expert Dr. Brogioli and the express disclosure of the prior art persuaded the Board that the claims are unpatentable. Decision, 20-25, 27-30. Nothing about the Board’s analysis reflects any misunderstanding of the facts or improper application of the law to those facts. Thus, the Request should be denied.

C. Patent Owner’s New Teaching Away Argument is Unavailing

Patent Owner argues, for the first time, that “Petitioners proposed an inoperative combination that, ... actually teaches away from Petitioners’ combination because it is inoperable to achieve the desired results.” Req. 9; *see also id.* at 5; *see generally* POR; Decision. Patent Owner cited no evidence that the combination of Bigbee and Nguyen would be inoperable. And the Director need not evaluate this “teaching away” argument—it is presented too late. *In re Nuvasive, Inc.*, 842 F.3d 1376, 1379-82 (Fed. Cir. 2016). Still, this argument fails due to circular reasoning—it challenges an “inoperable” version of the combination of its own making.

IV. Conclusion

Petitioners respectfully request the Director deny the Request.

Date: April 25, 2025

Respectfully submitted,

/Lionel M. Lavenue/

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Reg. No. 46,859

CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing **Authorized Response to Director Review Request** was served on April 25, 2025, via email directed to counsel of record for the Patent Owner at:

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