

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VOLKSWAGEN GROUP OF AMERICA, INC.,

Petitioner,

v.

LONGHORN AUTOMOTIVE GROUP LLC,

Patent Owner.

Patent No. 8,265,353

Filing Date: September 30, 2004

Issue Date: September 11, 2012

Inventors: Stéphane Bonnett and Pierre Grangeat

Title: METHOD OF RECONSTRUCTING AN IMAGE ACQUIRED
USING SEVERAL IMAGERY MODES

PATENT OWNER'S PRELIMINARY RESPONSE

Case No. IPR2025-01064

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LIST OF EXHIBITS

Exhibit No.	Description of Document
2001	Second Amended Docket Control Order, Dkt. 69, <i>Longhorn Auto. Grp. LLC v. Hyundai Motors Corp.</i> , Case No. 2:24-cv-00554 (E.D. Tex. July 9, 2025)
2002	Fourth Amended Docket Control Order, Dkt. 58, <i>Longhorn Auto. Grp. LLC v. Volkswagen AG</i> , Case No. 2:24-cv-00933 (E.D. Tex. May 15, 2025)
2003	Longhorn Automotive Group LLC's Infringement Contentions and P.R. 3-1 and 3-2 Disclosures in <i>Longhorn Auto. Grp. LLC v. Hyundai Motors Corp.</i> , Case No. 2:24-cv-00554 (E.D. Tex.), dated July 25, 2025

I. INTRODUCTION

On May 30, 2025, Volkswagen Group of America, Inc. (“Petitioner”) submitted a petition (Paper 1, “Petition” or “Pet.”) to institute *inter partes* review (“IPR”) of U.S. Patent No. 8,265,353 (Ex. 1001, the “’353 Patent”), challenging Claims 1-18 (the “Challenged Claims”). The Petition asserts that the Challenged Claims are rendered obvious by (1) the Weese reference (Ex. 1005 or “Weese”); (2) Weese and Muehllehner (Ex. 1006 or “Muehllehner”); (3) Weese and Wainer (Ex. 1007 or “Wainer”); and (4) Wainer. Pet. at 1.

Each proposed ground of invalidity relies heavily on purported POSITA knowledge to allege disclosure of missing elements.

The Board should deny the Petition because Petitioner’s mapping does not specify where the Weese or Wainer references disclose [1c] “obtaining a plurality of second images of the mobile object using a second imaging technique while obtaining a plurality of second measurements corresponding to movements of the mobile object using a second sensor system, the second sensor system being independent from the second imaging technique.” Regarding the Weese reference, while Petitioner concedes that Weese’s “P1” are “projections” which are raw collected sensor data, Petitioner does not articulate how the “P1” raw data itself constitutes a “second image” and how the “P1” raw data is different from the “second measurements” data recited in the same claim limitation. To the extent

Petitioner pivots to rely on Weese's processed and reconstructed "I0" and "I10" elements, Petitioner fails to adequately explain how such constructions are "obtained" as required by the claims. Regarding Wainer, Petitioner's mapping is deficient because (1) the single-system single-imaging technique for STET, SPECT, and SPTCT images are the exact same, not *different*, as required by the claims; and (2) Wainer does not actually disclose obtaining CT images using Wainer's system. Accordingly, the Board should deny institution of the Petition.

II. CLAIM CONSTRUCTION

For the purposes of this Preliminary Response only, Patent Owner believes that claim construction is not required to resolve any issues. Pet. at 9-10. Patent Owner is not required to propose constructions at this stage and reserves the right to propose constructions supported by expert testimony.

III. LEVEL OF ORDINARY SKILL IN THE ART

For the purposes of this Preliminary Response only, Patent Owner utilizes Petitioner's proposed level of skill in the art: "at least a four-year degree in physics, biophysics, medical physics, or a related field, and two years of experience in developing and/or applying computed tomography methods. Additional education and professional experience are interchangeable." Pet. at 1 (citations omitted).

**IV. PETITIONER HAS NOT DEMONSTRATED A REASONABLE
LIKELIHOOD OF SUCCESS FOR THE GROUNDS
ADVANCED IN THE PETITION, AND THE PETITION
SHOULD BE DENIED**

The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) so-called secondary considerations where in evidence. *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1537 (Fed. Cir. 1983).

The Board has held that a failure to identify the differences between the claimed subject matter and the prior art is fatal to an obviousness challenge. *See, Apple, Inc. v. Contentguard Holdings, Inc.*, IPR2015-00355, Decision Denying Institution of *Inter Partes* Review, Paper 9 at 9-10 (P.T.A.B. June 26, 2015) (denying institution for failure to identify the differences between the claimed subject matter and the prior art).

In arriving at an obviousness determination, the Board must sufficiently explain and support the conclusions that the prior-art references disclose all the

elements recited in the Challenged Claims and a relevant, skilled artisan not only could have made, but would have been motivated to combine all the prior art references in the way the patent claims and reasonably expected success. *Pers. Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017). That is, even if all the claim elements are found across a number of references, an obviousness determination must consider whether a person of ordinary skill in the art would have the motivation to combine those references. *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1368 (Fed. Cir. 2016); *Los Angeles Biomedical Rsch. Inst. at Harbor-UCLA Med. Ctr. v. Eli Lilly & Co.*, 849 F.3d 1049, 1067 (Fed. Cir. 2017) (vacating and remanding an obviousness determination, in part, because the Board did not make factual finding as to whether there was an apparent reason to combine all three prior art references to achieve the claimed invention and whether a person of skill in the art would have had a reasonable expectation of success from such a combination). This combinability determination, as supported by an articulated motivation to combine, requires a plausible rationale as to why those prior art references would have worked together. *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1335 (Fed. Cir. 2013). Absent some articulated rationale, a “common sense” finding is no different than the conclusory statement “would have been obvious.” *In re Van Os*, 844 F.3d 1359, 1361 (Fed. Cir. 2017). Of additional importance, “knowledge of a problem and motivation to solve it are entirely different

from motivation to combine particular references” *Innogenetics, N.V. v. Abbott Lab’ys*, 512 F.3d 1363, 1373 (Fed. Cir. 2008).

35 U.S.C. § 312(a)(3) requires that an IPR petition must identify, “in writing and with particularity, each claim challenged, the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim.” 35 U.S.C. § 312(a)(4) requires that a “petition filed under section 311 may be considered only if . . . the petition provides such other information as the Director may require by regulation.” 37 C.F.R. § 42.104(b)(4) requires that a petition for inter partes review “must specify where each element of the claim is found in the prior art patents or printed publications relied upon.” General knowledge, such as applicant admitted prior art, expert testimony, common sense, and other evidence, that is not prior art consisting of patents or printed publications may not be used to supply a missing claim limitation. *See* July 31, 2025 Memorandum from Acting Director Stewart Regarding Enforcement and Non-Waiver of 37 C.F.R. § 42.104(b)(4). The Board may deny an IPR petition that fails to comply with Rule 104(b)(4). *Id.*

A. The Petition Fails to Show How the Weese or Wainer References Disclose or Render Obvious “obtaining a plurality of second images of the mobile object using a second imaging technique while obtaining a plurality of second measurements corresponding to movements of the mobile object using a second sensor system, the second sensor system being independent from the second imaging technique” in Claim Limitations [1c], [12d]

Claim 1 recites [1c] “obtaining a plurality of second images of the mobile object using a second imaging technique while obtaining a plurality of second measurements corresponding to movements of the mobile object using a second sensor system, the second sensor system being independent from the second imaging technique.” Claim 12 recites similar limitations [12d] and [12e] as means-plus-function limitations and Petitioner maps the same prior art in the same manner. Petitioner contends that all claims require these claim elements and limitations. Petitioner submits Grounds 1-3 based on the Weese references alone or in combination with other prior art, and Ground 4 based on the Wainer reference.

Regarding Grounds 1-3, Petitioner fails to adequately explain or identify any “second images” in Weese. Petitioner does not actually identify a plurality of second images for several reasons.

First, Petitioner submits that Weese’s “P1” meets the “second images” limitations. However, Petitioner concedes that Weese’s “P1” are “projections” which are raw collected sensor data. Petitioner does not articulate any explanation

for why raw projection data meets the “second images” limitation. While Petitioner acknowledges this shortcoming, Petitioner fails to adequately explain how the “P1” raw data itself constitutes an image and how the “P1” raw data is different from the “second measurements” data recited in the same claim limitation.

Second, to the extent Petitioner pivots to rely on “I0” and “I10,” Petitioner fails to adequately explain how such constructions are “obtained” as required by the claims. Petitioner refers to the creation of “I0” and “I10” throughout the Petition as a process within the Weese system. However, Petitioner does not map Weese’s “I0” and “I10” elements to the “forming an image of the mobile object based on said plurality of first images, said associated plurality of first movement measurements, and said first movement states and on said plurality of second images, said associated plurality of second movement measurements, and said second movement states,” which is recited as claim limitation 1e. Petitioner does not specify how the requirement of “obtaining a plurality of second images . . .” is met while concurrently conceding that Weese’s “I0” and “I10” need to be created or formed through a reconstruction process. Pet. at 56. Petitioner does not allege that “I0” and “I10” are obtained in any way. Against this backdrop, Petitioner fails to identify how any of these elements meet the obtaining second images limitations of the claims.

Regarding Ground 4, Petitioner fails to adequately explain or identify any “second images . . . using a second imaging technique” in Wainer. Petitioner

addresses this limitation in a single sentence with no further explanation. Pet. at 135. Petitioner maps what Wainer's purported "e.g., STET, SPECT" as the claimed "second images . . . using a second imaging technique." Petitioner's mapping is deficient because (1) the imaging technique for STET, SPECT, and SPTCT are the exact same, not *different*, and use the same exact imaging technique disclosed in the Wainer system; and (2) Wainer does not actually disclose obtaining CT images using Wainer's system. To the extent Petitioner contends that "obtaining a plurality of first images of the mobile object using a first imaging technique" does not need to be different from the "obtaining a plurality of second images of the mobile object using a second imaging technique," the claims recite a later claim limitation [1f] requiring "wherein the first imaging technique is different from the second imaging technique." Neither [1c] nor [1f] are met by Petitioner's mapping.

First, Wainer expressly discloses that STET, SPECT and SPTCT are all proposed images using *the same imaging technique*. To demonstrate "a typical STET camera assembly" which is used to take both the SPECT and the proposed SPTCT images, Wainer incorporates by reference to U.S. Patent No. 5,210,421, which describes a SPECT system. Ex. 1007 at 4:30-32. This disclosure describes a single type of system for SPECT imaging technique. The Wainer reference attempts to develop on the incorporated reference by proposing use of the same device using the same imaging technique by taking multiple images at different times (not using

different imaging techniques). *Id.* at 2:30-37. Petitioner does not attempt to distinguish STET, SPECT and SPTCT in its single-line description. Pet. at 135. While the Wainer reference discloses that the same “diagnostic method that uses SPECT and SPTCT simultaneously is known as STET” and that “this method is described in further detail in U.S. Patent 5,210,421, the disclosure of which is incorporated by reference,” review of the incorporated reference shows only a single SPECT system using one single imaging technique. Petitioner’s one line analysis does not consider or intentionally ignores that Wainer is based on a single imaging technique from a single SPECT system, and Petitioner does not attach the reference as an exhibit.

Second, Wainer does not actually disclose obtaining any CT imaging using a CT imaging technique. Wainer discloses a single SPECT system. Ex. 1007 at 4:30-32. Wainer does not disclose that a SPECT system also performs CT imaging. Indeed, SPECT systems are completely different from CT systems. Petitioner does not identify any combined system for performing multiple types of imaging techniques, including SPECT and CT imaging, because such a combined system does not exist in the prior art of record. Wainer does not disclose acquiring or obtaining any type of CT image, as a CT image uses a completely different technology as compared to SPECT imaging. There is no disclosure in Wainer or the incorporated reference for any combined SPECT+CT imaging device that performs

both types of imaging techniques.

Accordingly, Petitioner fails to identify where “obtaining a plurality of second images of the mobile object using a second imaging technique while obtaining a plurality of second measurements corresponding to movements of the mobile object using a second sensor system, the second sensor system being independent from the second imaging technique” is disclosed in either of the Weese and Wainer references.

Accordingly, Petitioner has failed to show a reasonable likelihood of success for Grounds 1-4.

V. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests that the Board deny institution of the Petition in its entirety.

Respectfully submitted,

Dated: September 23, 2025

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CERTIFICATE OF WORD COUNT

The undersigned hereby certifies that the portions of the above-captioned PATENT OWNER'S PRELIMINARY RESPONSE has 2,176 words in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24. This word count was prepared using Microsoft Word for Office 365.

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