

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BMW OF NORTH AMERICA, LLC,
Petitioner,

v.

MICHIGAN MOTOR TECHNOLOGIES LLC,
Patent Owner.

IPR2023-01234
Patent 6,588,260 B1

Before NEIL T. POWELL, BARBARA A. PARVIS, and
STEPHEN E. BELISLE, *Administrative Patent Judges*.

BELISLE, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

BMW of North America, LLC (“Petitioner”)¹ filed a Petition (Paper 3, “Pet.”) requesting an *inter partes* review of claims 1–17 of U.S. Patent No. 6,588,260 B1 (Ex. 1001, “the ’260 patent”). Petitioner identifies itself and Bayerische Motoren Werke AG as real parties in interest. Pet. 1. Michigan Motor Technologies LLC (“Patent Owner”) identifies itself as a real party in interest (Paper 4), and timely filed a Preliminary Response to the Petition (Paper 10, “Prelim. Resp.”; *see* Ex. 3001 (extending due date for filing Preliminary Response)).

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314(b) (2018); 37 C.F.R. § 42.4(a) (2023). We may not institute an *inter partes* review “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). The “reasonable likelihood” standard is “a higher standard than mere notice pleading” but “lower than the ‘preponderance’ standard to prevail in a final written decision.” *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential). When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim. 37 C.F.R. § 42.108(a).

¹ The Petition also identified Mercedes-Benz USA, LLC as a Petitioner and included various Mercedes-Benz entities as real parties in interest. Pet. 1. On November 16, 2023, the Board terminated IPR2023-01234 with respect to Mercedes-Benz USA, LLC due to settlement, and modified the caption of the case to eliminate reference thereto. Paper 9.

Applying those standards, and upon consideration of the information presented in the Petition and Preliminary Response, we determine that Petitioner has demonstrated a reasonable likelihood of success in proving that at least one claim of the '260 patent is unpatentable. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Accordingly, we institute an *inter partes* review as to all Challenged Claims of the '260 patent on all grounds raised in the Petition.

II. BACKGROUND

A. *Related Matters*

The parties identify the following matters as related to the '260 patent (Pet. 1; Paper 4, 2):

Michigan Motor Technologies, LLC v. Bayerische Motoren Werke AG, No. 22-3804 (N.D. Ill.) (“District Court Case”).

Michigan Motor Technologies, LLC v. Mercedes-Benz USA, LLC, No. 22-03957 (N.D. Ill.).

We note that the Board previously instituted *inter partes* review of the '260 patent in *Volkswagen Group of America, Inc. v. Michigan Motor Technologies LLC*, IPR2020-00451, Paper 18 (Aug. 28, 2020). However, that case was terminated prior to trial due to settlement. *Id.*, Paper 35; *see* Pet. 11–12.

B. *The '260 Patent*

The '260 patent is titled “Electronic Throttle Disable Control Test System,” and issued on July 8, 2003, from U.S. Application No. 09/695,165, filed October 24, 2000. Ex. 1001, codes (10), (21), (22), (45), (54).

The '260 patent relates generally to “an electronic throttle disable control test system.” *Id.* at 1:6–8. Figure 1 of the '260 patent is reproduced below.

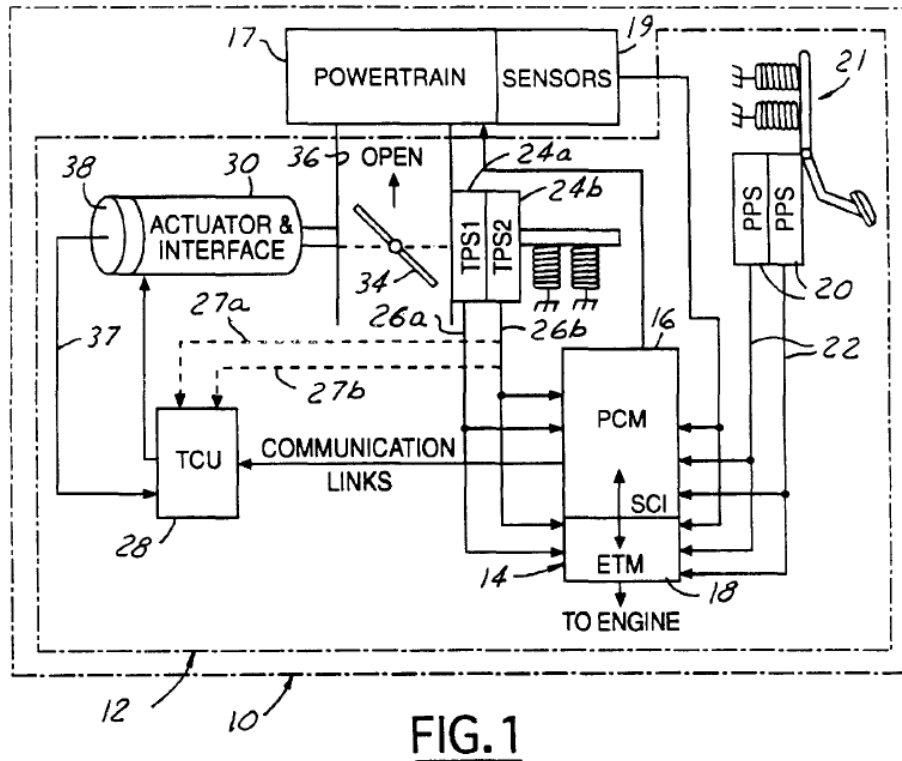


Figure 1 depicts an electronic throttle disable control test system.

Id. at 2:33–35.

Figure 1 shows motor vehicle powertrain system 10 including electronic throttle control system 12, which includes electronic control unit 14, throttle control unit 28, throttle motor 30, and throttle plate 34. Ex. 1001, 2:49–51, 3:20–33. Electronic control unit 14 includes powertrain control module (PCM) 16 including a main processor and electronic throttle monitor (ETM) 18. *Id.* at 2:51–55. The PCM and ETM share sensors 19 and actuators that are associated with powertrain system 17 and control module 16. *Id.* at 2:55–57. Electronic control unit 14 also includes

inputs 26a and 26b for detecting throttle position, such as via first throttle position sensor 24a and redundant second throttle position sensor 24b. *Id.* at 3:4–9.

Notably, although the '260 patent states that “[t]he present invention is illustrated with respect to *an electronic throttle disable control test system*” shown in the “preferred embodiment” of Figure 1 (Ex. 1001, 2:42–55 (emphasis added)), the system as shown in the '260 patent’s Figure 1 is *identical* (or nearly so) to an electronic throttle monitoring system as shown in Figure 1 of prior art U.S. Patent No. 5,673,668, as seen in the side-by-side comparison of the two figures in Table I below.

Table I

FIG. 1

Ex. 1001, Fig. 1

Table I depicts a comparison of Figure 1 of the '260 patent to Figure 1 of U.S. Patent No. 5,673,668.

Compare Ex. 1001, Fig. 1, 2:49–3:26, with Ex. 1018, Fig. 1, 2:65–3:39.

More notably, U.S. Patent No. 5,673,668 does not appear to have been

disclosed to the U.S. Patent and Trademark Office (including the Examiner) during prosecution of the '260 patent. *See* Pet. 4–5; Ex. 1003 ¶¶ 37–38.

A flow chart for an electronic throttle disable control test is shown in the '260 patent's Figure 2, reproduced below.

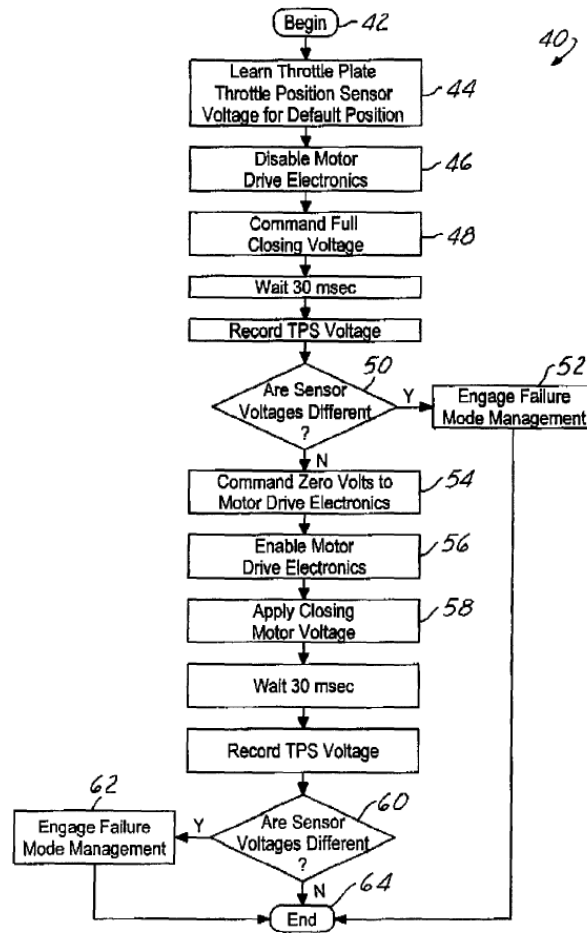


FIG. 2

Figure 2 depicts a flow chart for an electronic throttle disable control test.

Ex. 1001, Fig. 2, 2:36–38. According to the '260 patent:

[C]ontrol test 40 begins with step 42 and immediately proceeds to step 44 where PCM 16 learns the TPS output voltage for the default position of throttle plate 36. (At this point, no motor

voltage is applied so that the plate will have attained the default position.) The sequence then proceeds to step 46.

In step 46, PCM 16 disables the drive electronics responsible for actuating motor 30. The sequence then proceeds to step 48 where PCM 16 commands full closing motor voltage. PCM 16 waits approximately 30 milliseconds and then records the resulting throttle position sensor voltage. The sequence then proceeds to step 50.

In step 50, the throttle position voltage corresponding to the default position of throttle plate 34, determined in step 44, is compared to the throttle position voltage obtained after disabling the drive electronics. If the two voltages are significantly different, it means that the motor drove the plate to a new position and the disable function is not working and then the PCM 16 will engage failure mode management in step 52 and proceed to the end of the sequence 64.

Ex. 1001, 3:44–4:20. According to the '260 patent, “[t]he purpose of the present invention is to establish a method with which *to test the ability to take an action* (which is taken upon failure detection).” *Id.* at 3:27–29 (emphasis added).

C. Illustrative Claim

The '260 patent includes 17 claims, all of which are challenged. Claims 1, 8, and 11 are the independent claims. Claim 1 is illustrative and reproduced below with labels, such as “[1.A],” added to limitations in the same manner as used by the parties.

1. [1.P] An electronic throttle control apparatus for testing integrity of a motor drive electronics disable feature comprising:

[1.A] a PCM having drive electronics for controlling a motor coupled to an electronic throttle plate, [1.B] said PCM having control logic to disable said drive electronics and return said electronic throttle plate to a default position, [1.C] determine a default throttle position sensor (TPS) output voltage corresponding to said default position,

[1.D] command a full closing motor voltage, [1.E] compare a full closing TPS output voltage to said default TPS output voltage, and [1.F] engage failure mode management when said full closing TPS output voltage and said default TPS output voltage are significantly different from each other.

Ex. 1001, 4:45–59.

D. Evidence of Record

Petitioner relies on the following patent evidence.

Name	Patent Document	Exhibit
McQueen	U.S. Patent No. 5,303,581, issued April 19, 1994	1005
Terazawa	U.S. Patent No. 5,048,485, issued September 17, 1991	1006

Pet. 12–13.

Petitioner relies on the following non-patent evidence.

Name	Document	Exhibit
Husselbee	William L. Husselbee, <i>Automotive Computer Control Systems: Fundamentals and Service</i> , published in 1988 (<i>see</i> Ex. 1009 ¶ 45)	1008
Mauser	Hans Mauser, <i>Electronic Throttle Control – A Dependability Case Study</i> , published in 1999	1011

Pet. 12–13.

Petitioner also relies upon the Declarations of Gerald J. Micklow, Ph.D. (Ex. 1003) and Sylvia D. Hall-Ellis, Ph.D. (Ex. 1009).

At this stage of the proceeding, Patent Owner does not rely upon a declarant of its own.

E. Asserted Challenges to Patentability

Petitioner challenges the patentability of claims 1–17 of the '260 patent on the following bases. Pet. 13.

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–5, 8	103 ²	McQueen, Terazawa, Husselbee
11–13	103	McQueen, Terazawa
14, 15	103	McQueen, Terazawa, Husselbee
6, 7, 9, 10, 16, 17	103	McQueen, Terazawa, Mauser, Husselbee

III. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 314(a)

A. Overview

Patent Owner requests that we exercise our discretion under 35 U.S.C. § 314(a) to deny the Petition under *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). Prelim. Resp. 1–5; *see Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”). For the reasons that follow, we decline to exercise our discretion to deny *inter partes* review.

In assessing whether to exercise such discretion, the Board weighs the following factors:

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the '260 patent was filed before March 16, 2013, the effective date of the relevant amendment, the pre-AIA version of § 103 applies.

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board's exercise of discretion, including the merits.

Fintiv at 6. Recognizing that “there is some overlap among these factors” and that “[s]ome facts may be relevant to more than one factor,” the Board “takes a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.*

We address each *Fintiv* factor below.

B. Factor 1 (Stay of Parallel Proceeding)

“A district court stay of the litigation pending resolution of the PTAB trial allays concerns about inefficiency and duplication of efforts. This fact has strongly weighed against exercising the authority to deny institution under *NHK*.” *Id.* (citing *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (PTAB Sept. 12, 2018) (precedential)).

Petitioner submits that it “intend[s] to promptly seek a stay of the related district court action[] if the Board institutes this proceeding.”

Pet. 83. At this juncture, however, the District Court Case remains ongoing. Absent specific evidence, the Board, typically, “will not attempt to predict how the district court in the related district court litigation will proceed

because the court may determine whether or not to stay any individual case . . . based on a variety of circumstances and facts beyond our control and to which the Board is not privy.” *Sand Revolution II LLC v. Cont’l Intermodal Grp.*, IPR2019-01393, Paper 24, 7 (PTAB June 16, 2020) (informative, designated July 13, 2020). We decline to speculate here, and find this factor does not weigh for or against exercising discretion to deny *inter partes* review in this case.

C. Factor 2 (Proximity of Court’s Trial Date)

“If the court’s trial date is *earlier than* the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution under *NHK*.” *Fintiv* at 9 (emphasis added). That is not the case here. According to Petitioner, in the District Court Case, “a schedule has not yet been set, and thus the court[] [has] not yet set a *Markman* hearing or trial date.” Pet. 84. Petitioner also submits that “the Federal Judiciary Report for the period ending March 31, 2023, states that the Northern District of Illinois civil trials have taken approximately 48.9³ months from filing to trial, which would place the trial[] in the corresponding litigation[] in January 2027.” Pet. 84 (citing Ex. 1020, 47). In this case, a Final Written Decision would be expected to issue by February 2025, about two years before the court’s statistical trial date. Because there is no scheduled trial date in the District Court Case, and the record evidence suggests that the court’s statistical trial date would occur

³ We do not find the number 48.9 anywhere on page 47 of Exhibit 1020. However, in this page for the period ending March 31, 2023, the report states that the median time from filing to trial in a civil case is 53.5 months. Ex. 1020, 47.

many months after the projected Board’s deadline to issue a Final Written Decision, we find this factor weighs against exercising discretion to deny *inter partes* review.

D. Factor 3 (Investment in Parallel Proceeding)

Patent Owner states that in the District Court Case the court invalidated all claims in the ’260 patent under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Prelim. Resp. 1, 3. Patent Owner then alleges, for reasons left unstated, that this weighs in favor of our exercising discretion to deny *inter partes* review “at least under *Fintiv* Factors 3, 4 and 6.” *Id.* at 5. We disagree given the posture of this case.

Patent Owner has not stated that the district court’s Section 101 determination is final and unappealable. According to the docket for the District Court Case, the court’s decision here is in the context of Petitioner’s motion to dismiss Patent Owner’s Second Amended Complaint for failure to state a claim under Federal Rule of Civil Procedure 12(b)(6), and the remainder of the case is ongoing. According to the same docket, on September 8, 2023, Patent Owner filed a Third Amended Complaint against Petitioner, making clear that the District Court Case remains ongoing, and on November 14, 2023, a minute entry from the court states, “[t]he Court holds off entering a discovery schedule” given a pending motion to dismiss that complaint. Patent Owner argues that, “given that the District Court has already invalidated the patent, [Patent Owner] offered a covenant not to sue [Petitioner] on the ’260 Patent in return for dismissing this IPR Petition.” Prelim. Resp. 4. Patent Owner does not explain the import of such an unaccepted offer of a covenant not to sue in a *Fintiv* analysis, but it does

highlight that Patent Owner must *not* consider the district court's Section 101 determination to be final and unappealable at this juncture.

Although the parties have some investment in district court in disputing whether the claims in the '260 patent are directed to patent-ineligible subject matter (which we do not address in an *inter partes* review), Patent Owner neither argues nor presents any evidence of substantial investment in disputing patentability of such claims *over prior art*. See *generally* Prelim. Resp. 1–5. To the contrary, as discussed above, Petitioner submits that “the court[] [has] not yet set a *Markman* hearing” (Pet. 84), and the posture of the District Court Case is still at initial pleadings, with Patent Owner recently filing its Third Amended Complaint. Thus, considering the type of investment and the overall progress to date, we do not have concerns that “instituting would lead to duplicative costs.” *Fintiv* at 9–10 (emphasis added).

In sum, there has been some investment in the District Court Case so far, but not in disputing patentability of the challenged claims *over prior art*. Thus, in our overall assessment, we find this factor weighs against exercising discretion to deny *inter partes* review.

E. Factor 4 (Overlap with Issues Raised in Parallel Proceeding)

“[I]f the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding, this fact has favored denial.” *Fintiv* at 12.

In this case, Petitioner “stipulate[s] that, if the Board institutes *inter partes* review, Petitioner[] will not seek resolution in the District Court of any ground of invalidity for the '260 Patent that utilizes the same combination of prior art reference relied upon in the grounds of the instant

petition.” Pet. 84. Although Petitioner has not stipulated to forgo relying on all the patents and prior art publications that could have reasonably been raised in the *inter partes* review (see *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (precedential as to § II.A.)), Petitioner’s stipulation will likely contribute to streamlining the issues presented in the District Court Case as to the ’260 patent. See *Sand Revolution II*, IPR2019-01393, Paper 24 at 11–12 (similar stipulation “mitigates to some degree the concerns of duplicative efforts between the district court and the Board, as well as concerns of potentially conflicting decisions”).

We are persuaded that the stipulation here is sufficient to “mitigate[] to some degree” potential⁴ overlap caused by Petitioner’s reliance on McQueen, Terazawa, Husselbee, and Mauser in this case. Accordingly, we find this factor weighs against exercising discretion to deny *inter partes* review.

F. Factor 5 (Commonality of Parties in Parallel Proceeding)

There is no dispute that Petitioner is a party to the District Court Case. Pet. 1; Paper 4, 2. However, because a Final Written Decision is likely to issue before the district court trial, we weigh this factor against exercising discretion to deny *inter partes* review. See *Huawei Tech. Co. v. WSOU Inv., LLC*, IPR2021-00225, Paper 11 at 14 (PTAB June 14, 2021) (“[T]his factor favors denial if trial precedes the Board’s Final Written Decision and favors institution if the opposite is true.” (internal quotation marks omitted)); *Google LLC v. Parus Holdings, Inc.*, IPR2020-00846,

⁴ Patent Owner does not identify any overlap between prior art asserted in this case and prior art asserted in the District Court Case.

Paper 9 at 21 (PTAB Oct. 21, 2020) (“Here, . . . Petitioner is the defendant in the parallel proceeding. This fact could weigh either in favor of, or against, exercising discretion to deny institution, depending on which tribunal was likely to address the challenged patent first.”).

G. Factor 6 (Other Circumstances)

When considering whether to exercise discretion to deny a petition, the Board assesses “all the relevant circumstances in the case,” including the Petition’s merits. *Fintiv* at 14–16.

Strong merits typically favor granting institution. *Fintiv* at 14–16. Weak merits favor denial. *Id.* In this case, Petitioner has shown a reasonable likelihood of prevailing as to the unpatentability of at least one of the Challenged Claims. *Infra* § IV. In addition, as noted above, the Board previously instituted *inter partes* review of the ’260 patent in *Volkswagen Group of America, Inc. v. Michigan Motor Technologies LLC*, IPR2020-00451, Paper 18 (Aug. 28, 2020), but that case was terminated prior to trial due to settlement (*id.*, Paper 35; *see* Pet. 11–12). We find our assessment of and history with the merits in this case weigh against exercising discretion to deny *inter partes* review.

Patent Owner argues we should exercise our discretion to deny *inter partes* review because “the ’260 [patent] expired over two years ago.” Prelim. Resp. 1. But Patent Owner does not explain why. Indeed, despite expiring “over two years ago,” Patent Owner recently filed a Third Amended Complaint against Petitioner that maintains a count for infringement of the ’260 patent, although at this juncture such count is marked as dismissed by the district court for the reasons explained above. We note that Patent Owner has not stated, for example, whether it is

precluded from seeking up to six years of pre-suit damages for infringement of the '260 patent (whether expired or not).

Patent Owner argues we should exercise our discretion to deny *inter partes* review because the '260 patent allegedly is unenforceable against Petitioner. Prelim. Resp. 1–2. But Patent Owner does not explain why, even if the '260 patent were unenforceable against Petitioner, this precludes Petitioner from requesting *inter partes* review of the '260 patent. *See* 35 U.S.C. § 311(a) (“[A] person who is not the owner of a patent may file with the Office a petition to institute an inter partes review of the patent.”).

Patent Owner argues we should exercise our discretion to deny *inter partes* review because “[a] settlement and dismissal of the related [District Court Case] is expected long before a Final Written Decision is expected, in February 2025.” Prelim. Resp. 4–5. But Patent Owner does not explain why this mere unilateral “expectation,” particularly one not validated by Petitioner, should influence whether to exercise our discretion to deny *inter partes* review, especially where Petitioner may be time barred from seeking such review should this “expectation” not come to fruition.

In our overall assessment, we find these other circumstances of Factor 6 weigh against exercising discretion to deny *inter partes* review.

H. Holistic Assessment of Factors

We consider the above factors and take “a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Fintiv* at 6. Thus, based on our assessment of the *Fintiv* factors as a whole, we decline to exercise our discretion under 35 U.S.C. § 314(a) to deny *inter partes* review.

IV. PATENTABILITY

A. *Applicable Law*

Petitioner challenges the patentability of claims 1–17 of the '260 patent on grounds that the claims would have been obvious under 35 U.S.C. § 103 in light of various references, namely McQueen, Terazawa, Husselbee, and Mauser. “In an [*inter partes* review], the petitioner has the burden from the onset to show *with particularity* why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)) (emphasis added). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review).

A claim is unpatentable under 35 U.S.C. § 103 if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). 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) when of record, objective evidence of obviousness or non-obviousness, i.e., secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Secondary considerations may

include the following: “commercial success, long felt but unsolved needs, failure of others, etc.”⁵ *Id.* The totality of the evidence submitted may show that the challenged claims would not have been obvious to one of ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). When evaluating a combination of teachings, we must also “determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

The Supreme Court has made clear that we apply “an expansive and flexible approach” to the question of obviousness. *Id.* at 415. Whether a patent claiming a combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. To reach this conclusion, however, requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim under examination. *Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention. *Id.* “To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the

⁵ At this stage of the proceeding, Patent Owner has not presented objective evidence of non-obviousness.

legal conclusion of obviousness.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016).

We analyze the challenges presented in the Petition in accordance with the above-stated principles.

B. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art, at the time of the invention of the ’260 patent, “would have had a B.S. degree in Electrical Engineering or Mechanical Engineering (or equivalent), as well as at least 2–4 years of academic or industry experience in the relevant field of throttle control systems.” Pet. 14 (citing Ex. 1003 ¶¶ 68–73).

Patent Owner does not present an alternative definition at this stage of the proceeding. *See generally* Prelim. Resp.

In determining the level of ordinary skill in the art, various factors may be considered, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted). The level of ordinary skill in the art also may be reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

Neither party argues, at least at this stage of the proceeding, that the outcome of this case would differ based on our adoption of any particular definition of the level of ordinary skill in the art. Considering the subject matter of the ’260 patent, the background technical field, the prior art, and Petitioner’s proposed and unopposed definition of the skilled artisan,

we apply the level of skill set forth above, which is consistent with the testimony of Dr. Micklow (Ex. 1003 ¶¶ 68–73).

C. Claim Construction

We construe claims “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

In this context, claim terms “are generally given their ordinary and customary meaning” as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *see CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (There is “a ‘heavy presumption’ that a claim term carries its ordinary and customary meaning.”). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17). Extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317.

Only those claim terms that are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017

(Fed. Cir. 2017) (stating that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

Petitioner submits that the claim limitations in the ’260 patent should be given their ordinary and customary meaning. Pet. 14–15. At this stage of the proceeding, Patent Owner does not take any position on claim construction. *See generally* Prelim. Resp. In determining that Petitioner has demonstrated a reasonable likelihood of establishing unpatentability of at least one challenged claim, we need not and do not construe expressly any claim terms.

Nevertheless, we invite the parties, at the appropriate stages in this case, to address the claim construction issue of whether the functions or steps recited in independent claims 1, 8, and 11 *must be* performed in the order in which they are written. *See Altiris Inc. v. Symantec Corp.*, 318 F.3d 1363, 1371 (Fed. Cir. 2003) (Although the specification discussed only a single embodiment, the court held that it was improper to read a specific order of steps into method claims where, as a matter of logic or grammar, the language of the method claims did not impose a specific order on the performance of the method steps, and the specification did not directly or implicitly require a particular order.).

D. Alleged Obviousness of Claims 1–5 and 8 over the Combination of McQueen, Terazawa, and Husselbee

Petitioner contends claims 1–5 and 8 would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of McQueen (Ex. 1005), Terazawa (Ex. 1006), and Husselbee (Ex. 1008). Pet. 13, 15–71.

Patent Owner, at this stage of the proceeding, has not disputed Petitioner's contentions. *See generally* Prelim. Resp. Based on our review of the Petition and Preliminary Response, we determine that Petitioner has established a reasonable likelihood that it would prevail in showing that claims 1–5 and 8 would have been unpatentable as obvious over the combination of McQueen and Terazawa, in view of the skilled artisan's knowledge demonstrated by Husselbee, as discussed below.

1. Overview of McQueen (Ex. 1005)

McQueen generally is directed to “a method of and an apparatus for detecting a fault in a return system, for instance in a closing system for a throttle of an internal combustion engine,” as shown, for example, in Figure 2, reproduced below. Ex. 1005, 1:5–8, Fig. 2.

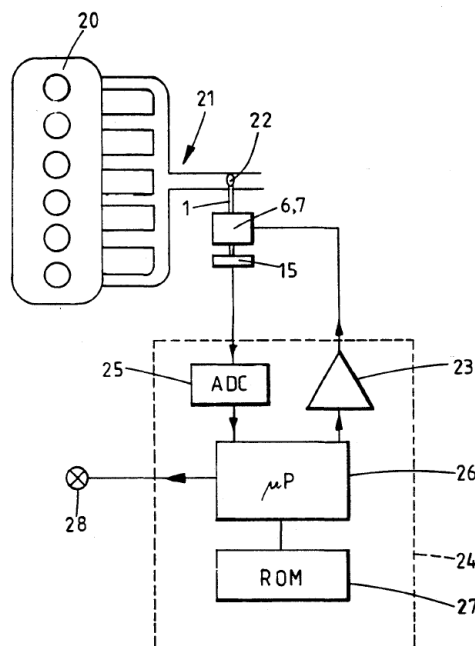


Figure 2 depicts a block diagram of a throttle control system including a closing fault detection apparatus.

Id. at 2:66–68, Fig. 2.

Figure 2 shows internal combustion engine 20 provided with induction system 21 including throttle 22 attached to shaft 1, motor hub 6, and rotary position sensor 15, where throttle 22 controls the supply of air through induction system 21 and hence the output demand of engine 20. Ex. 1005, 3:3–37. Engine 20 is controlled, in part, by electronic control unit 24, which includes H bridge driver 23, microprocessor (μ P) 26 connected to driver 23, analogue/digital converter (ADC) 25 connected to microprocessor 26, read only memory (ROM) 27, and indicator 28 for providing an indication of a fault in the throttle closing system. *Id.* at 3:38–57. Microprocessor 26, through driver 23, supplies a variable duty cycle pulse output suitable for driving motor 6 to rotate throttle 22. *Id.* at 3:42–45. Operation of microprocessor 26 is controlled by a program or logic stored in ROM 27. *Id.* at 3:48–49.

McQueen's throttle closure fault determining system operates in accordance with the program illustrated by the flow diagram in Figure 3, reproduced below. Ex. 1005, 3:58–60, Fig. 3.

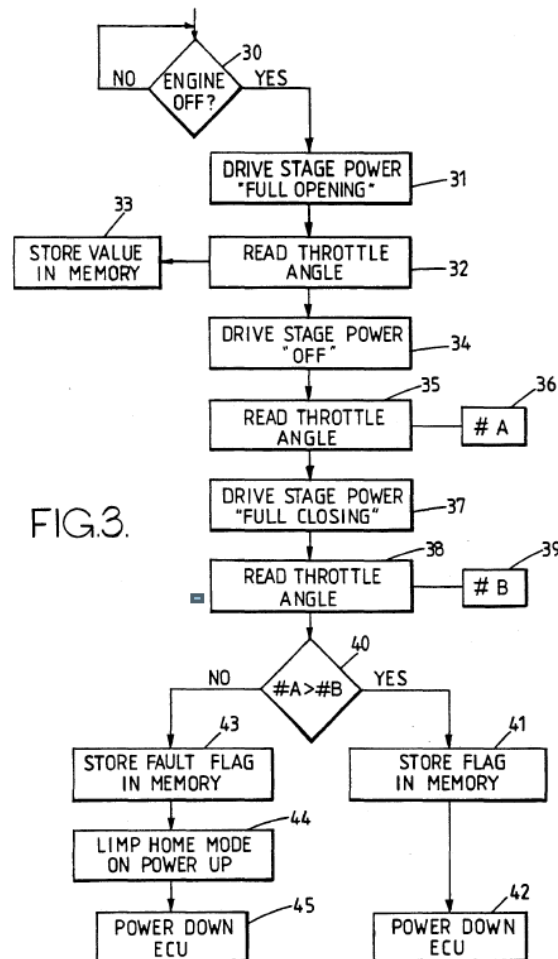


Figure 3 depicts a flow diagram illustrating operation of the apparatus of Figure 2 above.

Ex. 1005, 3:1–2, Fig. 3.

According to McQueen, referring to Figure 3 above, at 30, a periodic check is made on whether engine 20 is operating. If the engine is off, microprocessor 26 causes, at 31, driver 23 to supply full opening power to motor 6 so as to open throttle 22 fully. At 32, the throttle angle indicated by sensor 15 is read and is stored at 33 for system calibration and checking purposes. At 34, the driver 23 is switched off. In the absence of a fault, return spring 4 closes throttle 22 such that cam 2 abuts against stop 3, and the throttle angle is read at 35 and stored as “A” at 36. At 37,

microprocessor 26 causes driver 23 to supply full closing power to motor 6, which acts on the resilience of shaft 1 such that sensor 15 detects a position which is “more closed” than the position detected when throttle 22 was closed by spring 4 without the closing torque supplied by motor 6. The throttle angle is again read at 38 and stored as variable “B” at 39. Motor 6 can then be deactivated by switching off the driver 23. At 40, the variables A and B are compared. If A is greater than B, a flag is stored in non-volatile memory at 41 indicating that both throttle closing systems are functioning correctly and electronic control unit 24 is powered down at 42 to await further operation of the engine. In the event of a fault in driver 23, such as one or more failed transistors, or in motor 6, step 40 detects that A is not greater than B and a step 43 stores a fault flag in memory. At 44, electronic control unit 24 is set such that, on being powered up again for subsequent operation of engine 20, the engine may only operate in a limp home mode. *See* Ex. 1005, 3:60–4:34 (discussing Figure 3).

2. Overview of Terazawa (Ex. 1006)

Terazawa generally is directed to a “throttle control method for an internal combustion engine wherein a motor is connected through a clutch mechanism to a throttle valve which is constantly biased toward a closed position by a return spring,” as shown, for example, in Figure 2, reproduced below. Ex. 1006, Abstract, Fig. 2.

Fig. 2

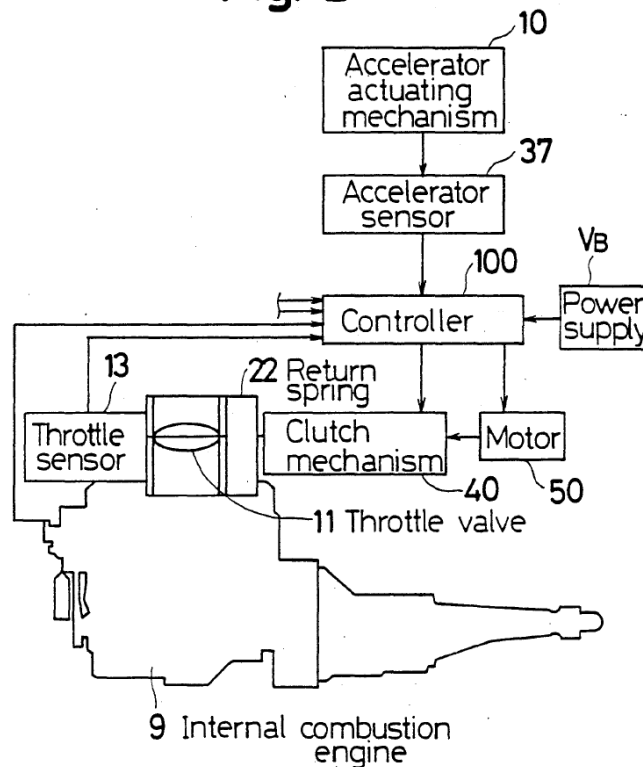


Figure 2 depicts a block diagram of a throttle control apparatus employed to carry out a throttle control method.

Ex. 1006, 3:17–20, Fig. 2.

As shown in Figure 2 above, Terazawa discloses throttle valve 11 attached to internal combustion engine 9 and biased in a closed direction by return spring 22. Ex. 1006, 3:53–56. Motor 50 is connected to throttle valve 11 through electromagnetic clutch mechanism 40, with throttle valve 11 provided with throttle sensor 13, which has a detector for detecting the degree of opening of throttle valve 11. *Id.* at 3:56–59, 4:13–14. Electromagnetic clutch mechanism 40 and motor 50 are operated under the control of controller 100, which is connected to power supply V_B . *Id.* at 3:65–68.

Terazawa discloses various throttle control apparatus “system checks” (see Ex. 1006, 11:24–15:21), including a system check in which motor 50 is supplied with a predetermined holding current so that throttle valve 11 is held at a predetermined opening position, and electromagnetic clutch mechanism 40 is turned off. Ex. 1006, 12:66–13:2. If return spring 22 and electromagnetic clutch mechanism 40 are normal, throttle valve 11 returns to the idling position, but if throttle valve 11 is left held at the predetermined opening position, it is considered that return spring 22 or electromagnetic clutch mechanism 40 has a problem. *Id.* at 13:2–7.

We further discuss below the disclosures of McQueen, Terazawa, and Husselbee (which Petitioner relies upon to demonstrate the skilled artisan’s knowledge) in connection with Petitioner’s arguments.

3. *Analysis*

a) *Independent Claim 1*

Petitioner contends that the combination of McQueen and Terazawa, in view of the skilled artisan’s knowledge demonstrated by Husselbee, would have rendered obvious independent claim 1. Pet. 15–61.

(1) [1.P] “An electronic throttle control apparatus for testing integrity of a motor drive electronics disable feature comprising”

Neither party at this stage of the proceeding argues that the preamble of claim 1 is limiting. See Pet. 42–43; see generally Prelim. Resp. Regardless, as discussed below, on the present record and for purposes of institution, we find that Petitioner persuasively shows that the combination of McQueen and Terazawa teaches or at least fairly suggests an electronic

throttle control apparatus for testing integrity of a motor drive electronics disable feature *as defined in claim 1*. See Pet. 42–43.

(2) [1.A] “a PCM having drive electronics for controlling a motor coupled to an electronic throttle plate”

McQueen discloses electronic control unit 24 having H bridge driver 23 for controlling motor 6 coupled to throttle plate 22. Ex. 1005, 3:3–47, Fig. 2. Petitioner contends such description discloses “a [powertrain control module or] PCM having drive electronics for controlling a motor coupled to an electronic throttle plate,” as recited in claim 1. Pet. 43–45 (citing, *inter alia*, Ex. 1003 ¶¶ 121–123).

(3) [1.B] “said PCM having control logic to disable said drive electronics and return said electronic throttle plate to a default position”

McQueen discloses that electronic control unit 24 includes microprocessor 26 and a software program or logic stored in ROM 27 to disable (and enable) H bridge driver 23 and return throttle plate 22 to a default position, e.g., to throttle angle A. Ex. 1005, 3:38–4:7, Figs. 2–3. In particular, with reference to McQueen’s Figure 3 discussed above, McQueen discloses:

At 34, [with engine 20 off,] *the driver 23 is switched off. In the absence of a fault*, the return spring 4 closes the throttle such that the cam 2 abuts against the stop 3. After a suitable time interval to allow the throttle to close under the action of the spring 4, the throttle angle is read at 35 and stored as “A” at 36.

Id. at 3:68–4:5 (emphases added); see Fig. 3 (Step 34: “DRIVE STAGE POWER ‘OFF’”; Step 35: “READ THROTTLE ANGLE”). Petitioner contends such description discloses “said PCM having control logic to disable said drive electronics and return said electronic throttle plate to a

default position,” as recited in claim 1. Pet. 45–47 (citing, *inter alia*, Ex. 1003 ¶¶ 125–128).

(4) [1.C] “[said PCM having control logic to . . .] determine a default throttle position sensor (TPS) output voltage corresponding to said default position”

McQueen discloses:

The motor hub 6 is connected via a shaft 14 to *a rotary position sensor 15*. The sensor 15 comprises *a rotary variable potentiometer* having a resistive track and a slider which contacts the track at a position determined by the rotary position of the shaft 14. A fixed stable voltage is applied across the resistive track so that *the voltage at the slider represents the rotary or angular position of the shaft 14* and hence of the motor hub 6.

Ex. 1005, 3:24–32 (emphases added). McQueen also discloses “[t]he output of the position sensor 15 is connected to an analogue/digital converter (ADC) 25 whose output is connected to a microprocessor (μP) 26.” *Id.* at 3:39–42. As discussed above, McQueen further discloses that at step 34, with engine 20 off, driver 23 is switched off, and in the absence of a fault, throttle 22 returns to its default position and the throttle angle is read at step 35 and stored as “A” at step 36. *Id.* at 3:68–4:5. Petitioner contends such description discloses “[said PCM having control logic to . . .] determine a default throttle position sensor (TPS) output voltage corresponding to said default position,” as recited in claim 1. Pet. 48–50 (citing, *inter alia*, Ex. 1003 ¶¶ 129–134).

Petitioner also contends that the skilled artisan would have known, as evidenced by Husselbee, “that potentiometer throttle position sensors, like McQueen’s throttle position sensor 15, output a voltage signal corresponding to the throttle valve angle (*e.g.*, 5V when the throttle plate is

fully open and 0.5V when the throttle plate is closed).” Pet. 50 (citing Ex. 1008, 60 (“Typical potentiometer-type sensors in use in engine control systems are the throttle position sensor (TPS), vane airflow sensor, and EGR valve position sensor.”; “As the wiper arm moves along the resistance material in response to changes in throttle valve angle, the voltage at the signal connector will increase or decrease.”); Ex. 1003 ¶ 135); *see* Pet. 50–51 (providing sufficient reasons why it would have been obvious to the skilled artisan to determine a default TPS output voltage corresponding to a default position (citing, *inter alia*, Ex. 1003 ¶¶ 136–138)).

(5) [1.D] “[said PCM having control logic to . . .] command a full closing motor voltage”

McQueen discloses that “microprocessor 26 causes the driver 23 to supply full closing power to the motor 6,” which closes throttle 22. Ex. 1005, 4:6–7. As discussed above, McQueen also discloses disabling (and enabling) driver 23 (i.e., switching driver 23 “on” and “off”). *Id.* at 3:68 (“At 34, the driver 23 is switched off.”; “The motor 6, 7 can then be deactivated by switching off the driver 23.”). Petitioner contends such description discloses a PCM having control logic to command driver 23 to supply full closing motor voltage. Pet. 51 (citing, *inter alia*, Ex. 1003 ¶ 139).

We note that neither party has construed at this stage of the proceeding whether independent claim 1 (or independent claims 8 or 11) requires the “PCM [to have] control logic to” not only “command a full closing motor voltage” as recited in claim 1, but although not expressly recited therein, *to additionally require* commanding a full closing motor voltage *while the “drive electronics” are disabled*. Regardless, even if

McQueen were silent on whether the full closing motor voltage continues to be commanded by the microprocessor 26 after the driver 23 has been disabled, Petitioner turns alternatively to Terazawa's disclosure of "testing whether an electromechanical clutch and return spring in a throttle control system are functioning properly" to show this feature. Pet. 52–57.

As discussed above, Terazawa discloses a throttle control system check in which motor 50 is supplied with a predetermined holding current so that throttle valve 11 is held at a predetermined opening position, *and electromagnetic clutch mechanism 40 is turned off*. Ex. 1006, 12:66–13:2. If return spring 22 and electromagnetic clutch mechanism 40 are normal, throttle valve 11 returns to the idling position, but if throttle valve 11 is left held at the predetermined opening position, it is considered that return spring 22 *or electromagnetic clutch mechanism 40 has a problem*. *Id.* at 13:2–7. Petitioner argues that "Terazawa's method of disabling the clutch to check whether the throttle plate 11 returned to the idling or initial position due to the return spring is analogous to disabling the driver 23 of McQueen to check whether the throttle plate 22 returned to position (A) due to the return spring 4." Pet. 54–55 (citing, *inter alia*, Ex. 1003 ¶¶ 144–146). Petitioner also argues "it would have been obvious to [the skilled artisan] to combine Terazawa's technique [of testing the functionality of the clutch and return spring] with McQueen's [testing technique] by disabling McQueen's driver 23 while continuing to command the 'full closing' power *to test whether the driver 23 is actually off* and that the return spring 4 brings the throttle back to throttle angle A." Pet. 55 (emphasis added); *see* Ex. 1003 ¶ 147. Petitioner further argues that the skilled artisan "would have been motivated to combine Terazawa's technique for testing throttle components

with McQueen in view of McQueen's express desire 'to provide an arrangement which is capable of detecting a latent fault or failure in a return system, such as a throttle closing system.'" Pet. 56–57 (citing Ex. 1005, 2:28–31; Ex. 1003 ¶ 148); *see* Pet. 27–42 (providing additional sufficient reasons to combine teachings of McQueen, Terazawa, and Husselbee).

(6) [1.E] "[said PCM having control logic to . . .] compare a full closing TPS output voltage to said default TPS output voltage"

McQueen discloses microprocessor 26 having a software program or logic stored in ROM 27 to compare a "full closing" throttle angle "B" to a default throttle angle "A." Ex. 1005, Fig. 3, 4:1–5 ("After a suitable time interval to allow the throttle to close under the action of the spring 4, the throttle angle is read at 35 and stored as 'A' at 36."), 4:6–17 ("[M]icro-processor 26 causes the driver 23 to supply full closing power to the motor 6 . . . [and] [t]he throttle angle is again read at 38 and stored as variable 'B' at 39."), 4:18 ("At 40, the variables A and B are compared."). Petitioner contends "McQueen explicitly discloses that the electronic control unit 24 includes control logic . . . to compare throttle position variables based on outputs from the potentiometer throttle position sensor 15." Pet. 57. As noted above, Petitioner also contends that the skilled artisan would have known, as evidenced by Husselbee, that the units compared in McQueen would be output voltages from the rotary variable potentiometer in McQueen's sensor 15. Pet. 57 (citing Ex. 1007, 60; Ex. 1003 ¶ 152).

Similarly, Petitioner contends that it also would have been obvious to the skilled artisan for McQueen's electronic control unit 24, as modified in view of Terazawa and the skilled artisan's knowledge as evidenced by Husselbee (discussed above), "to compare: (1) the voltage output from the

throttle position sensor (TPS) 15 when commanding the full closing voltage *and the driver 23 is disabled*, with (2) the voltage output from the throttle position sensor (TPS) 15 corresponding to throttle angle A stored in memory” (emphasis added), because, for example, “[d]oing so would have simply required McQueen’s electronic control unit 24, which is already configured to compare throttle positions, to use existing voltages output from the throttle position sensor (TPS) 15 in the comparison.” Pet. 57–58 (citing, *inter alia*, Ex. 1003 ¶¶ 153–155); Ex. 1003 ¶ 154.

(7) [1.F] “[said PCM having control logic to . . .] engage failure mode management when said full closing TPS output voltage and said default TPS output voltage are significantly different from each other”

McQueen discloses microprocessor 26 having a software program or logic stored in ROM 27 to detect differences between “full closing” throttle angle “B” and default throttle angle “A” (*see* Ex. 1005, 4:29–31 (“[S]tep 40 detects that A is not greater than B and a step 43 stores a fault flag in memory.”)), and where “A” and not greater than “B,” to illuminate warning light 28 and engage a “limp home mode” so that “electronic control unit 24 may be prevented from opening the throttle 22 beyond a predetermined angle corresponding to a limited relatively low engine output” (Ex. 1005, 4:31–49). Petitioner contends “McQueen specifically discloses that the electronic control unit 24, having microprocessor 26 and software stored in ROM 27, engages the limp home mode and illuminates a warning light 28 to alert a driver to a failure of the system based a comparison of the throttle positions (*e.g.*, A and B).” Pet. 58.

In the context discussed above where McQueen’s electronic control unit 24 is modified in view of Terazawa to determine the output voltage from throttle position sensor 15 while commanding full closing voltage *with driver 23 disabled*, Petitioner contends that the skilled artisan would have understood that if this output voltage were different (or significantly different) from the output voltage corresponding to throttle angle “A,” then either driver 23 failed to turn off or return spring 4 has failed. Pet. 58–60 (citing, *inter alia*, Ex. 1003 ¶¶ 157–159). Petitioner further contends that “[e]ither of these failures would create the undesirable condition that McQueen specifically seeks to avoid,” and thus the skilled artisan would have understood such a condition to likewise trigger McQueen’s limp home mode (i.e., engage failure mode management). Pet. 59–61 (citing, *inter alia*, Ex. 1003 ¶¶ 159–161).

(8) Conclusion for Independent Claim 1

For the foregoing reasons, and the reasons stated in the Petition (Pet. 15–61), we determine that Petitioner has established a reasonable likelihood that it would prevail in showing that independent claim 1 would have been unpatentable as obvious over the combined teachings of McQueen and Terazawa, in view of the skilled artisan’s knowledge demonstrated by Husselbee.

b) Independent Claim 8 and Dependent Claims 2–5

Petitioner contends claims 2–5 and 8 also would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of McQueen, Terazawa, and Husselbee. Pet. 61–71. Claim 8 is an independent claim reciting structure commensurate in scope with structure recited in independent claim 1, and claims 2–5 depend directly or indirectly from

independent claim 1. The Petition provides a detailed assessment of these claims, with references to the Petition's analysis of claim 1, disclosures in McQueen, Terazawa, and Husselbee, and the declaration testimony of Dr. Micklow. Pet. 61–71. Patent Owner does not contend otherwise at this stage of the proceeding. As discussed above, we are persuaded that the cited evidence sufficiently supports Petitioner's contention that independent claim 1 would have been unpatentable as obvious over the combined teachings of McQueen and Terazawa, in view of the skilled artisan's knowledge demonstrated by Husselbee. For the reasons set forth in the Petition (Pet. 61–71), we also are persuaded that the current record sufficiently supports Petitioner's challenges to independent claim 8 and dependent claims 2–5 as obvious over these combined teachings for purposes of institution.

c) Summary – Combination of McQueen, Terazawa, and Husselbee

At this stage of the proceeding and based on the record before us, we are persuaded that Petitioner's cited evidence provides sufficient rational reasons for purposes of institution to combine the teachings of McQueen and Terazawa, in view of the skilled artisan's knowledge demonstrated by Husselbee, with a reasonable expectation of success, and sufficiently supports Petitioner's contentions that claims 1–5 and 8 would have been unpatentable as obvious over this combination. Accordingly, we determine that Petitioner has established a reasonable likelihood that it would prevail in showing that claims 1–5 and 8 would have been unpatentable as obvious over the combined teachings of McQueen and Terazawa, in view of the skilled artisan's knowledge demonstrated by Husselbee.

E. Alleged Obviousness of (i) Claims 11–13 over the Combination of McQueen and Terazawa, (ii) Claims 14 and 15 over the Combination of McQueen, Terazawa, and Husselbee, and (iii) Claims 6, 7, 9, 10, 16, and 17 over the Combination of McQueen, Terazawa, Mauser, and Husselbee

Petitioner contends (i) claims 11–13 would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of McQueen (Ex. 1005) and Terazawa (Ex. 1006) (Pet. 71–75); (ii) claims 14 and 15 would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of McQueen and Terazawa, in view of the skilled artisan’s knowledge demonstrated by Husselbee (Ex. 1008) (Pet. 75–76); and (iii) claims 6, 7, 9, 10, 16, and 17 would have been unpatentable under 35 U.S.C. § 103 as obvious over the combination of McQueen, Terazawa, and Mauser (Ex. 1011), in view of the skilled artisan’s knowledge demonstrated by Husselbee (Pet. 77–83). Claim 11 is an independent claim reciting a method analogous to functions performed by the apparatus of each of independent claims 1 and 8, and claims 6, 7, 9, 10, and 12–17 depend directly or indirectly from independent claims 1, 8, or 11. The Petition provides a detailed assessment of these claims, with references to the Petition’s analysis of claim 1, disclosures in McQueen, Terazawa, Mauser, and Husselbee, and the declaration testimony of Dr. Micklow. Pet. 71–83. Patent Owner does not contend otherwise at this stage of the proceeding. As discussed above, we are persuaded that the cited evidence sufficiently supports Petitioner’s contention that independent claims 1 and 8 and dependent claims 2–5 would have been unpatentable as obvious over the combined teachings of McQueen and Terazawa, in view of the skilled artisan’s knowledge demonstrated by Husselbee. For the reasons set forth in the Petition (Pet. 71–83), we also are persuaded that the current record

sufficiently supports Petitioner’s challenges to independent claim 11 and dependent claims 6, 7, 9, 10, and 12–17 as obvious over the above-listed combinations for purposes of institution.⁶

V. CONCLUSION

Based on the evidence before us, we determine that Petitioner has established a reasonable likelihood that claims 1–17 of the ’260 patent are unpatentable. Accordingly, we institute trial on all the challenges in the Petition.

We base our factual findings and conclusions at this stage of the proceeding on the evidentiary record developed so far. This is not a final decision as to the construction of any claim term or the patentability of any claim. Any final decision shall be based on the full trial record, including any response timely filed by Patent Owner. Any arguments not raised by Patent Owner in a timely filed response may be deemed waived, even if they were presented in the Preliminary Response.

⁶ Because we determine that Petitioner demonstrates a reasonable likelihood of success in establishing the unpatentability of claims 1–5 and 8 as obvious over the combined teachings of McQueen and Terazawa, in view of the skilled artisan’s knowledge demonstrated by Husselbee, such that we institute this proceeding (*see supra* Section IV.D), and because we must therefore institute *inter partes* review on all claims and all challenges in the Petition (*see* 37 C.F.R. § 42.108(a)), for purposes of institution, we need not and do not herein address in detail Petitioner’s assertions of obviousness of claims 6, 7, and 9–17 over the noted combinations.

VI. ORDER

Upon consideration of the record before us, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 1–17 of the '260 patent is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of the '260 patent shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

IPR2023-01234
Patent 6,588,260 B1

For PETITIONER:

Edward H. Sikorski
Matthew Middleton
DLA PIPER LLP (US)
ed.sikorski@us.dlapiper.com
matthew.middleton@us.dlapiper.com

James M. Glass
QUINN EMANUEL URQUHART & SULLIVAN, LLP
jimglass@quinnemanuel.com

For PATENT OWNER:

Timothy Devlin
Jason Wejnert
DEVLIN LAW FIRM LLC
Td-ptab@devlinlawfirm.com
jason.wejnert@dinsmore.com