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Paper 9
Date: October 3, 2025

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MERCEDES-BENZ GROUP AG,
Petitioner,

v.

THE PHELAN GROUP, LLC,
Patent Owner.

IPR2025-00758
Patent 9,908,508 B2

Before LINDA E. HORNER, MITCHELL G. WEATHERLY, and KARA L. SZPONDOWSKI, *Administrative Patent Judges*.

SZPONDOWSKI, *Administrative Patent Judge*.

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

I. INTRODUCTION

Mercedes-Benz Group, AG ("Petitioner") filed a Petition (Paper 2, "Pet.") to institute an *inter partes* review of claims 1–14 of U.S. Patent No. 9,908,508 B2, issued on March 6, 2018 (Ex. 1001, "the '508 patent"). The Phelan Group ("Patent Owner") filed a Discretionary Denial Brief (Paper 6) and Petitioner filed an Opposition to Patent Owner's Discretionary Denial Brief (Paper 7). The Director denied Patent Owner's Request for Discretionary Denial and referred the Petition to the Board (Paper 8). Patent Owner did not file a Preliminary Response.[1]

Institution of an *inter partes* review is authorized when "the information presented in the petition . . . and any response . . . shows that 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). Based on the current record, and for the reasons explained below, we determine that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one challenged claim, and we institute an *inter partes* review.

II. BACKGROUND

A. Real Parties-in-Interest

Petitioner identifies Mercedes-Benz Group AG, Mercedes-Benz AG, Mercedes-Benz USA, LLC, and Mercedes-Benz Intellectual Property GmbH & Co. KG as the real parties-in-interest. Pet. 2. Patent Owner identifies

[1] Patent Owner titled the Discretionary Denial Brief as a Preliminary Response Related to Discretionary Denial, and substantively only provided arguments addressing discretionary denial.

itself as the real party-in-interest. Paper 3, 2 (Patent Owner's Mandatory Notices).

B. Related Matters

The parties identify the following district court cases involving the '508 patent: *The Phelan Grp., LLC v. Toyota Motor Corp.*, No. 2-23-cv-00093 (E.D Tex.) (voluntarily dismissed with prejudice), *The Phelan Grp., LLC v. Kia Corp.*, No. 2-23-cv-00094 (E.D. Tex.) (voluntarily dismissed with prejudice), *The Phelan Grp., LLC v. Honda Motor Co.*, No. 2-23-cv-00606 (E.D. Tex.) (voluntarily dismissed with prejudice), *The Phelan Grp., LLC v. State Farm Mutual Automobile Ins. Co.*, No. 2-23-cv-00611 (E.D. Tex.), *The Phelan Grp., LLC v. Mercedes-Benz Grp. AG*, No. 2-23-cv-00607 (E.D. Tex.) (transferred to N.D. Ga), and *The Phelan Grp., LLC v. Mercedes-Benz Grp. AG*, No. 1-25-cv-01399 (N.D. Ga.). Pet. 3; Paper 3, 3.

C. The '508 Patent (Ex. 1001)

The '508 patent is titled "Driver Authentication System and Method for Monitoring and Controlling Vehicle Usage" and is generally directed to a "system and method for monitoring and controlling vehicle usage by high-risk drivers," such as teen drivers, fleet or rental drivers, habitual reckless drivers, etc. Ex. 1001, codes (54), (57), 2:28–30.

Figure 5, reproduced below, depicts a block diagram of an embodiment of a driver authentication system. Ex. 1001, 5:48–49.

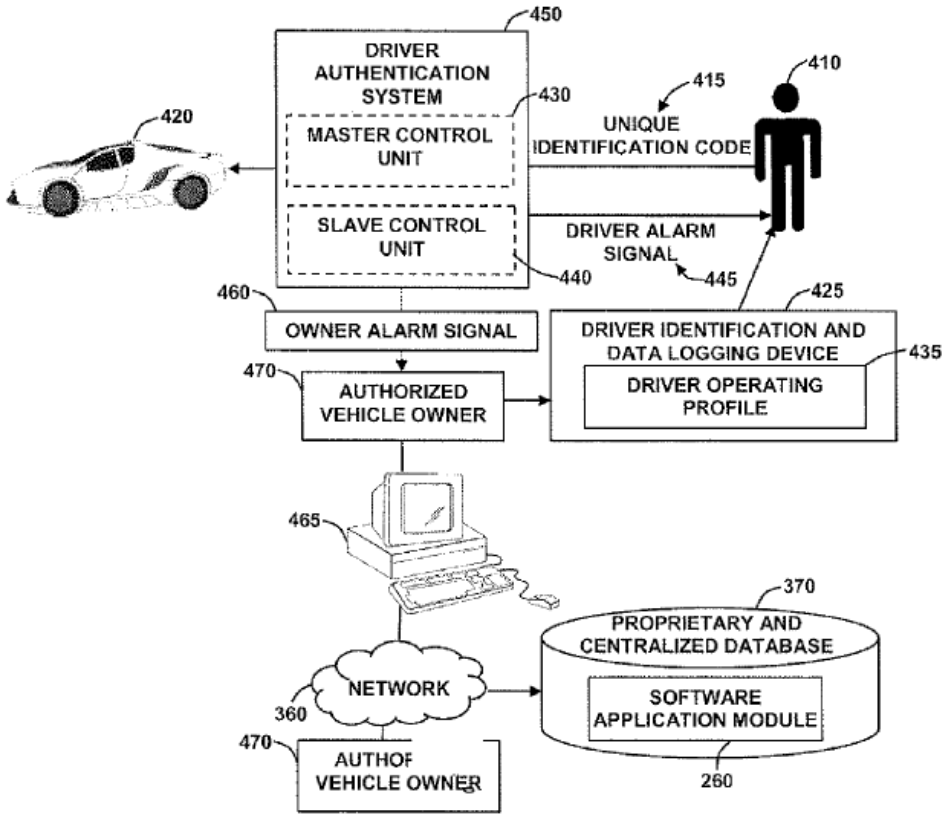

FIG. 5

Figure 5 shows, among other things, driver authentication system 450 that can be used for monitoring and controlling vehicle usage by high-risk driver 410 of vehicle 420 and providing real time corrective feedback to high-risk driver 410 and/or to authorized vehicle owner 470. *Id.* at 5:51–60.

Driver authentication system 450 "includes a master control unit 430 and a slave control unit 440 that can be accessed and programmed via the software application module 260 stored in the proprietary and centralized database 370." Ex. 1001, 5:61–64. "[A]uthorized vehicle owner 470 can access the software application module 260 over a data network 360, via the remote computer 465 in order to program a desired operating profile 435

representing various operating parameters associated with the vehicle 420." *Id.* at 6:36–40; *see also id.* at 2:31–35. These parameters may include, for example, maximum allowable vehicle speed, vehicle locations, vehicle hours of operation, or seat belt usage associated with the vehicle. *Id.* at 6:40–44. The operating profile may also include a set of driving rules and conditions for the intended high-risk driver of the vehicle. *Id.* at 6:52–55. The "operating profile 435 can be loaded to a driver identification and data logging device 425" that "can be utilized in conjunction with the remote computer 465 in order to load the operating profile 235 into the master control unit 430." *Id.* at 6:56–62.

"The master control unit 430 can authenticate the driver 410 using a unique identification code 415 provided by the driver identification and data logging device 425" and "enable vehicle operation within the programmed operating profile 435." Ex. 1001, 7:6–11. "If the driver 410 violates the preprogrammed operating profile 435[,] the master control unit 430 can communicate with the slave control unit 440 and generate a real time driver alarm signal 445," which "can result in an actual audible alarm, or it can be used to control/govern operational aspects of the vehicle." *Id.* at 7:11–16. The driver authentication system 450 can also "provide an owner alarm signal 460 that remotely alerts the authorized vehicle owner 470 regarding violation of the programmed operating profile 435." *Id.* at 7:29–32.

Figure 8, reproduced below, illustrates a high-level flow chart of a method for monitoring and controlling vehicle usage. Ex. 1001, 9:18–20.

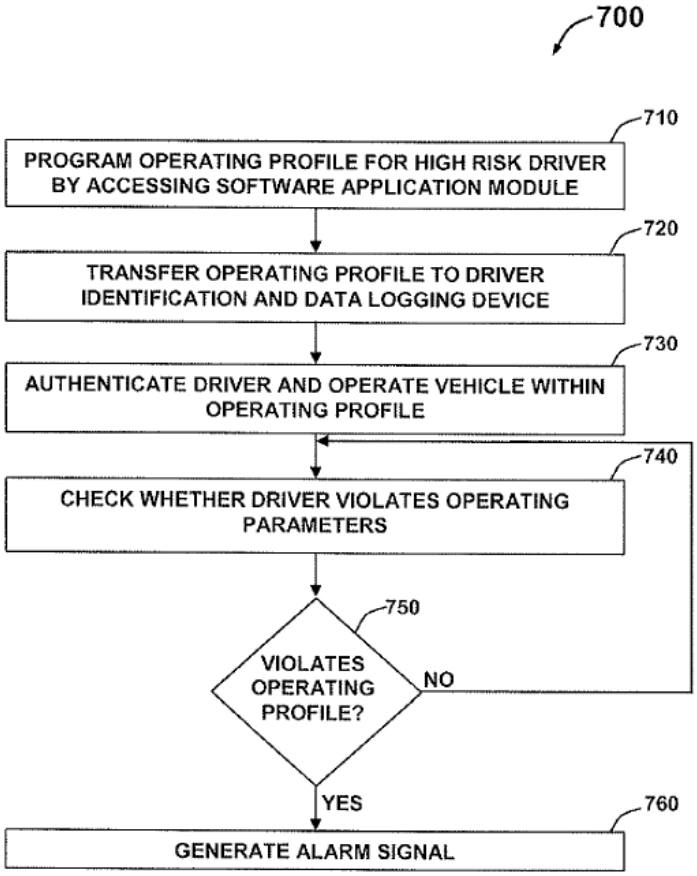

FIG. 8

Figure 8 shows programming an operating profile for a high-risk driver by accessing the software application via the remote computer (step 710), transferring the operating profile to the driver identification and data logging device (step 720), authenticating the driver and copying the operating profile to the driver authentication system (step 730), checking whether the driver is violating the operating profile (steps 740, 750), and generating an alarm if the operating profile has been violated (step 760). *Id.* at 9:23–40.

D. Illustrative Claims

Independent claim 1 is representative, and is reproduced below, with Petitioner's identifiers in brackets.

1. [1pre] A system comprising:

> [1A] a driver authentication system for authenticating at least one driver via a driver identification interface, [1B] wherein the driver authentication system receives a unique identification code to permit the at least one driver to operate the vehicle within an operating profile associated with the at least one driver; and
>
> [1C] [i] at least one computer associated with the driver authentication system, said driver authentication system in communication with said computer and [ii] configured to monitor operation of the vehicle and generate a signal if the at least one driver violates the operating profile thereby providing feedback to the driver authentication system about usage of the vehicle, and [iii] wherein the driver authentication system cooperates with the at least one computer to control operation of the vehicle.

Ex. 1001, 9:64–10:12.

E. Prior Art and Asserted Challenges to Patentability

Petitioner asserts that claims 1–14 are unpatentable based on the following challenges (Pet. 4–5):

Claim(s) Challenged	35 U.S.C. §[2]	Basis/References
1–6, 8–11, 13, 14	102(b), 103(a)	Murphy[3]
10	103(a)	Murphy, Adams[4]
7, 12	103(a)	Murphy, Wu[5]
1–6, 8–11, 13, 14	102(a), (e), 103(a)	Petrik[6]
1–6, 8–11, 13, 14	103(a)	Petrik, Schanz,[7]
10	103(a)	Petrik, Adams or Petrik, Schanz, Adams
7, 12	103(a)	Petrik, Wu, or Petrik, Schanz, Wu

In support of its proposed challenges, Petitioner relies on the Declaration of Dr. Mark Ehsani. *See* Ex. 1004.

III. ANALYSIS

A. Legal Standards

A claim is unpatentable as anticipated under 35 U.S.C. § 102 "if each and every limitation is found either expressly or inherently in a single prior art reference." *WhitServe, LLC v. Computer Packages, Inc.*, 694 F.3d 10, 21 (Fed. Cir. 2012) (quoting *Celeritas Techs., Ltd. v. Rockwell Int'l Corp.*, 150 F.3d 1354, 1361 (Fed. Cir. 1998)). An anticipatory reference must also

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[2] Because the earliest possible effective filing date of the '508 patent is before March 16, 2013, patentability is governed by the version of 35 U.S.C. § 103 preceding the Leahy-Smith America Invents Act ("AIA"), Pub L. No. 112–29, 125 Stat. 284 (2011). *See* Pet. 7 (assuming, but not conceding, that a priority date of July 2, 2008 applies).
[3] Murphy, US 6,225,890 B1 (issued May 1, 2001) (Ex. 1006).
[4] Adams et al., US 2008/0046739 A1 (published Feb. 21, 2008) ("Adams," Ex. 1010).
[5] Wu, US 2008/0114501 A1 (published May 15, 2008) (Ex. 1011).
[6] Petrik, US 2007/0168125 A1 (published July 19, 2007) (Ex. 1009).
[7] Schanz et al., DE 10323723 A1 (published Dec. 9, 2004) (Exs. 1007, 1008 (translation)).

"disclose those elements 'arranged as in the claim.'" *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

A claim is unpatentable as obvious under 35 U.S.C. § 103(a) 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) (quoting 35 U.S.C. § 103(a)). 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) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

"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)); *see also Intelligent BioSystems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016). At this preliminary stage, we determine whether the information presented in the Petition shows there is a reasonable likelihood that Petitioner would prevail in establishing that at least one of the challenged claims would have been obvious.

B. Level of Ordinary Skill in the Art

Petitioner contends a person of ordinary skill in the art "would have at least a bachelor's degree in electrical engineering, computer engineering, computer science, or similar disciplines, and at least two years of professional experience in the automotive industry with research, design, and/or development of automotive electrical and control systems, or an equivalent level of skill knowledge, and experience." Pet. 7–8 (citing Ex. 1004 ¶ 23). In addition, "[t]he more education one has, the less experience needed to attain an ordinary level of skill," and "more experience in the field may serve as a substitute for formal education." *Id.* at 8.

At this stage of the proceeding, Patent Owner does not dispute Petitioner's proposed definition. Paper 6, 4.

Based on the current record, we adopt Petitioner's proposed level of ordinary skill in the art for purposes of this Decision, as it is consistent with the level of ordinary skill in the art reflected by the prior art of record.

C. Claim Construction

Petitioner proposes that all terms be given their plain and ordinary meaning. Pet. 7. Patent Owner "does not believe any terms need to be construed at this time." Paper 6, 4. Because there is no dispute between the parties, and after reviewing the record, we determine that no express claim construction is necessary for purposes of this Decision. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required to construe 'only those 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) (alteration in original)).

D. Alleged Obviousness Over Murphy

Petitioner contends that claims 1–6, 8–11, 13, 14 would have been obvious over Murphy. Pet. 8–36. Having considered the arguments and evidence before us, we find that the record establishes a reasonable likelihood that Petitioner would prevail on at least one claim in this asserted ground of unpatentability.

1. Murphy (Ex. 1006)

Murphy is titled "Vehicle Use Control" and is generally directed to "[a] system for restricting use of a vehicle by a selected vehicle operator to permitted time intervals and permitted vehicle travel corridors." Ex. 1006, codes (54), (57). Murphy's system requires the driver to provide a biometric indicium (e.g., a fingerprint), "insertion or presentation of a token or smart card," and/or "keypad entry of information" specific to the driver, in order to allow operation of the vehicle. *Id.* at code (57), 2:24–34, 4:39–52, 6:55–59, 7:15–18. Murphy's system determines whether certain conditions are met, e.g., whether vehicle location and/or speed are within permitted ranges, and if not, "vehicle operation is temporarily disabled, or a coded alarm signal is transmitted, or other appropriate control actions are taken." *Id.* at code (57).

Figure 6, reproduced below, shows an apparatus for restricting use of a vehicle.

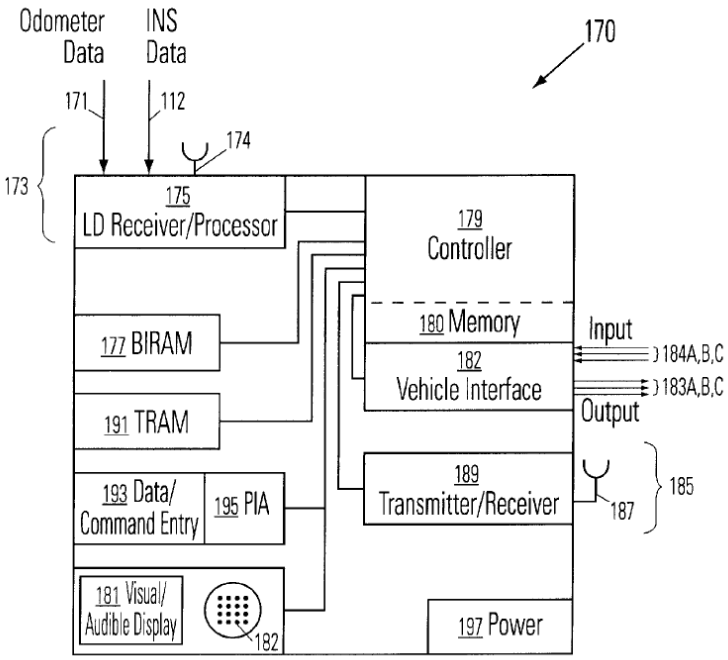

Figure 6 depicts apparatus 170, which includes location determination (LD) module 173, a biometric receiving and analysis mechanism (BIRAM) 177, controller module 179, memory module 180, visual/audible display 181, vehicle interface module 182, telecommunication module 185, and token receiving and analysis mechanism (TRAM) 191, data entry module 193, and personal information analysis (PIA) module 195. LD module may be GPS, and determines the present location and/or present speed of the vehicle and sends it to controller module 179. Ex. 1006, 13:27–32, 13:53–14:65. BIRAM 177 receives a biometric indicum from a vehicle operator and sends it to controller module 179 and associated memory module 180 to determine the identity of the vehicle operator. *Id.* at 13:33–41. TRAM 191 receives and analyzes a token from a vehicle operator and sends information to controller module 179 for implementation and/or comparison of the identity of the token holder with a database of authorized vehicle operators. *Id.* at

14:46–54. Alternatively, identification information may also be entered through data entry module 193 and analyzed in PIA module 195 to identify the person, then sent to controller 179 for implementation and/or for comparison of the identity of the token holder with a database of authorized vehicle operators. *Id.* at 14:55–65. Controller module 179 is connected to vehicle interface module 182, which is connected to at least one vehicle component, such as the vehicle engine, for use in controlling or restricting operation of the vehicle. *Id.* at 13:66–14:4. Telecommunications module 185 exchanges signals with a remote facility to modify, add or delete vehicle operation restrictions. *Id.* at 14:23–45.

Figure 7, reproduced below, illustrates an embodiment for a vehicle use control system. Ex. 1006, 15:8–10.

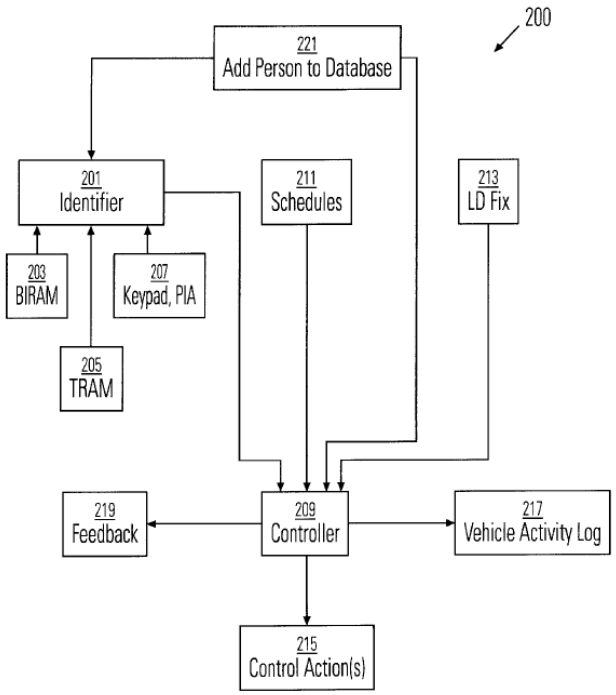

Figure 7 depicts TRAM 205 and/or BIRAM 203 presenting information to identifier module 201, which analyzes the information and transmits it to controller 209. Ex. 1006, 15:8–18. Controller 209 also receives information from schedule module 211 that contains various limitations on vehicle operation for each authorized vehicle operator. *Id.* at 15:21–31. LD Fix module 213 determines present location and/or present speed for the vehicle and communicates this information to controller 209. *Id.* at 15:32–36. Controller 209 determines which Control Action should be taken, and communicates this information to Control Action interface module 215, for implementation by the vehicle engine, etc. *Id.* at 15:37–42; *see also id.* at 5:29–54 (describing twelve Control Actions, including disabling the vehicle). Controller 209 may also communicate the vehicle operation information to vehicle activity log module 217, and/or communicate the limitations to be imposed on the vehicle and driver to a feedback module 219 to visually or audibly notify the driver. *Id.* at 15:43–50; *see also id.* at 5:55–60 (describing the "controller connect[ing] to a display system that audibly announces or visually displays an announcement that a violation has occurred").

2. Analysis of Independent Claim 1

a) 1[pre] — "A system comprising"

Petitioner contends Murphy teaches a "system." Pet. 8–9 (citing Ex. 1006, code (57), 15:1–8, 11:60–64, ("[a] ***system*** for restricting use of a vehicle by a selected vehicle operator" that can be "installed in a vehicle dashboard or elsewhere" and "used to monitor operation of the vehicle by a

teenager or other inexperienced driver, with restrictions imposed upon . . . vehicle maximum speed . . ."), Figs. 1, 6, 7).

Based on the record before us, we determine that Petitioner's cited evidence sufficiently supports its contentions that Murphy teaches the preamble.[8]

b) Limitation [1A] — "a driver authentication system for authenticating at least one driver via a driver identification interface"

Petitioner contends Murphy's system includes a "controller" that authenticates a driver via multiple interfaces, including (1) a "biometric indicium receiving and analysis mechanism" (BIRAM); (2) a "token receiving analysis mechanism" (TRAM) and "token or smart card"; and (3) a "data entry module" (e.g., keypad) and "personal information analysis (PIA) module." Pet. 9–10 (citing, Ex. 1006, Figs. 6, 7, 13:28–42, 14:46–65, 6:55–7:14, 15:8–31, 7:24–29); *see also id.* at 10–11 (further describing the BIRAM, TRAM, and data entry module). Petitioner contends that "Murphy's system uses the 'information' obtained via the BIRAM, TRAM and token, and data entry module and PIA for 'authenticating the identity of the presenter [i.e., driver].'" *Id.* at 11 (citing Ex. 1006, 7:22–24) (emphasis omitted).

At this stage, Patent Owner does not challenge Petitioner's contentions as to limitation [1A].

[8] Because we are persuaded that Petitioner has shown that Murphy teaches the subject matter recited in the preamble, we need not decide whether the preamble is limiting for purposes of this Decision. At this stage, neither party has presented arguments that the preamble is limiting.

We determine that, on the record before us, Petitioner's cited evidence sufficiently supports its contentions regarding this limitation.

> c) *Limitation [1B] — "wherein the driver authentication system receives a unique identification code to permit the at least one driver to operate the vehicle within an operating profile associated with the at least one driver; and"*

Petitioner contends that "[i]n Murphy, different vehicle drivers can have different 'operating profiles.'" Pet. 12. For example, Petitioner contends that Murphy divides drivers into different categories, such as "restricted operators," drivers who are "identified and authorized[], but not a [restricted operator]," and that "[d]ifferent driving restrictions are imposed[] depending upon the category to which the operator belongs," including on "permitted time intervals and permitted travel corridor(s) and speeds for travel." *Id.* (citing and quoting Ex. 1006, 1:66–2:16, 2:35–53, 5:18–26, 7:49–9:44, Fig. 2) (emphasis omitted). Additionally, Petitioner contends that drivers can be assigned their own "individualized" driving restrictions, limiting, for example, "maximum speed," "geographic region" and "routes," "maximum accumulated mileage and time," and "time intervals" when the vehicle can be driven. *Id.* (citing Ex. 1006, 6:8–17, 6:55–7:14, 8:29–53, 10:45–11, 15:66–16:11, 17:14–29, Figs. 2, 3, code (57), claims 3, 10).

Petitioner further contends that Murphy's system receives information about a driver from the TRAM, BIRAM, and/or data entry device or PIA that identifies the driver (i.e., a unique identification code) and permits the driver to operate the vehicle within the "operating profile." Pet. 13–14 (citing, e.g., Ex. 1006, 6:55–7:24).

At this stage, Patent Owner does not challenge Petitioner's contentions as to limitation [1B].

We determine that, on the record before us, Petitioner's cited evidence sufficiently supports its contentions regarding this limitation.

> *d) Limitation [1C] — "[i] at least one computer associated with the driver authentication system, said driver authentication system in communication with said computer and [ii] configured to monitor operation of the vehicle and generate a signal if the at least one driver violates the operating profile thereby providing feedback to the driver authentication system about usage of the vehicle, and [iii] wherein the driver authentication system cooperates with the at least one computer to control operation of the vehicle"*

Petitioner contends that Murphy teaches multiple "computers" associated with its "driver authentication system," including "modules" that are in communication with its controller, including a "vehicle [or control action] interface module," a "visual and/or audible display [or feedback] module," and a "telecommunications module." Pet. 15–16 (citing, e.g., Ex. 1006, Fig. 6) (alterations in original). Petitioner contends that Murphy's controller, along with these modules, monitors vehicle operation and generates signals when the driver violates their profile, thereby providing feedback about vehicle usage and cooperating with the computer to control vehicle operation. *Id.* at 16 (citing Ex. 1004 ¶¶ 58–66).

According to Petitioner, Murphy's control system can take various "Control Actions" when the driver violates the operating profile, including, for example, reducing the vehicle's speed using a vehicle "governor," activating an audible/visual "on-board alarm," or transmitting an alarm to a selected facility. Pet. 16–17 (citing, e.g., Ex. 1006, 5:13–24). Petitioner

contends that Murphy's controller will monitor information on the "vehicle location and/or vehicle speed and/or time and/or accumulated operating time and/or accumulated mileage" and "compar[e] this . . . with any vehicle operation restrictions that may be imposed on an identified or unidentified vehicle operator." *Id.* at 17–18 (citing and quoting Ex. 1006, 13:53–61) (emphasis omitted, alterations in original). Petitioner argues that Murphy's vehicle interface module or control action interface module monitors vehicle operation for information, and if it receives information from the controller that the driver has violated his operating profile, it will control or restrict operation of the vehicle. *Id.* at 18 (citing Ex. 1006, 2:20–53, 7:49–9:44, 10:45–11:27, 13:66–14:17, 15:9–16:11, 16:50–17:63, Figs. 2, 3, 6, 7).

Additionally, Petitioner contends, Murphy's "display [or feedback] module" and "operations [vehicle activity] log" module monitor for signals from the controller as to whether the driver has violated his profile, and can provide feedback to the system, such as recording the feedback or announcing or visually displaying that a violation has occurred. Pet. 19 (citing Ex. 1006, 5:29–60, 5:53–54, 10:29–40, 12:1–15, 13:61–65, 15:42–54, Figs. 6, 7). Petitioner also contends that Murphy's "telecommunication module" receives instructions from the controller when a driver violates his operating profile, and exchanges information signals with an information processing facility (e.g., transmitting an alarm signal and/or receiving commands), which will allow the controller to control the vehicle, such as by implementing any new or modified driving restrictions that the telecommunication module receives. *Id.* at 19–20 (citing Ex. 1006,

2:6–9, 4:15–27, 5:13–60, 12:16–27, 14:23–45, 17:30–63, Fig. 6, code (57), claims 1, 7, 9, 12, 15, 18).

At this stage, Patent Owner does not challenge Petitioner's contentions as to limitation [1C].

We determine that, on the record before us, Petitioner's cited evidence sufficiently supports its contentions regarding this limitation. That is, we are persuaded that Murphy's "controller, vehicle (or control action) interface module, display (or feedback) module, operations (or vehicle activity) log module, telecommunication module, and remote facility monitor vehicle operation and generate signals when the driver violates her operating profile (thereby providing feedback) *and* cooperate to control vehicle operation." Pet. 20 (citing Ex. 1004 ¶¶ 58–66).

e) Conclusion for Independent Claim 1

Based on our review and consideration of the current record, we determine that Petitioner has adequately shown that the Murphy teaches or suggests the limitations in claim 1 for purposes of institution. Accordingly, we determine, on the current record and for purposes of this Decision, that the information presented in the Petition demonstrates a reasonable likelihood that claim 1 is unpatentable under 35 U.S.C. § 103(a) over Murphy.

3. Claims 2–14

At this stage, Patent Owner does not challenge Petitioner's contentions as to claims 2–14. Because we preliminarily determine that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to at least one claim of the '508 patent, we institute *inter partes*

review on all claims and grounds. *See* 37 C.F.R. § 42.108(a) ("When instituting . . . 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."). At this stage of the proceeding, and because Petitioner meets the threshold for institution for claim 1 under this ground, we need not decide whether Petitioner's challenges to the other independent and dependent claims demonstrate the same. Those challenges, in our view, are best left for trial after full development of the record.

E. Alleged Obviousness Over Petrik

Petitioner contends that claims 1–14 would have been obvious over Petrik. Pet. 42–50. Having considered the arguments and evidence before us, we find that the record establishes a reasonable likelihood that Petitioner would prevail on at least one claim in this asserted ground of unpatentability.

1. Petrik (Ex. 1009)

Petrik is titled "GPS Monitoring Biometric Smartcard, Intelligent Speed Manag[e]ment" and is generally directed to a method and system that "provides real time GPS based vehicle monitoring, management and cruise control," "incorporating intelligent speed adaptation, recording driver and vehicle operating parameters on a smart card and a . . . mobile communication facility by an in[-]vehicle small, single sealed monitoring unit." Ex. 1009, codes (54), (57), ¶ 1. Figure 1, reproduced below, shows an embodiment of Petrik's in-vehicle monitoring unit.

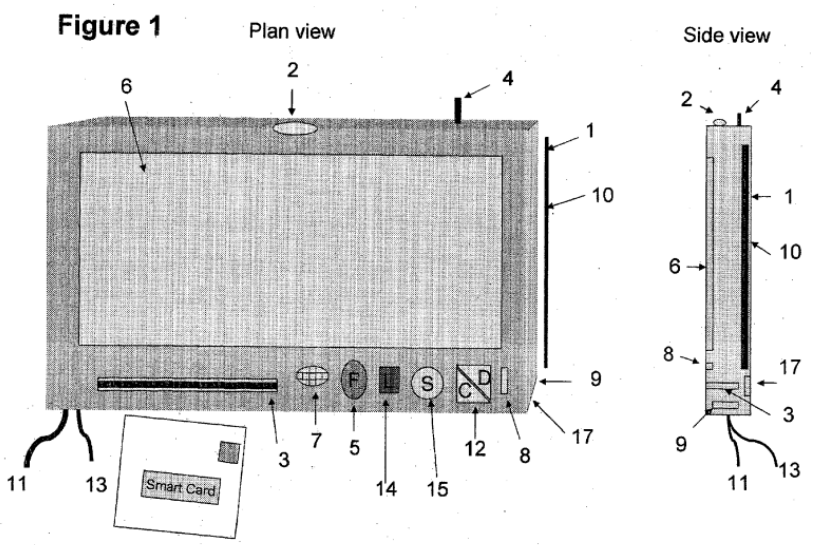

Figure 1 shows microcomputer 1, GPS module 2, smart card reader writer 3, SATELLITE/GPRS/GSM/BLUETOOTH module 4, fingerprint module 5, display 6, beeper 7, USB connector 8, accelerometer 10, and engine management system connector 13. Ex. 1009 ¶¶ 16, 69. When installed in the vehicle, "the unit is connected to the engine management system which is programmed to take instructions from it." *Id.* ¶ 20.

Prior to departure, the intended vehicle route plan and cargo details are "filed" with the national Transport Management Command Center and in the in-vehicle unit. Ex. 1009 ¶ 24. Drivers are issued "smart cards with their fingerprint template recorded in the card." *Id.* ¶ 22. To use the system, "the driver inserts his smart card into the units' [*sic* unit's] smart card reader/writer and places his finger on the fingerprint reader to confirm his identity." *Id.* ¶ 25. "This automatically logs him in as the current driver and enables engine ignition." *Id.* While traveling, "the GPS keeps a constant log of the date, time, location, distance travelled and speed of the vehicle

both in the units' [*sic* unit's] memory and in the smart card." *Id.* The system provides intelligent speed adaptation, which can be programmed to not allow the vehicle to exceed a maximum speed limit. *Id.* Additionally, "[a]s the vehicle approaches each new speed zone, the unit . . . beeps to warn the driver of the zone change and if allowed, interacts with the engine management system to slow down or speed up the vehicle to automatically stay within appropriate speed limits in each zone." *Id.* Further, a "hostile driver or out of control vehicle can be stopped by sending a 'disable' command to the unit via the SATELLITE/GPRS/GSM to lock up the engine management unit." *Id.* ¶ 30.

2. Analysis of Independent Claim 1

a) 1[pre] — "A system comprising"

Petitioner contends that Petrik discloses a "GPS based vehicle monitoring, management, and cruise control" system with an "in-vehicle monitoring unit." Pet. 43 (citing Ex. 1009, code (57), ¶¶ 16–25, 30, Figs. 1–3).

At this stage, Patent Owner does not challenge Petitioner's contentions as to the preamble.

Based on the record before us, we determine that Petitioner's cited evidence sufficiently supports its contentions regarding the preamble.

b) Limitation [1A] — "a driver authentication system for authenticating at least one driver via a driver identification interface"

Petitioner contends that Petrik's in-vehicle monitoring unit teaches the driver authentication system. Pet. 43 (citing Ex. 1009 ¶¶ 16, 69, Figs. 1–3). Petitioner contends that Petrik uses a smart card reader/writer and a

fingerprint reader to confirm a driver's identity. *Id.* at 43–44 (citing Ex. 1009 ¶¶ 17, 22, 25, 69, Fig. 1).

At this stage, Patent Owner does not challenge Petitioner's contentions as to limitation [1A].

We determine that, on the record before us, Petitioner's cited evidence sufficiently supports its contentions regarding this limitation.

c) *Limitation [1B] — "wherein the driver authentication system receives a unique identification code to permit the at least one driver to operate the vehicle within an operating profile associated with the at least one driver; and"*

Petitioner contends that in Petrik, "[e]ach fingerprint and fingerprint template would be unique to the driver and, therefore, be a unique code identifying such driver." Pet. 45 (citing Ex. 1004 ¶¶ 147–148); *see also id.* (further describing Petrik's smart card reader/writer and fingerprint reader). Petitioner contends that during authentication, i.e., use of Petrik's smart card reader/writer and fingerprint combination, an operating profile associated with the driver is loaded into the in-vehicle unit that includes the route plan, speed limits, and rest parameters. *Id.* at 45–46 (citing Ex. 1009 ¶¶ 3–6, 24–26, 28, 30; Ex. 1004 ¶¶ 150–151).

At this stage, Patent Owner does not challenge Petitioner's contentions as to limitation [1B].

We determine that, on the record before us, Petitioner's cited evidence sufficiently supports its contentions regarding this limitation.

d) *Limitation [1C] — "[i] at least one computer associated with the driver authentication system, said driver authentication system in communication with said computer and [ii] configured to monitor operation of the vehicle and generate a signal if the at least one driver violates the operating profile*

> *thereby providing feedback to the driver authentication system about usage of the vehicle, and [iii] wherein the driver authentication system cooperates with the at least one computer to control operation of the vehicle"*

Petitioner contends that Petrik's in-vehicle unit is associated with "computers," including an "engine management system." Pet. 47–48 (citing Ex. 1009, Fig. 1, ¶¶ 16, 18, 20, 25, 32, 69; Ex. 1004 ¶¶ 153–156). Petitioner contends that Petrik's engine management system is "'programmed' to receive instructions from the in-vehicle unit." *Id.* at 48 (citing Ex. 1009, Fig. 1, ¶¶ 16, 18, 20, 25, 32, 69; Ex. 1004 ¶¶ 153–156). Petitioner further contends that the in-vehicle unit is configured to "monitor operation of the vehicle," logs and records operational parameters, and stores data logged by the engine management system. *Id.* at 48–49 (citing Ex. 1004 ¶¶ 155–156; Ex. 1009 ¶¶ 9, 18, 20, 25, 28, 32).

According to Petitioner, "Petrik's system generates a signal causing the in-vehicle unit to 'beep' to warn the driver when approaching a speed change zone, if the driver is not below the maximum speed for that zone, thereby providing feedback that the vehicle needs to be slowed down." Pet. 49 (citing Ex. 1009, ¶¶ 25–26; Ex. 1004 ¶¶ 155–157). Petitioner further contends that "the in-vehicle unit can 'cooperate' with the engine management computer to 'control operation of the vehicle,'" by "interacting 'with the engine management system to slow down or speed up the vehicle to automatically stay within appropriate speed limits'" and by "'locking up' the engine management system to disable and stop the vehicle if a driver violates his operating profile and is considered 'hostile' or 'out of control'." *Id.* at 49–50 (citing and quoting Ex. 1009 ¶¶ 25–26, 30).

Petitioner also identifies additional "computers" that it contends are "associated with [Petrik's] in-vehicle unit . . . that, with the in-vehicle unit, monitor vehicle operation, generate a signal if the driver violates her profile (thereby providing feedback), [and] cooperate to control vehicle operations." Pet. 50 (citing Ex. 1004 ¶¶ 157–158; Ex. 1009, ¶¶ 10, 30).

Patent Owner does not challenge Petitioner's contentions as to limitation [1C].

We determine that, on the record before us, Petitioner's cited evidence sufficiently supports its contentions regarding this limitation.

e) Conclusion for Independent Claim 1

Based on our review and consideration of the current record, we determine that Petitioner has adequately shown that Petrik teaches or suggests the limitations in claim 1 for purposes of institution. Accordingly, we determine, on the current record and for purposes of this Decision, that the information presented in the Petition demonstrates a reasonable likelihood that claim 1 is unpatentable under 35 U.S.C. § 103(a) over Petrik.

3. Claims 2–14

At this stage, Patent Owner does not challenge Petitioner's contentions as to claims 2–14. Because Petitioner meets the threshold for institution for claim 1 under this ground, we need not decide whether Petitioner's challenges to the other independent and dependent claims demonstrate the same.

F. Remaining Challenges

Petitioner also contends that claims 1–6, 8–11, 13, 14 would have been anticipated by Murphy, anticipated by Petrik, and obvious over the

combination of Petrik and Schanz. Pet. 8–36, 42–65. In addition, Petitioner contends that claim 10 would have been obvious over Murphy and Adams, Petrik and Adams, and Petrik, Schanz, and Adams. *Id.* at 36–38, 65–66. Petitioner contends that claims 7 and 12 would have been obvious over Murphy and Wu, Petrik and Wu, and Petrik, Schanz, and Wu. *Id.* at 38–42, 66–69. Because we preliminarily determine above that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to at least one claim of the '508 patent, we institute *inter partes* review on all claims and grounds. At this stage of the proceeding, we need not decide whether Petitioner's additional challenges demonstrate the same.

IV. CONCLUSION

After considering the evidence and arguments presented, we determine Petitioner has established a reasonable likelihood of prevailing on its assertion that at least one claim of the '508 patent is unpatentable on at least one ground, and we institute an *inter partes* review on all the challenged claims and challenges presented in the Petition. *See* 37 C.F.R. § 42.108(a) ("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").

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314, *inter partes* review is instituted as to the challenged claims of the '508 patent and all challenges of unpatentability presented in the Petition; and

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

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