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Paper 14
Date: July 23, 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.

IPR2025-00413
Patent 9,045,101 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 9, "Pet.") to institute an *inter partes* review of claims 1–20 of U.S. Patent No. 9,045,101 B2, issued on June 2, 2015 (Ex. 1001, "the '101 patent"). The Phelan Group ("Patent Owner") filed Discretionary Denial Brief (Paper 10) and Petitioner filed an Opposition to Patent Owner's Discretionary Denial Brief (Paper 12). The Director denied Patent Owner's Request for Discretionary Denial and referred the Petition to the Board (Paper 13). 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. 1. Patent Owner identifies

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

itself as the real party-in-interest. Paper 4, 1 (Patent Owner's Mandatory Notices).

B. Related Matters

The parties identify the following district court cases involving the '101 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.), *The Phelan Grp., LLC v. Mercedes-Benz Grp. AG*, No. 2-23-cv-00607 (E.D. Tex.). Pet. 2; Paper 4, 2. Patent Owner also identifies *The Phelan Grp., LLC v. State Farm Mutual Automobile Ins. Co.*, No. 2-23-cv-00611 (E.D. Tex.) and Reexamination No. 90/015,287 (reexamination proceeding involving related U.S. Patent No. 10,259,470 B2). Paper 4, 2.

C. The '101 Patent (Ex. 1001)

The '101 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), 2:20–23.

Figure 5, reproduced below, depicts a block diagram of an embodiment of a driver authentication system. Ex. 1001, 5:35–36.

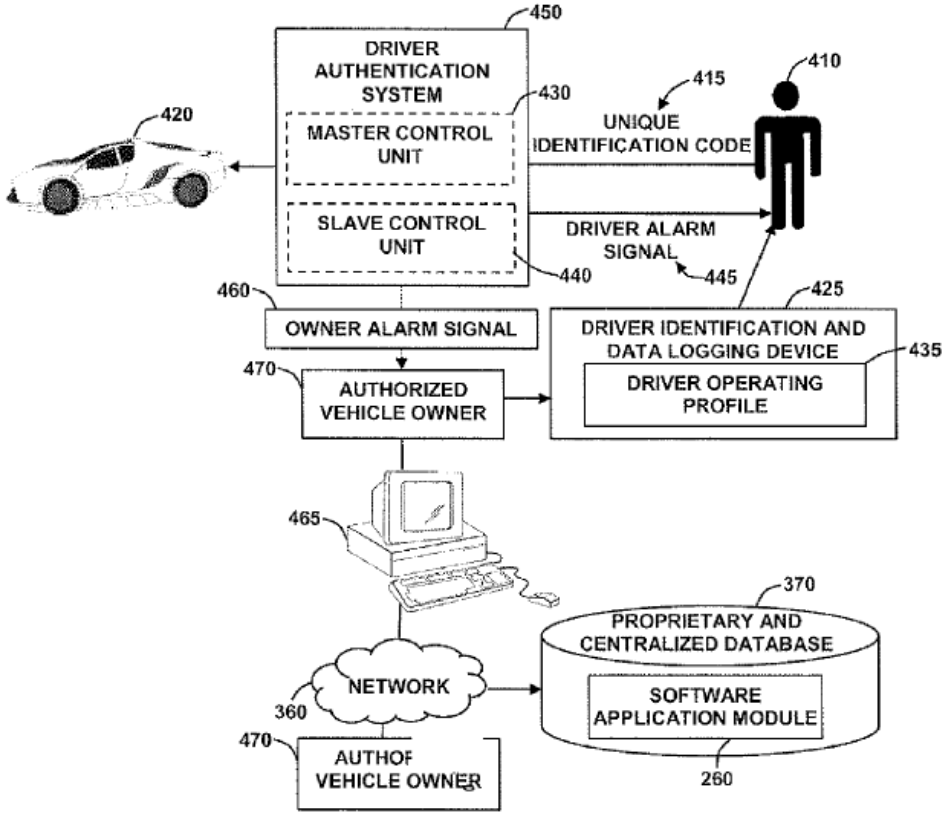

FIG. 5

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 5:35–47.

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, 5:48–51. "[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 6:21–25; *see also id.* at 2:24–28. 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 6:25–28. The operating profile may also include a set of driving rules and conditions for the intended high-risk driver of the vehicle. *Id.* at 6:36–39. 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 6:39–46.

"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, 6:57–60. "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 6:61–67. 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 7:12–15.

Figure 7, reproduced below, illustrates a high-level flow chart of a method for monitoring and controlling vehicle usage. Ex. 1001, 8:62–64.

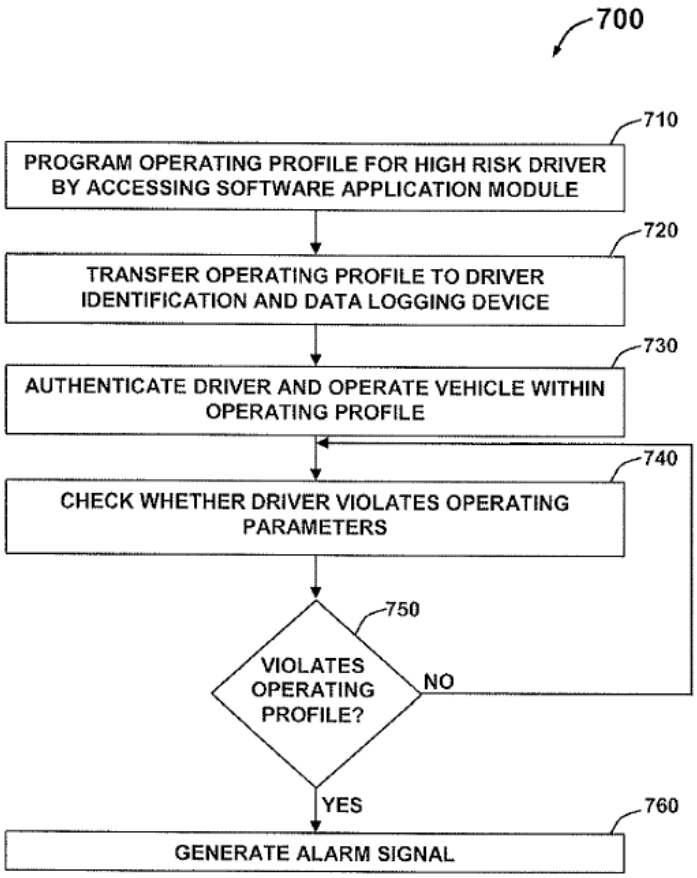

FIG. 8

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 8:67–9:16.

D. Illustrative Claims

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

> 1. [1pre] A driver authentication and monitoring system, comprising:
>
> [1A] a master control unit in a motor vehicle for authenticating at least one driver via a driver identification and data logging device [1B] wherein master control unit receives a unique identification code to permit said at least one driver to operate said vehicle within an operating profile; and
>
> [1C] a slave control unit in a motor vehicle and in communication with said master control unit, said slave control unit configured to receive commands from said master control unit and to generate at least one of an alarm signal if said at least one driver violates said operating profile unique to said at least one driver thereby providing feedback about said vehicle usage and govern mechanical operations of said vehicle remotely thereby maintaining occupant safety.

Ex. 1001, 9:41–57.

E. Prior Art and Asserted Challenges to Patentability

Petitioner asserts that claims 1–20 are unpatentable based on the following challenges (Pet. 3):

Claim(s) Challenged	35 U.S.C. §[2]	Basis/References
1–20	102(b), 103(a)	Murphy[3]

[2] Because the earliest possible effective filing date of the '101 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. 5 (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).

Claim(s) Challenged	35 U.S.C. §[2]	Basis/References
1–20	103(a)	Murphy, Schanz[4]
10	103(a)	Murphy, Schanz, Benco[5]
1–20	102(a), (b), 103(a)	Petrik[6]
1–20	103(a)	Petrik, Schanz
10	103(a)	Petrik, Schanz, Benco

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 "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). The question of obviousness is resolved on the basis of

[4] Schanz et al., DE 10323723 A1 (published Dec. 9, 2004) (Exs. 1007, 1008 (translation)).
[5] Benco et al., US 2008/0136611 A1 (published June 12, 2008) (Ex. 1010).
[6] Petrik, US 2007/0168125 A1 (published July 19, 2007) (Ex. 1009).

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. 5–6 (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 6.

At this stage of the proceeding, Patent Owner does not dispute Petitioner's proposed definition. Paper 10, 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. 5. Patent Owner "does not believe any terms need to be construed at this time." Paper 10, 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)).

D. Alleged Obviousness Over Murphy

Petitioner contends claims 1–20 would have been obvious over Murphy. Pet. 6–33. 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) and/or "insertion or presentation of a token or smart card" in order to allow operation of the vehicle. *Id.* at code (57), 2:24–34, 4:39–52, 6:55–59. 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.

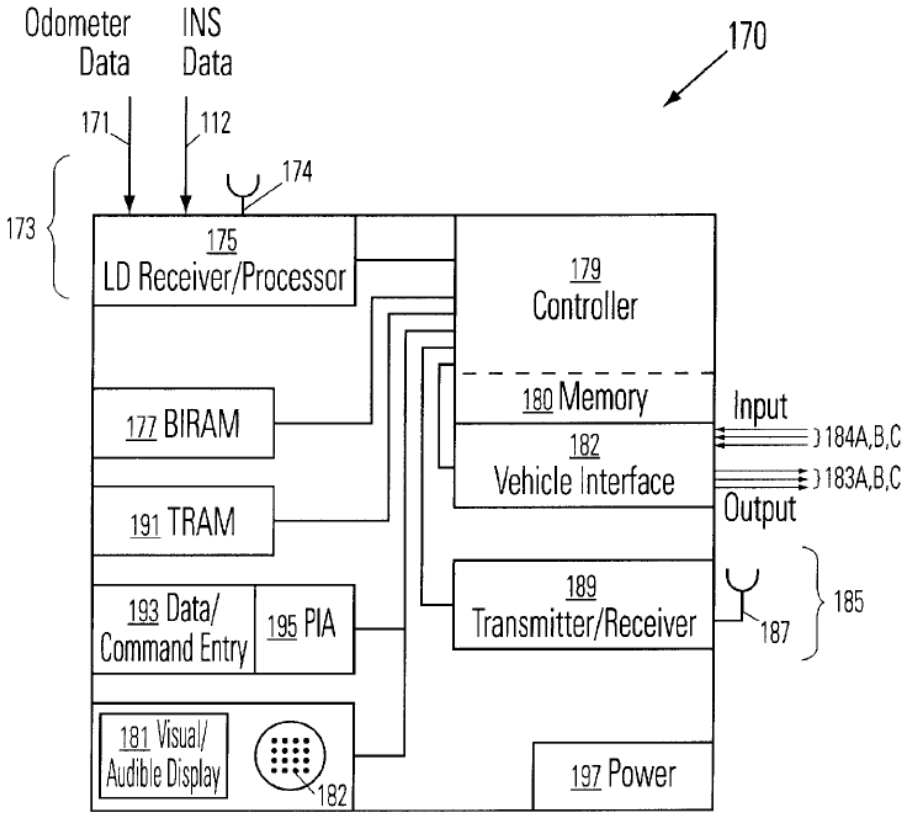

Figure 6 depicts apparatus 170, which includes location determination (LD) module 175, a biometric receiving and analysis mechanism (BIRAM) 177, controller 179, memory 180, vehicle interface 182, telecommunication module 185, and token receiving and analysis mechanism (TRAM) 191. LD module may be GPS, and determines the present location and/or present

speed of the vehicle and sends it to controller module 179. Ex. 1006, 3:47–55, 13:27–32, 13:53–56. BIRAM 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 13:33–42. 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. 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.

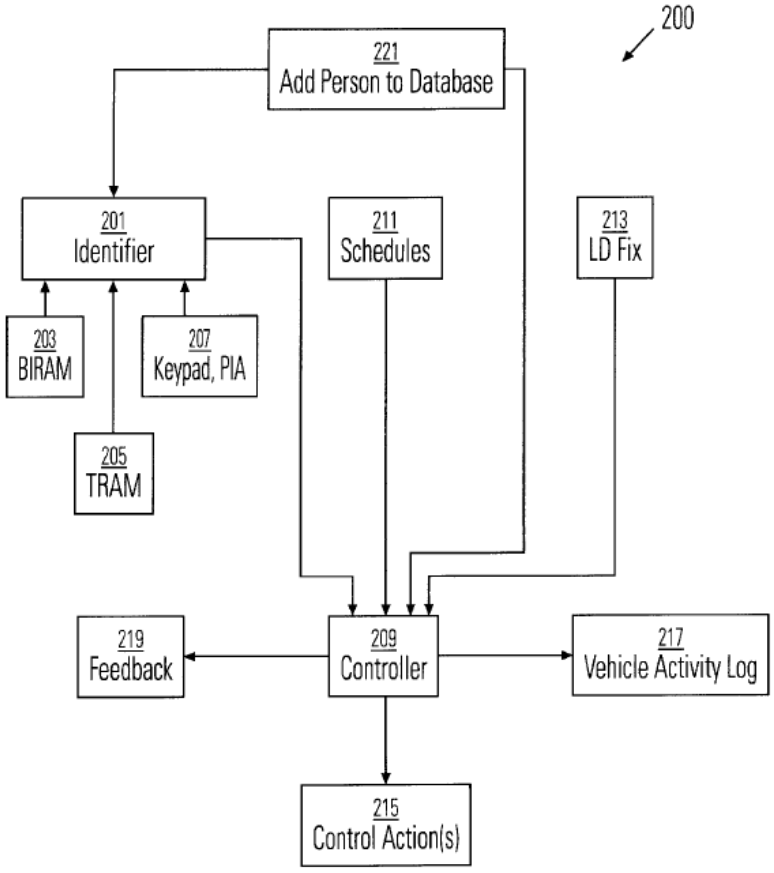

Figure 7 depicts TRAM 205 and/or BIRAM 203 presenting information to identifier module 201, which analyzes the information and transmits it to controller 209. Ex. 1006, 15:8–18. Controller 209 also receives information from schedule module 211 that contains various limitations on vehicle operation for 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 driver authentication and monitoring system, comprising"

Petitioner contends Murphy's system (1) authenticates a driver by requiring a driver to provide identity indicum like a "fingerprint" or "personal identification indicum contained on a token or card"; (2) monitors vehicle operation including the "operation time and/or mileage" and "location and speed" of the vehicle; and (3) takes "control actions" based upon the monitoring, such as disabling the vehicle, reducing speed, or issuing an alarm. Pet. 7–8 (citing, Ex. 1006, code (57), 2:20–34, 5:18–60, 11:60–67, Figs. 6, 7; Ex. 1004 ¶ 39 (citing Ex. 1006, code (57), Fig. 1)). 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 that Murphy teaches the preamble.[7]

[7] Because we are persuaded that Petitioner has shown that Murphy teaches the subject matter recited in the preamble, we need not decide whether the

b) Limitation [1A] — "a master control unit in a motor vehicle for authenticating at least one driver via a driver identification and data logging device"

Petitioner contends that Murphy's controller module 179, that identifies and authenticates a driver via TRAM and BIRAM, teaches the "master control unit." Pet. 8 (citing Ex. 1006, 4:39–44, 5:13–24, 6:55–59, 15:66–16:11, Figs. 2A–6); *see also id.* at 9 (citing Ex. 1006, 6:55–7:14, 7:49–63, 10:44–11:27, 13:33–40, 14:46–54, Figs. 2A, 3). Petitioner contends the token is a "driver identification and data logging device" because its "pre-programmed information permits the driver to operate the vehicle within an operating profile ('operating restrictions') loaded into controller 179." *Id.* (citing Ex. 1006, 6:59–7:14, 14:46–54; Ex. 1004 ¶ 40). 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. For example, Murphy teaches that the TRAM 191 receives and analyzes a token. Ex. 1006, 14:46–48. The token "contain[s] personal information . . . and/or information on limitations under which the token holder can operate a vehicle." *Id.* at 14:48–51. Moreover, "[t]he token may rely upon digitized data stored in a flash memory, in a (re)programmable ROM or in similar information storage media." *Id.* at 7:11–14. Additionally, the information obtained by the TRAM 191 is communicated to the controller 179 to

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preamble is limiting for purposes of this Decision. At this stage, neither party has presented arguments that the preamble is limiting.

compare the identity of the token holder with a database of authorized vehicle operators. *Id.* at 14:51–54.

c) Limitation [1B] — "wherein master control unit receives a unique identification code to permit said at least one driver to operate said vehicle within an operating profile"

Petitioner contends that Murphy controller 179 receives information about a driver from the TRAM and BIRAM, and the TRAM token includes pre-programmed information permitting the driver to operate the vehicle within an "operating profile." Pet. 10 (citing Ex. 1006, 6:59–7:14, 14:46–54; Ex. 1004 ¶ 40). Petitioner contends that the restrictions on operation of the vehicle can be loaded or changed remotely via the telecommunications module. *Id.* (citing Ex. 1006, 12:16–27). Petitioner contends that because the token and biometric sample are unique to the driver, they teach a unique identification code. *Id.* at 11 (citing Ex. 1006, 6:55–7:14, 2:20–34, 14:46–54, 17:63–18:18; Ex. 1004 ¶ 43 (Dr. Ehsani testifying that "[i]n order for the encoded/encrypted information to be used to identify an individual driver, the encoded/encrypted information within the token and/or biometric sample presented to the controller must necessarily comprise some unique code since the information must be unique to the driver"). 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] — "a slave control unit in a motor vehicle and in communication with said master control unit, said slave control unit configured to receive commands from said master control unit and to generate at least one of an alarm signal if said at least one driver violates said operating profile unique

> *to said at least one driver thereby providing feedback about said vehicle usage and govern mechanical operations of said vehicle remotely thereby maintaining occupant safety"*

Petitioner contends that Murphy's vehicle interface module 182 (e.g., Fig. 6) and Control Action(s) interface module 215 (e.g., Fig. 7) (collectively "Control Actions Module")[8] teach a "slave control unit." Pet. 12 (citing Ex. 1006, 13:66–14:4, 15:32–42, Figs. 6, 7). Petitioner contends that controller 179 is in communication with vehicle interface module 182, which controls or restricts vehicle operation. *Id.* (citing 13:66–14:4, 15:32–42, Fig. 6; Ex. 1004 ¶ 44). Similarly, Petitioner contends that controller 209 is in communication with Control Action(s) interface module 215, and sends a Control Action (i.e., a command) to the Control Action(s) interface module 215 when a driver violates operating restrictions. *Id.* at 13–15 (citing Ex. 1006, 5:18–60, 14:37–42, 15:37–42, Fig. 7; Ex. 1004 ¶ 44). At this stage, Patent Owner does not challenge Petitioner's contentions as to limitation [1C].

According to Petitioner, the Control Actions Module controls vehicle operation 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. 14 (citing Ex. 1006, 5:13–24, 5:29–54, Figs. 2A–5). Petitioner argues that the operating restrictions "can be changed remotely, using the communications module 30." *Id.* at 15 (citing Ex. 1006, 12:16–20).

[8] On this record, we agree with Petitioner that a person of ordinary skill in the art would have understood that vehicle interface module 182 and Control Action(s) interface module 215 are the same module. *See* Pet. 13 (citing Ex. 1004 ¶ 44).

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

> Control Action Module is [a slave control unit] that is in communication with and configured to receive commands from the [master control unit] (control module) to generate an alarm (Control Action, *e.g.*, disable or reduce vehicle speed or issue an alarm) if the driver violates the operating profile, thereby providing feedback about vehicle usage and governing mechanical operations of said vehicle remotely (either via the Control Actions Module or via changes to the restrictions via the communications module) thereby maintaining occupant safety.

See Pet. 15–16 (citing Ex. 1004 ¶¶ 44–47).

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 2–20

At this stage, Patent Owner does not challenge Petitioner's contentions as to claims 2–20. Because we preliminarily determine that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to at least one claim of the '101 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 claims 1–20 would have been obvious over Petrik. Pet. 47–67. 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.

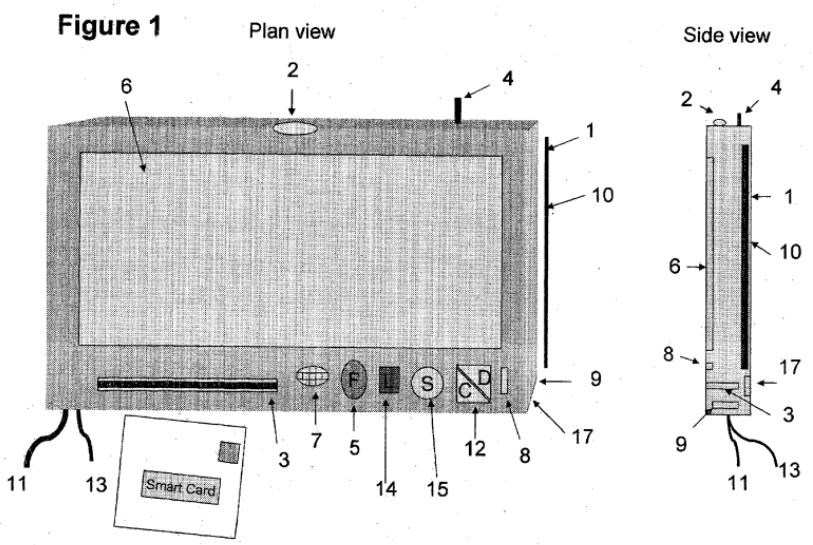

Figure 1 shows microcomputer 1, GPS module 2, smart card reader writer 3, SATELLITE/GPRS/GSM/BLUETOOTH module 4, fingerprint module 5, display 6, beeper 7, USB connector 8, accelerometer 10, and engine management system connector 13. Ex. 1009 ¶ 16, 69. When installed in the vehicle, "the unit is connected 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 driver authentication and monitoring system, comprising"

Petitioner contends that Petrik discloses a driver authentication and monitoring system. Pet. 49 (citing Ex. 1009 ¶ code (57), ¶ 25; Ex. 1004 ¶ 130). 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 master control unit in a motor vehicle for authenticating at least one driver via a driver identification and data logging device"

Petitioner contends that Petrik's in-vehicle unit teaches the master control unit, and Petrik's smart card teaches a driver identification and logging device. Pet. 49–50 (citing Ex. 1009 ¶¶ 22, 25, 69, Fig. 1; Ex. 1004 ¶¶ 131–132). Petitioner contends that during authentication, i.e., use of Petrik's smart card reader/writer and fingerprint combination, an operating profile is loaded into the in-vehicle unit that includes the route plan, speed

limits, and rest parameters. *Id.* at 51 (citing Ex. 1009 ¶ 25). Petitioner contends that "[t]he system monitors vehicle operation to determine if the driver is violating the operating profile." *Id.* at 52. 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 master control unit receives a unique identification code to permit said at least one driver to operate said vehicle within an operating profile"

Petitioner contends that a person of ordinary skill in the art "would have understood that confirmation of a driver's identity using both the smart card and fingerprint would include the in-vehicle unit (MCU) receiving information comprising/equivalent to 'a unique identification code' from both the smart card and fingerprint." Pet. 52 (citing Ex. 1004 ¶ 133); *see* Ex. 1004 ¶ 133 (Dr. Ehsani testifying that in order for smart cards supported by biometric fingerprints "to identify and authenticate a particular driver, the combination of a smart card with a biometric fingerprint must necessarily contain some indicia unique to the driver, which would be at least consistent with a unique identification code"). 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] — "a slave control unit in a motor vehicle and in communication with said master control unit, said slave control unit configured to receive commands from said master control unit and to generate at least one of an alarm signal if said at least one driver violates said operating profile unique to said at least one driver thereby providing feedback about

> *said vehicle usage and govern mechanical operations of said vehicle remotely thereby maintaining occupant safety"*

Petitioner contends that Petrik's engine management system teaches the slave control unit, which is in communication with the in-vehicle unit and is "programmed to take instructions from [the in-vehicle unit]." Pet. 52–53 (citing Ex. 1009 ¶¶ 20, 25, 69, Fig. 1). Petitioner contends that the engine management system automatically slows down or speeds up the vehicle via interaction with the GPS unit to stay within appropriate speed limits, and also controls the vehicle in response to commands from the Remote Transport Management Command Center, i.e., disabling the vehicle. *Id.* at 53–54 (citing Ex. 1009, ¶¶ 25, 30; Ex. 1004 ¶ 136).

Alternatively, Petitioner contends that it would have been obvious for Petrik's engine management system to generate a beep (i.e., an alarm signal) if the driver violates his/her operating program (e.g., exceeding the speed limit). Pet. 54. According to Petitioner, Petrik teaches that the vehicle beeps to warn the driver as it approaches a new speed zone, and interacts with the engine management system to slow or speed up the vehicle. *Id.* (citing Ex. 1009 ¶ 25). Therefore, Petitioner contends that it would be an obvious design choice to have the in-vehicle unit send the new zone's speed limit to the engine management system to send a signal for beeping in addition to sending a slow down command. *Id.* (citing Ex. 1004 ¶ 137). 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.

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 2–20

At this stage, Patent Owner does not challenge Petitioner's contentions as to claims 2–20. 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 1–20 would have been anticipated by Murphy, obvious over the combination of Murphy and Schanz, anticipated by Petrik, and obvious over the combination of Petrik and Schanz. Pet. 7–78. In addition, Petitioner contends that claim 10 would have been obvious over Murphy, Schanz, and Benco and Petrik, Schanz, and Benco. Pet. 46–47, 78–79. Because we preliminarily determine above that Petitioner has demonstrated a reasonable likelihood of prevailing in its challenge to at least one claim of the '101 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 '101 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 '101 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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