

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FORD MOTOR COMPANY,
Petitioner,

v.

SAFE DRIVING TECHNOLOGIES LLC,
Patent Owner.

IPR2021-01341
Patent 9,713,994 B2

Before SCOTT C. MOORE, RYAN H. FLAX, and BRENT M. DOUGAL,
Administrative Patent Judges.

FLAX, *Administrative Patent Judge.*

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
Granting Petitioner's Motion to Exclude
35 U.S.C. § 318(a); 37 C.F.R. § 42.64

I. INTRODUCTION

Safe Driving Technologies LLC (“Patent Owner”) is the owner of U.S. Patent 9,713,994 (Ex. 1001, “the ’994 patent”). Paper 6, 1. Ford Motor Company (“Petitioner”) filed a Petition for *inter partes* review challenging claims 1–4 and 7–10 of the ’994 patent.¹ Paper 4 (“Pet.”). We instituted trial in this proceeding on all grounds and over all challenged claims on February 11, 2022. Paper 11 (“DI” or “Institution Decision”). After institution, Patent Owner filed a Response (Paper 15 (“Resp.”)), to which Petitioner filed a Reply (Paper 17 (“Reply”)), to which Patent Owner filed a Sur-Reply (Paper 18 (“Sur-Reply”)). A final hearing was held on November 14, 2022, at which the parties presented oral argument in support of their positions in this case. Paper 29 (“Hr’g Tr.”).

Petitioner bears the burden of proving unpatentability of the challenged claims, and the burden of persuasion never shifts to Patent Owner.² *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). To prevail, Petitioner must prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e) (2018); 37 C.F.R. § 42.1(d) (2019).

¹ Claims 5 and 6 of the ’994 patent are not challenged in this proceeding. Pet. 2–3.

² Although we refer to certain of Patent Owner’s arguments in this proceeding as unpersuasive, we do not shift the ultimate burden of proof from Petitioner. Unpersuasiveness here is in the context of the parties’ arguments and the evidence of record. *See Essity Prof’l Hygiene N. Am. LLC v. Cascades Canada ULC*, 811 Fed. App’x 643 (Fed. Cir. 2020).

After considering the parties' arguments and supporting evidence, we conclude that Petitioner has met its burden to prove claims 1–4 and 7–10 are unpatentable over the asserted prior art.

Petitioner also filed a Motion to Exclude certain of Patent Owner's evidence. Paper 23 ("Motion" or "Mot."). Patent Owner opposed this motion (Paper 24 ("Opposition" or "Opp.")) and Petitioner filed a Reply to Patent Owner's Opposition (Paper 25 ("Opp. Reply")). For reasons discussed herein, the Motion is *granted*.

A. REAL PARTIES-IN-INTEREST

Petitioner identifies itself as a real party-in-interest. Pet. xii. Patent Owner identifies itself and also "General Patent Corporation" as real parties-in-interest. Paper 6, 1.

B. RELATED MATTERS

Petitioner identifies *Safe Driving Technologies LLC v. Ford Motor Company*, 1-21-cv-00064 (D. Del.) (the "related district court litigation") as a related matter. Pet. xii. Patent Owner identifies this same litigation as a related matter and also identifies the following other related matters: IPR2021-01353 concerning U.S. Patent 10,532,709; IPR2021-01446 concerning U.S. Patent 9,047,170; and IPR2022-00086 concerning U.S. Patent 8,301,108. Paper 6, 1. The parties indicate that these other patents are also at issue in the related district court litigation. Pet. xii; Paper 6, 1.

C. THE '994 PATENT

The '994 patent issued on July 25, 2017, from U.S. Application 15/352,206, which was filed on November 15, 2016. Ex. 1001, codes (45), (21), (22). On its face, the '994 patent identifies its priority to U.S. Application 14/661,589, which was filed on March 18, 2015. *Id.* at code

(63). However, in its written description, the '994 patent further references priority, ultimately, to U.S. Provisional 60/336,293, which was filed October 24, 2001. *Id.* at 1:6–17. There is no meaningful dispute here that the '994 patent is entitled to priority to this provisional application. *See, e.g.*, Pet. 3 (Petitioner asserts that the ordinarily skilled artisan would be someone as of October 24, 2001), 7 (Petitioner states all the asserted references predate October 24, 2001); *see also* Hr'g Tr. 44:17–45:11 (Patent Owner identifying the effective filing date, or priority date, of the '994 patent as the filing date of the provisional application in 2001).

The '994 patent's Abstract summarizes the invention as follows:

According to one aspect of one embodiment of the present invention, a safety control system for using applications in vehicles, includes, a communication device having at least one of an input accessible from within the vehicle and an output communicated within the vehicle, at least one sensor operable to sense at least one condition related to vehicle operation, and data about distraction features of a running application, [] and a controller communicated with the sensor and the communication device to selectively suppress at least one of said input and said output in response to a sensed parameter of said at least one condition being outside of a threshold. When an input is suppressed, the driver is prevented from accessing or inputting information into the communication device. When an output is suppressed, communication between the device and the driver of a vehicle is suppressed to, among other things, avoid distracting the driver during certain driving situations or conditions relating to the driver, vehicle and/or environment.

Ex. 1001, Abstract.

For context, regarding the claimed safety control system, the '994 patent's Figure 1, reproduced below, illustrates a vehicle having such a system:

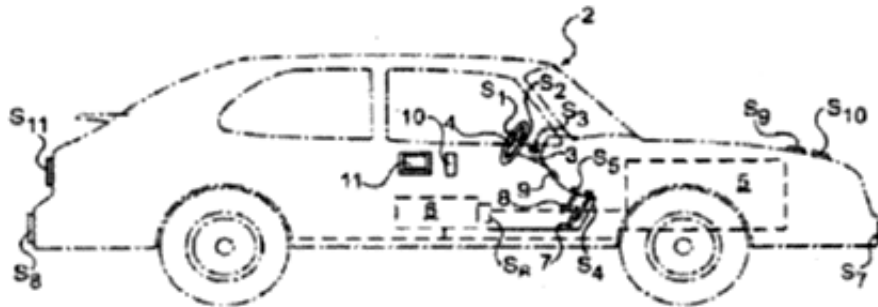


Figure 1

The '994 patent states that "FIG. 1 schematically illustrates one form of a safety control system for vehicles constructed in accordance with the present invention." *Id.* at 5:14–16. Figure 1 shows vehicle 2 (a "conventional vehicle"), including steering mechanism 3 (column), steering wheel 4, engine 5, torque converting means 6 (e.g., transmission and driveshaft), acceleration pedal 7, brake pedal 8, visual indicator and audio alarms 9 (collectively), cellular telephone 10 adjacent computer 11 (identified as telematic devices), and sensors S₁–S₁₁ distributed throughout the vehicle. *Id.* at 5:35–6:61. Sensors S₁ and S₂ are on steering wheel 4 and sense a driver, sensor S₃ is on steering mechanism 3 and senses changes in steering direction or actuation of turning indicator, sensor S₄ senses gas pedal 7 condition and/or vehicle speed or acceleration, sensor S₅ senses brake pedal 8 condition, sensor S₆ senses transmission condition at torque converter 6, sensors S₇ and S₈ sense vehicle proximity to other vehicles, sensor S₉ senses darkness or headlight activation, sensor S₁₀ senses weather conditions, and sensor S₁₁ senses turn signal activation. *Id.* at 6:35–61, 9:33–35.

In addition to cell phone 10 and computer 11 discussed above, the '994 patent identifies other telematic devices that provide email, radio, CD or DVD play, navigation system, paging, and the like, as well as blackberry

and PDA devices, etc. *Id.* at 5:56–58, 15:42–43. Figure 3, reproduced below, illustrates how the aforementioned sensors and various telematic devices are interconnected in a system via a microprocessor, which controls their functions:

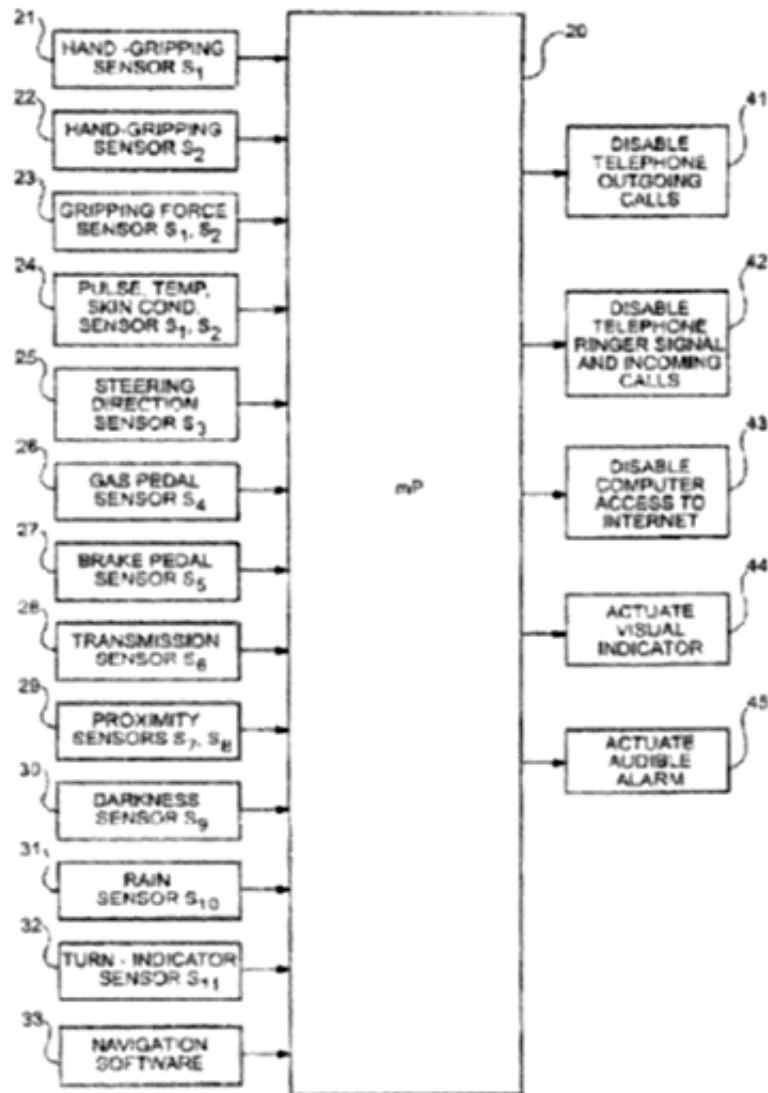


Figure 3

The '994 patent states that “FIG. 3 is a block diagram illustrating the main components in the system of FIG. 1.” *Id.* at 5:19–20. Figure 3 shows as a central block microprocessor (mP) 20, which is connected to and, as

indicated via arrows, receives inputs 21–33 from each of the aforementioned sensors S₁–S₁₁, as well as from navigation software 33. *Id.* at 9:50–11:11.

Figure 3 also shows that microprocessor 20 is further connected with and, as indicated via arrows, provides output to control disabling of telephone outgoing calls (block 41), disabling of telephone ringer signal and incoming calls (block 42), disabling of computer access to internet (block 43), actuating of visual indicator (block 44), and actuating of audible alarm (block 45). *Id.* at 11:12–14:27.

The '994 patent calls microprocessor 20 a “state machine” for its ability to perform these functions. The '994 patent states:

The state machine aspect of the microprocessor may make telematic control decisions on a variety of criteria such as: (a) the frequency of use of the application, the frequency in which a number, e-mail or URL is contacted; (b) based on safety/urgency priorities, e.g. cruise or CD changer, cell messages or other telematics, or music played on the radio; (c) as preset by the operator; (d) optionally, based on other collected information from the driving system, the microprocessor will initiate calls at predetermined times out of voice mail as, for example, when the driver completes backing out of a driveway and begins a trip.

Id. at 11:18–30. The operation of an embodiment of such a system is illustrated by the '994 patent at Figure 4, which we reproduce below:

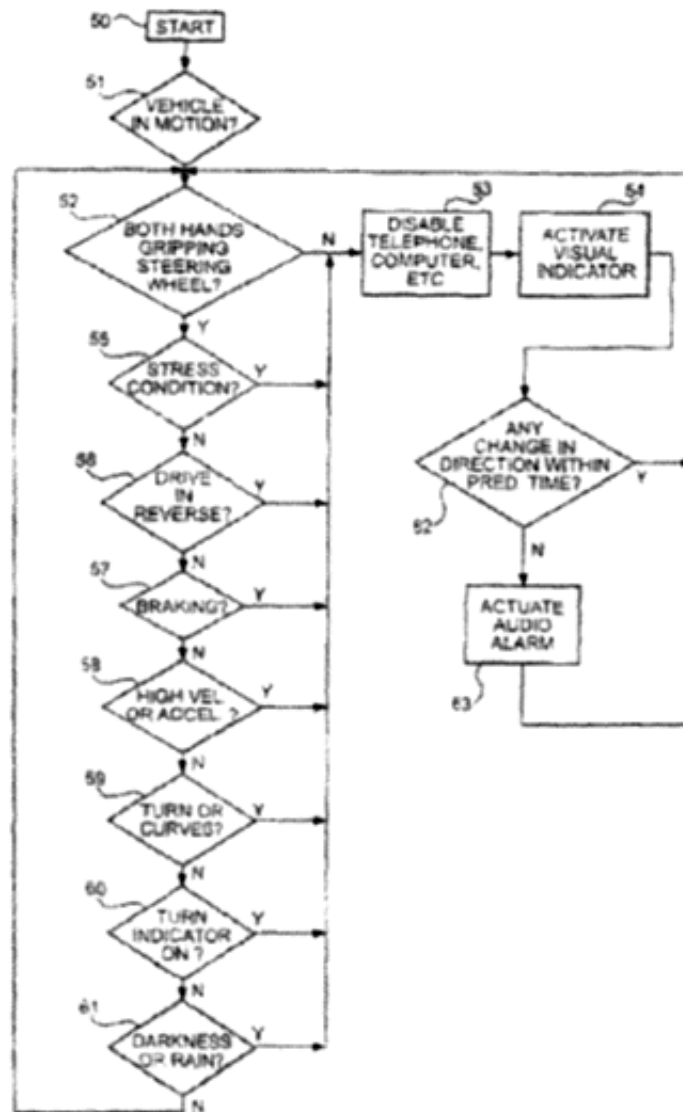


Figure 4

The '994 patent states that “FIG. 4 is a flowchart illustrating the operation of the system of FIG. 1.” *Id.* at 5:21–22. Figure 4 shows operational and algorithmic decision making of the state machine, which (via the aforementioned sensors) senses whether the vehicle is in motion (block 51), and thereafter uses sensor input to determine if potentially distracting conditions are met (blocks 55–61). *Id.* at 13:59–14:40. According to Figure

4, if microprocessor 20 determines a distracting condition is present, it outputs signals to disable vehicle components, e.g., phone, computer, etc., and provides an indicator of the condition. *Id.* Figure 4 shows that once the vehicle is started and is in motion, an ordered series of events can be sensed, as follows: the system senses 52 whether “both hands [of the driver are] gripping [the] steering wheel,” if not the system disables the telephone 53, etc., if so the system then senses 55 whether there is a “stress condition,” if not the system senses 56 whether the vehicle is “driv[ing] in reverse,” if not the system then senses 57 whether the vehicle is “braking,” if not the system then senses 58 whether the vehicle is traveling at a “high vel[ocity] or accel[erating],” if not the system senses 59 whether the vehicle is “turn[ing] or [traveling in] curves,” if not the system senses 60 whether the vehicle’s “turn indicator [is] on,” if not the system then senses 61 whether the vehicle is in “darkness or rain,” if not the system starts this process all over again. If any of the events just listed (other than hand positioning) are sensed in the affirmative the system then disables 53 the telephone, computer, etc., and activates 54 a visual indicator. *See id.*

The described factors that can be monitored and considered as potential distractions are numerous and are listed in Figure 5B of the ’994 patent. *Id.* at 17:58–21:6. They include, for example, state of the transmission, vehicle speed, and noises, and the system may take certain thresholds into consideration, for example vehicle speed, to determine whether to restrict, suppress, or disable components. *Id.* For example, if the system senses a high vehicle speed it may disable the telephone entirely, but if it senses a slower vehicle speed it may enable the telephone’s operation. *See id.* at 20:23–31.

The '994 patent concludes with 10 claims, of which claims 1, 9, and 10 are independent claims. *Id.* at 22:42–24:59. Claim 1 is illustrative and reproduced below with added sub-numbering, as used by the parties (*see, e.g.,* Pet. 13–27; Resp. 19–38):

[1.0] 1. A safety control system for vehicles comprising:
a telematic device running at least one software application and having at least one input and at least one output;

[1.1] at least one sensor operable to sense at least one condition related to a driving environment and data providing information indicating at least one distracting feature for at least one software application;

[1.2] a controller in communication with the sensor and the data and the software application and the telematic device, the controller configured to prevent the at least one application output from being provided to the driver in the original format of the at least one output and to provide the at least one output to the driver in a different format, and

[1.3] wherein the controller controls when at least one input into the software application and at least one output from the software application are provided to the driver so that prior to permitting the driver to access the input or prior to providing an output from the software application on the telematic device to the driver, the controller determines whether said at least one condition is within a threshold and permits the driver to access said input or provides said output to said driver only when said at least one condition is within the threshold.

Ex. 1001, 22:42–67. The '994 patent's claims 2–8 depend, directly or indirectly, from independent claim 1 (as noted above, claims 5 and 6 are not challenged). *Id.* at 23:1–24:6.

D. SUMMARY OF ASSERTED GROUNDS FOR UNPATENTABILITY

Petitioner asserts the following grounds for the unpatentability of claims 1–4 and 7–10 of the ’994 patent:

Ground	Claims Challenged	35 U.S.C. § ³	Reference(s)/Basis
1	1–4, 7–9	103	Tan ⁴
2	1–4, 7–9	103	Boies ⁵
3	2, 7, 8	103	Tan, Shuman, ⁶ Behr ⁷
4	10	103	Hardouin ⁸

See Pet. 2–3.

In support of the grounds for unpatentability Petitioner submits, *inter alia*, the Declarations of Scott Andrews (Ex. 1003; Ex. 1039). Patent Owner in opposition to Petitioner’s grounds submits, *inter alia*, the Declaration of John Peck (Ex. 2027). We find Mr. Andrews and Mr. Peck each competent to testify as to the perspective and understanding of the person of ordinary skill in the art, as defined herein. *See infra* Section II.A; *see also* (describing the witnesses’ backgrounds, qualifications, and considered materials) Ex. 1003 ¶¶ 5–22, 28, 31, 35, 39–41; Ex. 1004; Ex. 2027 ¶¶ 8–18, 20–21, App’x A.

³ The ’994 patent has an uncontested priority date of October 24, 2001, which is before AIA revisions to 35 U.S.C. § 103 took effect on March 16, 2013. 35 U.S.C. § 100 (note). Therefore, pre-AIA § 103(a) applies. Our decision is not impacted, however, by which version of the statute applies.

⁴ US 6,574,531 B2, issued June 3, 2003 (Ex. 1025, “Tan”).

⁵ US 6,266,589 B1, issued July 24, 2001 (Ex. 1026, “Boies”).

⁶ US 6,161,071, issued Dec. 12, 2000 (Ex. 1029, “Shuman”).

⁷ US 5,808,566, issued Sept. 15, 1998 (Ex. 1012, “Behr”).

⁸ US 6,311,078 B1, issued Oct. 30, 2001 (Ex. 1027, “Hardouin”).

II. DISCUSSION

A. LEVEL OF ORDINARY SKILL IN THE ART

In determining the level of ordinary skill in the art, we consider, for example, the types of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made, the sophistication of the technology, and the educational level of active workers in the field. *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 962 (Fed. Cir. 1986).

Petitioner asserts:

An ordinary artisan would have been a person having, as of October 24, 2001, a Bachelor's degree in Electrical Engineering, Mechanical Engineering, Computer Engineering, or Computer Science, or an equivalent degree with at least two years of experience in electronic user interface systems and vehicle sensor systems or related technologies. Additional education may substitute for lesser work experience and vice-versa. (Ex.1003, ¶40.)

Pet. 3 (citing Andrews Declaration). Patent Owner does not address the definition of the person of ordinary skill in the art, either to contest Petitioner's proposal or to offer a different definition. *See generally* Resp.

We adopt Petitioner's unopposed definition of the person of ordinary skill in the art (or ordinarily skilled artisan), which appears to be consistent with the level of skill in the art reflected in the prior art of record and the disclosure of the '994 patent. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) ("the prior art itself [may] reflect[] an appropriate level" as evidence of the ordinary level of skill in the art) (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985)).

B. CLAIM CONSTRUCTION

The Board interprets claim terms in an *inter partes* review using the same claim construction standard that is used to construe claims in a civil action in federal district court. 37 C.F.R. § 42.100(b). In construing claims, district courts and the Board here, by default, give claim terms their ordinary and customary meaning, which is “the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Should claim terms require express construction, sources for claim interpretation include “the words of the claims themselves, the remainder of the specification, the prosecution history [i.e., the intrinsic evidence], and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.* at 1314 (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)). “[T]he claims themselves [may] provide substantial guidance as to the meaning of particular claim terms.” *Id.* However, the claims “do not stand alone,” but are part of “‘a fully integrated written instrument’ . . . consisting principally of a specification that concludes with the claims,” and, therefore, the claims are “read in view of the specification.” *Id.* at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 978–79 (Fed. Cir. 1995) (en banc)).

Any special definition for a claim term must be set forth in the specification “with reasonable clarity, deliberateness, and precision.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). Without such a special definition, however, limitations may not be read from the specification into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner asserts “that the limitations of the claims from the ‘994 Patent at issue in this IPR can be understood based on their ordinary and customary meaning as understood by one of ordinary skill in the art, and therefore no claim construction is necessary at this time.” Pet. 8.

However, Petitioner does discuss a dispute in the related district court litigation concerning the meaning of the language of dependent claim 2 directed to a “communication device including *at least* a pager, a telephone, a global location sensor, a temporal sensor, an optical sensor, a heading sensor, a bearing sensor, and an altitude sensor.” *Id.* (citing Ex. 1001, 23:1–26). Petitioner explains that there is some ambiguity whether the language “at least” means that each of the subsequently listed devices are required or only one of those devices is required. *Id.* at 8–9; *see also* Ex. 1033 (email from related district court litigation addressing claim 2’s meaning). In view of this ambiguity, Petitioner explains it has challenged claims 2, 7, and 8 under Grounds 1 and 2 as if the respective language means “at least one of” and under Ground 3 as if the language means “each of.” Pet. 8–9. We address this claim language below.

Patent Owner includes in its Response a section with the heading “CLAIM CONSTRUCTION,” including a table listing what Patent Owner asserts are each party’s proposed constructions for “telematic device,” “communication,” and “communication device including at least a pager, a

telephone, a global location sensor, a temporal sensor, an optical sensor, a heading sensor, a bearing sensor, and an altitude sensor.” Resp. 17–19. However, Patent Owner provides no accompanying argument or cited support (other than a cite to a Joint Amended Claim Chart, Exhibit 2026, from a related District Court proceeding). *Id.* Patent Owner merely states that “[f]or the reasons set forth below [in its Response], all of the claims of the ’994 are patentable under either Patent Owner’s or Petitioner’s claim constructions.” *Id.* at 19.

We address the claim terms below for which the parties have identified a need for construction. If in the context of our patentability analysis that follows other claim interpretation is necessary, we address it in the same portion of this decision in which that analysis occurs and as a part of that analysis.

1. “*telematic device*”

The term “telematic device” appears in claims 1, 3–7, 9, and 10. Ex. 1001, 22:42–24:58.

Although, as noted above, Patent Owner provides no argument and cites no supporting evidence in its briefing under the heading “CLAIM CONSTRUCTION,” elsewhere in its Response, Patent Owner argues that the claim term “telematic device” (Patent Owner, and at times also Petitioner, uses the term “telematics,” which is not recited by the claims), must be “*a central multifunction device that integrates together the features of information, communication, computing, and entertainment technologies*” because the “FIELD OF THE INVENTION” portion of the ’944 patent states this. Resp. 10–11 (citing Ex. 1001, 1:20–26, 3:35–40, Fig. 5B); *see also* Ex. 2027 ¶ 50 (Mr. Peck providing this same definition for “telematic

device”); *but see id.* ¶ 30 (Mr. Peck testifying that “telematics” is “a concatenation of two words – ‘telecommunications’ and ‘informatics’” and that “[t]elematic devices initially were devices that combine location technology . . . with computing capability and some form of data communications.”). Patent Owner argues that, in the ’994 patent, “the inventor acts as his own lexicographer (which, in this case, is the same as the Plain and Ordinary meaning).” Resp. 11.

Patent Owner states (again, without supporting argument or evidence) that:

It is indisputable that the multiple applications such as navigation, mobile phone interface, Internet access, radio, and vehicle status (low battery *etc.*) and others that are provided by a telematics device to a driver are necessarily done through a singular integrated multimedia output device such as a multifunction screen having both audio and visual components.

Id.

Petitioner disputes this with argument and cited evidence. Reply 2–6.

Petitioner argues that “[t]he term ‘telematics device’ should be given its plain and ordinary meaning in view of the intrinsic evidence,” but “[t]o the extent construction is necessary, Ford submits that ‘telematics device’ should be construed as ‘a telecommunications device such as a telephone, PDA, computer, blackberry, and the like.’” *Id.* at 2–3 (citing Ex. 1001, 14:42–43, 16:39–40, 16:57–59); *see also* Pet. 15, 40, 70. As to the plain and ordinary meaning, Petitioner’s position is that a “telematic device” is a telecommunications device. Reply 3; *see also* Ex. 1003 ¶ 56 (discussing telematics devices as including some combination of communications and location services), ¶ 86 (describing cell phones between 1991–2002 as including “data oriented services”).

We find Patent Owner's reliance on the '994 patent's FIELD OF THE INVENTION Section misplaced. To quote it in its entirety, it states:

The present invention relates to the field of *telematics, namely to the field of integrating information, communication, computing and entertainment technologies into vehicles* for civilian or military use. The invention particularly relates to safety control systems for vehicles to reduce driver distraction, avoiding potentially dangerous conditions tending to produce accidents.

Ex. 1001, 1:21–27 (emphasis added). Thus, even were we to consider this portion of the Specification informative of the meaning of “telematic device,” it does not limit such to “a central multifunction device,” as argued by Patent Owner, but states that the field of telematics relates to integrating information, communication, computing, and entertainment technologies *into vehicles*, generally. *Id.* Nothing about this statement requires all these features to be integrated into a single device, unless the vehicle is considered the single device (which neither party suggests). *See* Reply 4 (discussing this section of the '994 patent).

Further, we find nothing in the '994 patent supporting Patent Owner's contention that the claim term “telematic device” should be restricted to *a central multifunction device that integrates together the features of information, communication, computing, and entertainment technologies*. The '994 patent never states this. *See* Ex. 1001. Moreover, we find the '994 patent to be much more inclusive than exclusive when describing what a telematic device can be, i.e., the scope of the term.

Upon reviewing the written description of the '994 patent, we find it makes the following statements (all emphasis added):

- “The *use of telematics in general and particularly cellular telephones* by drivers while driving”
Ex. 1001, 1:33–37.
- “[M]any states and countries have enacted legislation requiring that *telephones used in vehicles by drivers while driving must be of the ‘hands free’ type and usually telematics equipment carries a warning* to educate and discourage the driver about the risk of using these devices while driving.” *Id.* at 1:39–44.
- “One example of a hazardous situation avoided by the control system illustrated in FIG. 1 is the *use of the vehicle telephone in certain situations wherein a making of a telephone call by the vehicle driver, or the receiving of an incoming call, particularly the ringing of such a call, may distract the driver* and increase the possibility of an accident when the driver is in a high-risk driving situation. Similar increased risk can result from the driver changing vehicle controls like temperature settings, or interacting (e.g. inputting or receiving output) with *other telematics* such as e-mail, radio, CD, DVD, navigation system, incoming page or the like. In such cases, *the vehicle telephone, other telematics and/or other input/output devices are suppressed* and no incoming or outgoing signals are allowed to distract the driver.” *Id.* at 5:47–61.
- “FIG. 1 further schematically illustrates *a cellular telephone 10* within the vehicle, and a computer 11 or *other multifunction telematic device* allowing access to the Internet for transmitting and/or receiving faxes or e-mail, WAN and Web access, or other input/output device.” *Id.* at 6:23–27.
- “One important control function is to *disable an incoming call from ringing the telephone 10*, and the computer or *other telematics portable or built in 11* from

accessing the Internet or announcing incoming signals, e.g. page, e-mail etc., and to indicate same by actuating a visual indicator and an audio feedback if a driver attempts to initiate telematics during an unsafe or a high risk condition, and may direct a driver to alternative driving habit to gain access to telematics.” *Id.* at 6:66–7:7.

- “As will be described more particularly below, sensors S1 and S2, FIGS. 2, 6, thus sense that both driver's hands are present on both sides of the steering wheel 4 to ***enable operation of the telephone 10 and the computer 11 or similar multi-function or standalone telematics or other devices.*** Thus, ***the telephone 10 can be permitting ‘hands free operation’ or a telephone/telematics system that can be used as such with an adapter or when docked to the system gateway,*** as required by-many laws to avoid accidents, but also the driver is permitted to use the telephone only in a ‘hands free’ manner, thereby precluding the driver from gripping a ***telephone*** to operate it even though the ***telephone*** or the telematics system may have a ‘hands free’ capability.” *Id.* at 7:52–64.
- “[C]onditions can be sensed to ***disable the telephone*** for further reducing the possibility of an accident.” *Id.* at 8:8–10.
- “When drowsiness is sensed, ***the telephone 10 would not be disabled*** since the ringing of an incoming call may be further effective to arouse the driver.” *Id.* at 8:38–40.
- “The conditions sensed by sensors S₇-S₁₁ are also such that a hazard may be produced if, during the existence of such a condition, the full attention of the driver would be diverted by the ringing of the ***telephone*** or by the use of the ***telephone*** for making an outgoing call. Accordingly, under such conditions, ***the telephone 10 is disabled*** from operation. Similarly, the ***computer 11, if present,*** is disabled from operation to preclude access to the Internet for transmitting and/or receiving faxes or e-mail, which

could also result in a similar distraction increasing the possibility of causing an accident. And further, ***other devices, including telematic devices***, vehicle signals or alarms, and the like can be ***suppressed or disabled*** to avoid or limit distractions to the driver under certain conditions.” *Id.* at 9:36–49.

- “The outputs from microprocessor 20 include control signals as shown by the following blocks: block 41, effective to ***disable the telephone or other telematics*** from making outgoing calls; block 42, effective to ***disable the telephone or other telematics*** from receiving incoming calls and from actuating the ringing signal” *Id.* at 12:42–47.
- “In addition to ***disabling incoming telephone calls***, output 42 or some other output can disable the output of any or all input/output devices to prevent communication to the driver of the particular output signals from these devices.” *Id.* at 12:59–62.
- “If such a stress condition is indicated as being present, the ***telephone***, computer, vehicle alarm or signal, etc. are also disabled (block 53), and a visual indicator activated (block 54) to indicate this condition.” *Id.* at 14:10–13.
- “In addition to ***use of a telephone or other telematic device***, the switches on the steering member 3 can also be used to control the radio, CD player, cruise control, and environmental settings in the vehicle such as the interior temperature, and blower and heat/AC settings.” *Id.* at 15:39–43.
- “[T]he driver must actually use this ‘hands free’ capability created by the system gateway in order to make or receive ***telephone calls or other telematics activities***. In addition, other sensors could also be provided ***to disable a vehicle telephone or a multi-function telematics system*** or Internet access provided by a vehicle computer in response to other conditions” *Id.* at 16:13–19.

- “The state machine can allow driver to set their preferences on ***a portable telematics device such as a cellular phone***, or a WAN, Web site or via a FTP and e-mail. Such set up can be transferred to the vehicle in use ***when the driver docks the cell phone or other portable telematics devices*** to the system gateway.” *Id.* at 16:39–44.
- “The information may be stored in any suitable form on ***any suitable device including on a telematic device (e.g. telephone, PDA, computer, and the like)***. . . .” *Id.* at 16:57–59.
- “And further examples include input and output features of various devices communicated with the driver such as ***telephones***, pagers, PDA's, computers, fax machines, GPS devices, navigation systems and displays, radios, CD players, CB's, video monitors, ***and other telematic or informational devices***.” *Id.* at 18:7–14.
- “***The communication device can be at least any of those previously mentioned herein, for example without limitation, a telephone***, PDA, computer, vehicle alarm or indicator, navigation system, DVD player/recorder, CD player/recorder, ***and other electronic and/or telematic*** or other input/output devices accessible by the driver, and/or providing information or some communication to the driver.” *Id.* at 22:4–11.

Based on the above, and considering the '994 patent in its entirety, it is apparent on this record that a cellular (mobile) telephone is within the scope of the claim term “telematic device.” *See* Hr'g Tr. 65:7–13 (Patent Owner confirming at oral argument that the '994 patent's example of a cellular phone satisfies the claimed “telematic device.”). In fact, much of the '994 patent's written description is focused on controlling a cellphone (e.g., cellular telephone 10 illustrated in Fig. 1) based on sensed, potentially distracting conditions related to driving. *See generally* Ex. 1001. This is

important here because some of Petitioner’s challenges to patentability in this proceeding rely on prior art alleged to disclose the control of a cellular phone based on distracting driving conditions and Patent Owner argues a cellular phone is not a “telematic device,” as claimed. *See, e.g.*, Pet. 39–40, 69–72; Resp. 40–43, 52–53.

We conclude that we need not expressly define the meaning of the claim term “telematic device” to render a final decision in this proceeding, but we do find that the ’994 patent is unambiguous that the claim term includes within its scope a cellular telephone, as well as a variety of other devices. *See* Reply 3; *see, e.g.*, Ex. 1001, 5:47–58.

2. “communication”

The term “communication” appears in claims 1–7, 9, and 10. Ex. 1001, 22:42–24:58.

Patent Owner asserts, again without supporting argument or evidence, that this phrase should be understood to mean “a process by which information is exchanged by individuals through a common system of symbols, signs, or behavior.” Resp. 18.

Petitioner argues that Patent Owner’s proposed definition is not found in the intrinsic record and that it would be unreasonable for the claims to require the involvement of “individuals,” i.e., humans, when the invention is directed to electronic communications (between components). Reply 6–7. Petitioner argues that the claim term “communication” does not require express construction and can be accorded its plain and ordinary meaning. *Id.*

We agree with Petitioner. Patent Owner’s proposed construction does not appear to be applicable to the invention otherwise claimed and described

in the '994 patent; for example, “a controller in communication with [a] sensor,” as recited by claim 1 would not involve any “individuals.” In agreement with Petitioner, we decline to expressly construe the claim term.

3. “*communication device including at least a pager, a telephone, a global location sensor, a temporal sensor, an optical sensor, a heading sensor, a bearing sensor, and an altitude sensor*”

The language “communication device including at least a pager, a telephone, a global location sensor, a temporal sensor, an optical sensor, a heading sensor, a bearing sensor, and an altitude sensor” appears in claim 2. Ex. 1001, 23:1–26. Claims 7 and 8 depend from claim 2. *Id.* at 23:51–24:6.

As noted above, Petitioner asserts that this phrase is ambiguous and it is unclear whether the term “at least” means that the claim requires that *all* the subsequently listed devices are required, or that only *at least one* of them is required. Pet. 8–9. In view of this perceived ambiguity, Petitioner has asserted both Ground 1 and Ground 3, where the former asserts the Tan reference individually against claim 2 (and 7 and 8) in the case that only *one* of the listed devices is required, and the latter asserts Tan with Shuman and Behr against claim 2 (and 7 and 8) in the case that *all* of the listed devices are required. *Id.* We note, however, that Petitioner clarified at oral argument that “if you just read [the disputed language] in its plain and ordinary meaning, it’s got to have all of them [the listed devices]. But really, it doesn’t matter in this case because [Patent Owner] isn’t arguing about these dependent claims” that include the disputed language. Hr’g Tr. 16:10–16.

Patent Owner asserts, again without any supporting argument or evidence, that this phrase should be understood to require “at least one” of the subsequently recited devices. Resp. 19. Patent Owner further argues,

insofar as Petitioner’s position is that the claim language requires *all* of the listed components, that position is incorrect. *Id.*

We agree with Petitioner that the disputed claim language is, indeed, somewhat confusing. It appears to us from reading the language of claim 2 as a whole that Patent Owner understood that the phrase “include at least one of” could have been used rather than the language “including at least” because Patent Owner used these different phrases at different portions of claim 2. *Compare* Ex. 1001, 23:2, *with id.* at 23:14–15. Had Patent Owner intended that the disputed claim language require *only one* of the listed devices, it appears that Patent Owner understood how to claim that.

Further, the full disputed phrase of claim 2 recites a “communication device including at least a pager, a telephone, a global location sensor, a temporal sensor, an optical sensor, a heading sensor, a bearing sensor, and an altitude sensor.” *Id.* at 23:14–17. However, adding to the ambiguity of the claim, this list of communication device *components* is tacked onto the end of a clause listing *software applications* (e.g., a telephone application and a wireless communication application), *not devices*. And, moreover, the term “communication device” is not preceded by an associated “a” or “the,” and there is no other “communication device” recited earlier in claim 2 (or claim 1 from which it depends), which further adds to the claim’s ambiguity.

Patent Owner asserts that “at least” means “at least one” and Petitioner, at least in an alternative argument, appears to potentially agree and presented a case for unpatentability based on such an interpretation. *See* Pet. 9 (compare Grounds 1 and 2 with Ground 3). Furthermore, following Patent Owner’s stated position on this claim language in its Response (at page 19), Petitioner does not argue the matter in its Reply, other than stating

at one point (not at the claim construction section) that “at least” means “all.” *See* Reply 1–7; *but see id.* at 14 (stating that the plain language of claim 2 requires all of the devices).

Thus, we could adopt Patent Owner’s interpretation of claim 2’s language where “communication device including *at least* a pager, a telephone, a global location sensor, a temporal sensor, an optical sensor, a heading sensor, a bearing sensor, and an altitude sensor” would be understood to require only *at least one of* the listed devices, e.g., just “a telephone.” However, outright adoption of Patent Owner’s proposed construction would require us to ignore the plain language of the claim, particularly in the context of the claim as a whole, and would appear to correct what, according to Patent Owner’s position here, would amount to an error in the claim language that Patent Owner could have corrected by amendment, but did not.

We decline to adopt Patent Owner’s proposed construction and accord the disputed claim language its plain meaning, which requires that that “[t]he safety control system” of claim 2 includes a “communication device including *at least* a pager, a telephone, a global location sensor, a temporal sensor, an optical sensor, a heading sensor, a bearing sensor, and an altitude sensor,” i.e., all of these devices.

Ultimately, whether the claim language “at least” means that *at least one of* or *all of* the subsequently listed devices are included in the communication device is not determinative of the outcome here. *See Nidec Motor Corp.*, 868 F.3d at 1017 (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’”). This is because, as noted above and discussed in our analysis below,

Petitioner accounts for either proposed interpretation in asserting its Grounds 1 and 3, and we are persuaded by both grounds (e.g., if only one recited component is required, Tan teaches it; if all are required, the prior art combination teaches that). Patent Owner does not contest Ground 3 for any reasons different than those asserted against Ground 1 and, notably, does not dispute Ground 3 because the cited prior art fails to teach that *all* the listed devices would have obviously been included in a safety control system, as claimed. Accordingly, our ultimate determinations regarding the patentability of each challenged claim would have been the same had we adopted Patent Owner’s proposed construction.

C. UNPATENTABILITY AND APPLICABLE LEGAL STANDARDS

“In an IPR, 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”)). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware*, 800 F.3d at 1378 (discussing the burden of proof in *inter partes* review).

Regarding obviousness, the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), reaffirmed the framework for determining obviousness set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). The *KSR* Court summarized the four factual inquiries set forth in *Graham* (383 U.S. at 17–18) that are applied in determining whether a claim is unpatentable as obvious under 35 U.S.C. § 103(a) as follows:

(1) determining the scope and content of the prior art; (2) ascertaining the

differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art;⁹ and (4) considering objective evidence indicating obviousness or non-obviousness.¹⁰ *KSR*, 550 U.S. at 406.

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at 416. “[W]hen the question is whether a patent claiming the combination of elements of prior art is obvious,” the answer depends on “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* at 417.

With these standards in mind, and in view of the definition of the ordinarily skilled artisan and our understanding of the asserted prior art, we address Petitioner’s challenges below.

D. PETITIONER’S ASSERTED PRIOR ART

We review Petitioner’s asserted prior art below.

1. *Tan*

Tan issued as U.S. Patent 6,574,531 on June 3, 2003, from U.S. Application 09/915,124, which was filed on July 25, 2001. Ex. 1025, codes (45), (21), (22). There is no dispute that *Tan* is prior art. *See generally* Resp.

Tan’s Abstract summarizes its disclosed invention as follows:

A vehicle computer system and method of providing information to an occupant of a vehicle that minimizes complete feature lock out are provided. The operating system of the computer is adapted to selectively display full and limited functionality versions of a particular screen, preferably

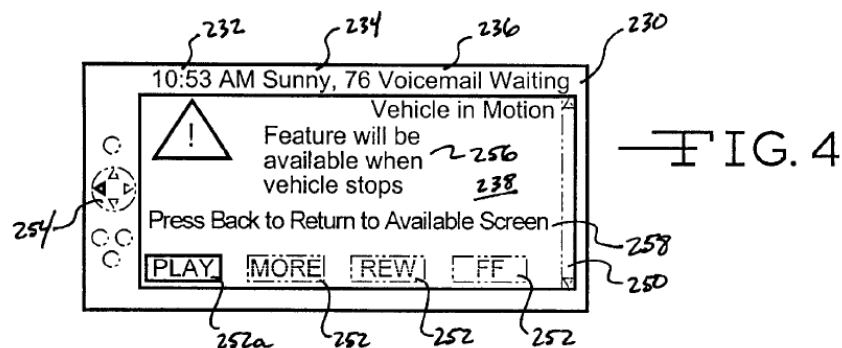
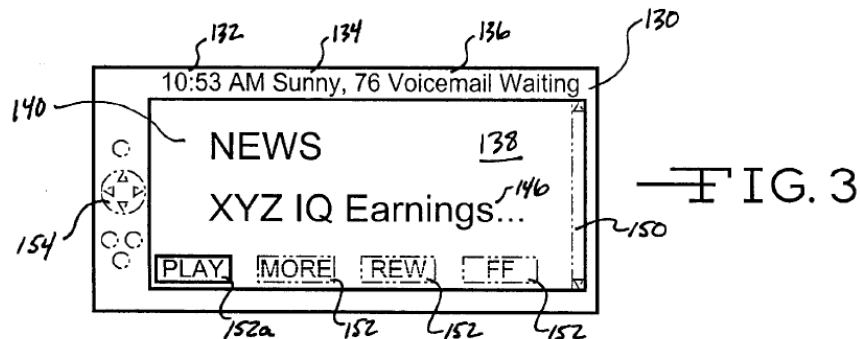
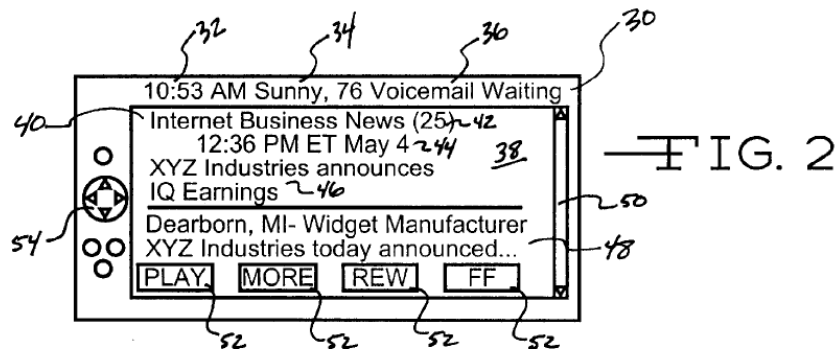
⁹ *See supra* Section II.A.

¹⁰ There is no evidence pertaining to objective indicia of non-obviousness. *See generally* Resp.

based on whether the vehicle is in motion. A text-to-speech engine can automatically generate audio based on a particular screen once motion is detected. The availability of a limited functionality version of the screen and audio, either independently or together, allow a vehicle occupant to retrieve information from the computer system without distraction.

Ex. 1025, Abstract.

Tan's Figures 2–4, reproduced below, illustrate this concept of limiting display and functionality of screen-enabled systems of a vehicle based on detecting vehicle motion:



Figures 2–4 show three views of a screen of a device in a vehicle. *See, e.g., id.* at 1:43–62, 2:39–41, 4:13–15. Tan states that “FIG. 2 is a schematic view of a full functionality version of an Internet news screen in accordance with the present invention,” “FIG. 3 is a schematic of a limited functionality version of an Internet news screen in accordance with the present invention,” and “FIG. 4 is a schematic of a common screen in accordance with the present invention.” *Id.* at 2:19–26. As these quoted portions of Tan indicate, Figures 2, 3, and 4 are three versions of the same in-vehicle computer system 10 having screen 14 for input (via touchscreen) and display, as well as hard buttons for input (*see also* Fig. 1), that illustrate decreasing degrees of information display and user-accessibility. *Id.* at 2:39–5:7.

Figure 2 shows a first, full functionality version 30 of the system where full information is displayed and full user access to all features and functions is provided. *Id.* at 4:10–33. Figure 2 shows that the device’s display shows internet-derived news 40 (and details 42, 44, 46, 48), clock 32, weather summary 34, voicemail indicator 36, active scroll bar 50 for screen navigation, active touch buttons 52, and active directional navigator 54. *Id.*

Figure 3 shows a second, alternate, limited functionality version 130 of this system where some display information is maintained, e.g., clock 132, weather summary 134, and voicemail indicator 136; some other display information is modified to be abbreviated or truncated, e.g., internet news 140, with details omitted; and some functionality is unavailable, e.g., scroll

bar 150, touch buttons 152, navigator 154, while some remains available, e.g., play touchscreen button 152a. *Id.* at 4:35–60.

Figure 4 shows a third, less-functional, common screen 230 to which the system defaults when the limited functionality version shown in Figure 3 is unavailable. *Id.* at 4:61–5:7. The common screen 230 preferably includes notice 256 to inform the vehicle occupant that they have reached a point at which even limited functionality is not available; the notice states “Vehicle in Motion” and “Feature will be available when vehicle stops.” *Id.* at 5:1–7, Fig. 4.

Tan discloses that its computer system includes electronics, such as a navigation system, internet connectivity, integrated mobile phone, and radio. *Id.* at 2:39–56, 3:13–36. Tan explains how its operating system functions to select the aforementioned versions of its display and functionality, as follows:

[T]he operating system selectively chooses which version of the screen to display based on whether the vehicle is in motion. The operating system can receive data related to vehicle motion from a motion sensor placed appropriately in the vehicle, as described above. Based on this data, the operating system preferably chooses between the two alternate versions of the screen. In the preferred method, the operating system displays the full functionality version of the screen if the vehicle is not in motion, giving an occupant of the vehicle access to all information associated with the screen. However, if the vehicle is in motion, the operating system displays the limited functionality version of the screen. This method restricts the ability of a vehicle occupant to interact with the computer system, but avoids complete lock-out of features. Of course, the application and/or computer processor can select the appropriate screen based on vehicle motion, if appropriate.

It is preferred that the sensor continually monitor for motion of the vehicle. This continuous monitoring allows the

operating system to switch from the full functionality version of the screen to the limited functionality version as soon as vehicle motion is detected.

Id. at 5:16–38.

2. *Boies*

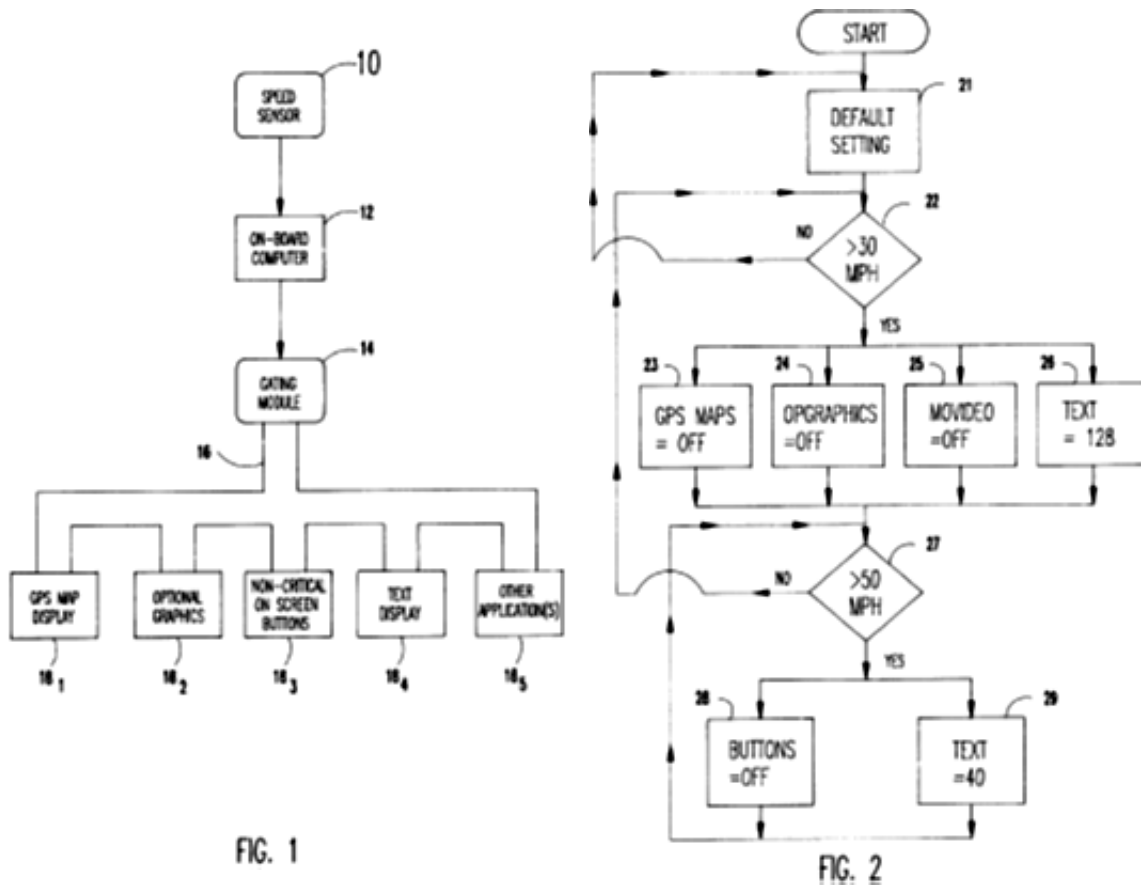
Boies issued as U.S. Patent 6,266,589 on July 24, 2001, from U.S. Application 09/443,388, which was filed on November 19, 1999. Ex. 1026, codes (45), (21), (22). There is no dispute that Boies is prior art. *See generally* Resp.

Boies summarizes its disclosed invention as:

A motor vehicle safety system determines the state of automotive electronic devices as a function of speed to minimize potential distractions to the driver. Vehicle speed data is supplied to a rules based system which applies rules to determine what functions, at a given speed, within the respective electronic devices are available.

Ex. 1026, Abstract.

Boies illustrates such a system with a block diagram and a flowchart at Figures 1 and 2, which are reproduced below, side-by-side:



Boies states that “FIG. 1 is a high level block diagram showing the basic components of a preferred embodiment of the invention; and FIG. 2 is a flow diagram showing the logic of the gating module of the system shown in FIG. 1.” *Id.* at 1:59–62.

Figure 1 (above-left) shows the connections, data flow, and functionality control by and between vehicle speed sensor 10, on-board computer 12, gating module 14, and several electronic devices, including GPS map display 18₁, optional graphics 18₂, non-critical on screen buttons 18₃, text display 18₄, and other applications 18₅. *Id.* at 1:66–2:52. As “other applications,” Boies discloses FM and internet radio, on-board cellular telephone, HVAC environmental controls, digital compass, and other

devices. *Id.* at 1:13–17, 3:31–4:14. Boies discloses that “the gating module 14 is a rule based system which determines the state, as a function of vehicle speed, of devices that may have potentially distracting functions” and that, “[f]or example, depending on the speed [of the vehicle], the gating module 14 may first determine whether particular electronic devices should be enabled or disabled and, if enabled, what portion of the full functionality can be provided to the driver as a function of automobile speed.” *Id.* at 2:11–29.

Boies includes “[a]n example of the rules applied by the gating module 14 [a]s illustrated in the following pseudocode:”

```
If speed>30
{
    GPSMaps=off;
    OptionalGraphics=off;
    MotionVideo=off;
    MaxText=128;
}

If speed>50
{
    Non-CriticalOnScreenButtons=off;
    MaxText=40;
}
```

Id. at 2:37–52.

Figure 2 (prior page, above-right) shows how Boies system implements such pseudocode and illustrates that, once the vehicle is powered up:

Vehicle speed is then monitored, preferably in real time, by gating module 14. A test is made in decision block 22 to

determine if the speed is greater than 30 mph. If not, the process loops back to function block 21, where the default settings are maintained. If the speed exceeds 30 mph, the GPS map display flag is turned to “off” in function block 23, the optional graphics display flag is turned to “off” in function block 24, the motion video (if any) flag is turned to “off” in function block 25, and the maximum text displayed flag is turned to “128” in function block 26. Flags may contain multiple bits to allow for the setting of multiple values rather than simply on or off. Thus, for example, if the text function has a two bit flag and both bits are set to “1”, then there may, for example, be no limitation to the text display. If one bit is set to “1” and the other bit set “0”, then the text display, for example, may be limited to the information content of 128 bits (or some other appropriate value). If both bits are set, for example, to “0”, then the text display is limited to the information content of 40 bits (or some other appropriate value).

The next step in the process is to determine in decision block 27 whether the speed exceeds 50 mph. If not, the process loops back to decision block 22 to determine if the speed exceeds 30 mph, and the logic of decision block 22 is again executed, as discussed above. If the test in decision block 27 indicates that the speed exceeds 50 mph, the non-critical screen buttons flag is set to “off” in function block 28, and the maximum text displayed flag is set to “40” in function block 29. The process then loops back to decision block 22 to maintain this state until the speed drops below 50 mph. Upon detecting that the speed has decreased below the thresholds of 50 (as used in this example), the process loops back to decision block 22 to determine if the speed exceeds 30 mph, and the logic of decision block 22 is again executed, as discussed above.

Id. at 2:61–3:28. Thus, Boies discloses a sensed-speed-based control system that restricts or suppresses the functionality and display of several devices in a vehicle, where one level of suppression (none or default) is instituted at a first speed threshold, a second level of suppression (higher suppression) is

instituted at a second speed threshold, and a third level of suppression (highest or full suppression) is instituted at a third speed threshold. *Id.* Boies describes how these various levels of suppression may be instituted in devices such as a radio or a cellphone. *Id.* at 3:29–4:14.

3. *Shuman*

Shuman issued as U.S. Patent 6,161,071 on December 12, 2000, from U.S. Application 09/268,162, which was filed on March 12, 1999. Ex. 1029, codes [45], [21], [22]. There is no dispute that Shuman is prior art. *See generally* Resp.

Shuman summarizes its disclosed invention in its Abstract, as follows:

A computing architecture for a motorized land-based vehicle is disclosed. The computing architecture includes a data network comprised of a plurality of interconnected processors, a first group of sensors responsive to environmental conditions around the vehicle, a second group of sensors responsive to the vehicle's hardware systems, and a map database containing data that represent geographic features in the geographic area around the vehicle. A vehicle-environment modeling program, executed on the data network, uses the outputs from the first and second groups of sensors and the map database to provide and continuously update a data model that represents the vehicle and the environmental around the vehicle, including geographic features, conditions, structures, objects and obstacles around the vehicle. Vehicle operations programming applications, executed on the data network, use the data model to determine desired vehicle operation in the context of the vehicle's environment. A driver interface receives the vehicle driver's input. Vehicle control programming, executed on the data network, receives outputs from the vehicle operations programming applications and the driver interface, determines a resolved operation for the vehicle's hardware systems and provides output commands indicative, thereof. The vehicle operations programming applications may include adaptive cruise control, automated mayday, and obstacle and collision

warning systems, among, others. Also disclosed is a new computing architecture that organizes the applications and systems in the vehicle into two groups: driver assistance systems and mobile services and information systems. Also disclosed is a drive recorder that maintains records of the statuses of all vehicle systems and of the driver.

Ex. 1029, Abstract. Further discussing the “group of sensors” identified above, Shuman discloses that sensor devices 202 may include those sensing the vehicle’s physical and geographic position, orientation, altitude, global positioning system information, gyroscopic information, road conditions such as moisture and traction, weather and meteorological conditions such as temperature, precipitation, barometric pressure, ambient and external light and visibility. *Id.* at 8:43–63.

4. *Behr*

Behr issued as U.S. Patent 5,808,566 on September 15, 1998, from U.S. Application 494,198, which was filed on June 23, 1995. Ex. 1012, codes [45], [21], [22]. There is no dispute that Behr is prior art. *See generally* Resp.

Behr summarizes its disclosed invention in its Abstract, which states, in part, “[t]he invention provides a method and system for providing route guidance and other information from a base unit to a remote unit in response to a request from the remote unit.” Ex. 1012, Abstract. Behr explains that the “route guidance” may include information about roads as navigation instructions, that information communication may be by, for example, cellular telephone or radio frequency, and that the database of geographic data need not be “on-board.” *Id.* at 3:29–30, 4:32–34, 5:16–27, 6:46–48.

Behr provides several examples of a “remote unit” for use in such a system, such as a computer, PDA (e.g., Apple Newton), and a pager, which

may be in a car, for example. *Id.* at 7:20–55, 11:6–9. Behr states that, “[i]n determining the route, the route calculator 66 preferably takes into account routing restrictions such as toll road avoidance, turn restrictions at a specified time of day, and other restrictions. Such routing restrictions may be specified by an operator at the base unit 12 in response to a temporary condition or may be added to the map database 72 when the restrictions become nationally available.” *Id.* at 10:29–35.

5. *Hardouin*

Hardouin issued as U.S. Patent 6,311,078 on October 30, 2001, from U.S. Application 09/196,542, which was filed on November 20, 1998. Ex. 1027, codes (45), (21), (22). There is no dispute that Hardouin is prior art. *See generally* Resp.

The title of Hardouin is “Automatic Shutoff for Wireless Endpoints in Motion,” and it summarizes its disclosed invention in its Abstract, as follows:

A wireless telephone does not generate an alerting signal if the speed at which the wireless telephone is moving exceeds a predefined speed when an incoming call is received. If an alerting signal is not generated for an incoming call, the wireless telephone transmits a message back to the calling party informing them that they have contacted the wireless telephone and may leave either a voice or data message. The caller can then either leave a voice message or touch tone in the caller’s telephone number. Further, the wireless telephone can inhibit the origination of calls from the wireless telephone if the speed of the wireless telephone exceeds the predefined speed. In addition, if the speed has not been equal or less than the predefined speed for a predefined amount of time, call originations and alerting signals are blocked.

Ex. 1027, code (54), Abstract. Hardouin explains that this system is for preventing driver distraction by a wireless telephone. *Id.* at 1:10–16, 1:24–46.

Hardouin discloses that a control unit of a wireless telephone detects speed, e.g., of an automobile in which the telephone is traveling, via a GPS device or via the automobile's speedometer. *Id.* at 1:57–2:15, Fig. 1. If the control unit determines that this speed is above some predefined speed it will control the telephone so as not to alert the user/driver via audio or vibration output and does not give the user/driver access to recorded information on the telephone or the ability to originate a call until the detected movement is detected to be at a rate below the predefined speed (e.g., 5 mph) for some predefined amount of time (e.g., 30 seconds). *Id.* at 2:4–38, Fig. 2.

E. PETITIONER'S PATENTABILITY CHALLENGES

As summarized above, Petitioner asserts four grounds for unpatentability of the claims of the '994 patent. *See supra* Section I.D; *see also* Pet. 2–3. We review Petitioner's challenges and Patent Owner's arguments below.

1. *Obviousness of Claims 1, 3, 4, and 9 over Tan (Ground 1) and of Claims 2, 7, and 8 over Tan, Shuman, and Behr (Ground 3)*

Petitioner's Ground 1 addresses independent claims 1 and 9, and dependent claims 2–4, 7, and 8, and asserts that each would have been obvious over Tan. *See* Pet. 9–36. Petitioner's Ground 3 asserts that dependent claims 2, 7, and 8 would have been obvious over Tan, Shuman, and Behr if we interpret claim 2's language to require a communication device including *each of* a telephone, a global location sensor, a temporal sensor, an optical sensor, a heading sensor, a bearing sensor, and an altitude sensor. *Id.* at 9, 60–69. Because each of Grounds 1 and 3 foundationally

relies on the same facts and arguments, because we interpret claim 2’s contested language to require *each* of the listed devices, and because Patent Owner does not make separate arguments for these grounds, we address these grounds together. *See supra* Section II.B.3; *see* Resp. 19–38, 50–51.

Petitioner begins by discussing Tan and maps its disclosure to each limitation of independent claim 1. Pet. 13–27 (citing Ex. 1003 ¶¶ 95–100, 102, 128–132, 134–138; Ex. 1025, Abstract, 1:43–61, 2:39–3:4, 3:24–33, 4:4–9, 4:13–29, 4:34–49, 4:61–5:4, 5:16–32, Figs. 1–4).

Regarding claim 1’s preamble and first clause limitation, 1.0 (“*A safety control system for vehicles comprising: a telematic device running at least one software application and having at least one input and at least one output*” (italics added here and below to highlight claim language)), Petitioner asserts that Tan teaches this in disclosing a vehicle computer system (having an integrated mobile phone) and method that displays full and limited functionality versions of an interactive display screen/device based on whether the vehicle is in motion. *Id.* at 13–16 (citing Ex. 1003 ¶¶ 128–132; Ex. 1025, Abstract, 2:39–3:4, 3:24–33, Fig. 1).

Turning to the next clause of claim 1, limitation 1.1 (“*at least one sensor operable to sense at least one condition related to a driving environment and data providing information indicating at least one distracting feature for at least one software application*”), Petitioner asserts that this is disclosed by Tan’s motion sensors associated with the vehicle’s axles, wheels, speedometer, parking brake, or other component of the vehicle indicating motion or lack of motion, and that motion or speed is an example of a condition of the driving environment (and a distracting feature) according to the ’994 patent. *Id.* at 17–19 (citing Ex. 1001, 17:58–63,

23:59–24:6 (claim 8), Fig 5B; Ex. 1003 ¶¶ 134–139; Ex. 1025, Abstract, 1:43–61, 4:4–9, 5:16–32); *see also* Ex. 1001, 1:58–67, 3:51–63, 9:12–26, 14:14–27, Fig. 4 (identifying vehicle speed as a *distracting feature*). The language of Tan referring to vehicle *movement* and the language of the ’994 patent referring to vehicle *speed* are not identical and identification of mere motion does not necessarily indicate a specific speed of a vehicle. However, this limitation does not expressly require speed sensing. Moreover, as we stated in our Institution Decision (*see* DI 26–27), sensing mere motion detects a vehicle’s exceeding a 0 MPH speed threshold. *See also* Reply 7–10 (addressing this and confirming our understanding). Petitioner asserts Tan teaches using such vehicle movement data to determine how to control and limit the functionality of the aforementioned screen/device. Pet. 19 (citing Ex. 1003 ¶ 139; Ex. 1025, Abstract, 1:43–61, 5:16–32).

Regarding limitation 1.2 (“*a controller in communication with the sensor and the data and the software application and the telematic device, the controller configured to prevent the at least one application output from being provided to the driver in the original format of the at least one output and to provide the at least one output to the driver in a different format*”), Petitioner asserts that Tan teaches this in disclosing a vehicle computer system and its operating system running a computer application to control a computer processor and electronics that control the visual interface of the application program and, thus, the telematic device (computer system with screen and phone) in the vehicle. *Id.* at 20–24 (citing Ex. 1003 ¶¶ 141–144, 146, 148–151; Ex. 1025, 1:43–62, 3:24–27, 3:37–55, 4:35–60, 5:18–32, Figs. 2–3). Petitioner asserts that, in response to sensed motion (speed greater than 0 MPH) information relayed to the computer system, Tan’s

computer system regulates the screen display and functionality from a first format allowing full display and functionality to a second format providing more limited display and functionality. *Id.*

Turning to the final clause of claim 1, limitation 1.3 (“*wherein the controller controls when at least one input into the software application and at least one output from the software application are provided to the driver so that prior to permitting the driver to access the input or prior to providing an output from the software application on the telematic device to the driver, the controller determines whether said at least one condition is within a threshold and permits the driver to access said input or provides said output to said driver only when said at least one condition is within the threshold*”), Petitioner asserts that the aforementioned computer system of Tan meets these elements in that it prevents certain outputs from and inputs to the system when the vehicle is in motion; for example, when a sensor detects the vehicle exceeds a speed of 0 MPH (the ordinarily skilled artisan would know this could be set to any desired speed value as evidenced by Boies (Ex. 1026, 2:53–3:28, Fig. 2)) the display screen transitions to a more limited display of information and user interactability with the device is limited. Pet. 25–27 (citing Ex. 1003 ¶¶ 152–156; Ex. 1025, 1:42–61, 4:39–60, 5:18–32, Figs. 2–3).

In view of the above-discussed assertions by Petitioner and the related evidence of record, Petitioner has accounted for all elements of claim 1 in Tan’s disclosure by a preponderance of evidence. We agree with Petitioner that Tan teaches the safety control system of claim 1 and renders claim 1 obvious. We address Patent Owner’s arguments to the contrary and why they are not persuasive below. We do not necessarily address issues not in

dispute. *See In re NuVasive, Inc.*, 841 F.3d 966, 974 (Fed. Cir. 2016) (“The Board [is] not required to address undisputed matters.”); *see also* Paper 12, 10 (Scheduling Order emphasizing that “any arguments not raised in the response may be deemed waived”).

Patent Owner makes an argument that Petitioner’s Ground 1 is premised on obviousness over Tan, but that Petitioner’s rationale for obviousness incorporates, generally, the knowledge the ordinarily skilled artisan would have had at the time and also relies upon the disclosure of Boies for its teaching that it would have been obvious to the ordinarily skilled artisan to use any detected speed as a threshold for motion triggering the throttling of the telematic device of Tan. Resp. 19. Patent Owner’s argument is that this forecloses Petitioner’s ground over Tan alone. Relatedly, Patent Owner argues that Tan’s disclosure of sensing vehicle motion does not teach the claim element of sensing “speed within a certain threshold range,” and that Petitioner relied on impermissible hindsight. *See id.* at 20–22, 28–38. Such arguments are not persuasive.

As an initial matter, all obviousness patentability analyses require consideration of the invention and prior art from the perspective of the person of ordinary skill in the art, meaning such a hypothetical person’s knowledge is always considered. *See KSR*, 550 U.S. at 418 (one must consider “the background knowledge possessed by a person having ordinary skill in the art”). Thus, under Ground 1, Petitioner does not seek to *combine* the teachings of Tan and Boies, but cites Boies as *evidence* for how the ordinarily skilled artisan would have read and understood Tan, that is, as evidence of what type of knowledge such a person would have brought to the table as of the date of invention. Pet. 25–27. Petitioner asserts that

Boies evidences that the ordinarily skilled artisan would have read Tan's disclosure of sensing vehicle motion and understood that, as Tan teaches sensing such motion by accessing, for example, the speedometer (*see id.* at 17 (citing Ex. 1025, 4:4–9)), any value for the motion threshold would have been obvious, e.g., greater than 0 MPH, greater than 30 MPH, greater than 50 MPH. *Id.*; *see also* Hr'g Tr. 20:7–16 (confirming our understanding that Petitioner did not seek to combine Boies with Tan or require any teachings of Boies under Ground 1, but that Boies was set forth as an evidentiary example of what an ordinarily skilled artisan would have known when reading Tan).

Regarding Patent Owner's related argument that Tan's disclosure of motion sensing does not render obvious the claimed “*controller determines whether said at least one condition is within a threshold,*” we disagree. As we noted above, Petitioner's position is that Tan's disclosure of sensing any motion and then restricting its telematic device's output and functionality indicates Tan's speed threshold of 0 MPH as a condition determined by its system. No speed threshold is excluded by the claim, even a low threshold speed like above 0 MPH. And, even were there some limit on such a threshold, we also agree with Petitioner's point that the ordinarily skilled artisan would have also found it obvious to use any given speed, as indicated by a speedometer, as a potentially distracting condition for Tan's motion detection. *See* Ex. 1003 ¶ 156 (Mr. Andrews testifying to this fact); *see also* Hr'g Tr. 14:19–24 (clarifying Petitioner's position on such a threshold), 41:13–18 (Patent Owner explaining, “If I'm at ten miles an hour, there's a certain amount of danger. But if I'm at 70 miles an hour, it's even more dangerous. If I put it at zero, it is the maximum safety because whenever the

vehicle’s moving it shuts off, and that’s what Tan teaches”—Patent Owner thereby conceding agreement with our analysis that Tan’s motion sensing is sensing of a speed threshold, albeit the lowest one, for “maximum safety”).

Patent Owner also argues that Tan “specifically teaches away from using a speed sensor in favor of a motion sensor and thus teaches away from using speed data as opposed to motion indication.” Resp. 21. We disagree.

Tan does not teach away from considering or sensing speed data, or from the “*controller determines whether said at least one condition is within a threshold,*” of claim 1. “[A] reference will teach away when it suggests that the developments flowing from its disclosures are unlikely to produce the objective of the applicant’s invention,” or “when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *Syntex (U.S.A.) LLC v. Apotex, Inc.*, 407 F.3d 1371, 1380 (Fed. Cir. 2005); *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Nothing about Tan criticizes, discredits, or otherwise discourages anything about the claimed invention and certainly not using speed as a threshold condition rather than mere motion. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). Tan does not teach away, as argued by Patent Owner, in fact, quite the opposite as we have addressed above. Tan teaches that sensing vehicle motion is accomplished by sensing vehicle speed in disclosing that its motion sensor is “preferably associated with the . . . speedometer . . . of the vehicle.” *See Ex. 1025*, 4:4–9.

Moreover, the Petition relies solely on evidence from the prior art, and we determine that no hindsight was improperly relied upon in Petitioner’s obviousness assertions based on Tan. *See In re McLaughlin*, 443 F.2d 1392,

1395 (CCPA 1971) (“Any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include knowledge gleaned only from applicant’s disclosure, such a reconstruction is proper.”).

Patent Owner also argues that Tan’s motion sensing “does not teach the acquisition and use of speed data” and that claim limitation 1.1 requires “a sensor that, based on Plain and Ordinary meaning, senses at least two different pieces of information”: (1) a condition of the driving environment such as whether the vehicle is in motion; and (2) data about that condition, such as speed. Resp. 22–23 (citing Ex. 2027 ¶¶ 54–56). Relating to this, Patent Owner discusses and cites the ’994 patent’s Figures 4 and 5 and, generally, argues that the claimed invention is what is shown in these figures, which disclose sensing a variety of conditions, in a specific order, and that whether some conditions are sensed at all depends on whether a preceding condition was or was not sensed. *Id.* at 23–26; *see also supra* Section II.D.1 (discussing Tan and these figures). We are not persuaded.

As we noted above, Tan’s disclosure of sensing motion of a vehicle, e.g., with a sensor accessing the speedometer, and of a computer system that uses the sensed data to regulate the output and functionality of a telematic device, renders obvious the claim limitations 1.1 and 1.3 relating to, *inter alia*, “at least one sensor operable to sense at least one condition related to a driving environment and data providing information indicating at least one distracting feature for at least one software application” and “the controller determines whether said at least one condition is within a threshold and permits the driver to access said input or provides said output

to said driver only when said at least one condition is within the threshold.”
See Pet. 17–19, 25–27; *see also* Ex. 1003 ¶¶ 134–139, 152–156.

Claim 1 of the ’994 patent does not restrict the sensed driving environment condition to any specific condition, much less a series of specific conditions (like Fig. 4 of the ’94 patent), and the ’994 patent describes vehicle speed as one driving condition that may be sensed. *See supra* Section I.C (discussing the disclosure of the ’994 patent). We find Tan’s disclosure of sensing vehicle motion renders the claim limitations obvious, as asserted by Petitioner. Here, we will not limit the claims to one preferred embodiment of the written description absent a reason to do so. *Bayer AG v. Biovail Corp.*, 279 F.3d 1340, 1348 (Fed. Cir. 2002) (“[E]xtraneous limitations cannot be read into the claims from the specification or prosecution history. . . . In other words, a court may not read into a claim a limitation from a preferred embodiment, if that limitation is not present in the claim itself.”); *see also In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (“Absent claim language carrying a narrow meaning, the PTO should only limit the claim based on the specification or prosecution history when those sources expressly disclaim the broader definition.”).

We recognize that several paragraphs of testimony from Mr. Peck’s Declaration are cited by Patent Owner as support for its argument that Tan’s motion detection is insufficient. *See* Ex. 2027 ¶¶ 67–77. Mr. Peck’s testimony relies on the premise that mere motion detection does not equate to speed detection and, thus, cannot satisfy claims that require a threshold. However, as we state above, we agree with Petitioner, and its declarant, that Tan’s disclosure of sensing of any vehicle motion teaches detecting speed exceeding a threshold of 0 MPH. We find this sufficient to render the

relevant claimed subject matter obvious even without considering the fact that the ordinarily skilled artisan would have also found it obvious to use any speed threshold for this sensing and device control, which the evidence also supports (*see* cites to Boies note above). *See* Ex. 1003, ¶ 156 (Mr. Andrews testifying that “any pre-defined speed at which the system takes action is a threshold speed,” “[a]n ordinary artisan would also have understood that the speed threshold could be set to whatever value the designer felt was appropriate,” and “[a]n ordinary artisan would have readily understood that the speed threshold in Tan (e.g. >0 MPH) is a configurable and flexible value that, as described in both Tan and Boies, can be used to limit information and functionality presented to the driver.”).

Patent Owner also argues that “[b]ecause *Tan* fails to show the sensor element from 1.1 above, it also fails to show the controller in communication with the sensor, the data, the software application and the telematic device as required by element 1.2.” Resp. 27–28 (citing Ex. 2027 ¶ 66). This argument is foundationally premised on Patent Owner’s arguments addressed above. Because those are unpersuasive, so is this argument.

Patent Owner presents no other arguments over claim 1 and Ground 1. As already stated, we are persuaded by Petitioner’s positions and evidence, and find that Petitioner has shown by a preponderance of evidence that claim 1 is obvious over Tan. We now turn to the other claims challenged under Ground 1.

Regarding claims 2–4 and 7–9, Petitioner similarly discusses how Tan teaches the recited subject matter and maps its disclosure to each claim element. *Id.* at 27–36 (citing, *inter alia*, Ex. 1003 ¶¶ 85–87, 128–139, 141–

162, 165–169, 171–175, 177–179, 181–184, 186–190; Ex. 1025, Abstract, 1:46–61, 2:39–56, 3:13–55, 4:4–60, 5:16–32, Figs. 2, 3, 4). Patent Owner does not address these assertions or the patentability of these claims under Ground 1 in any way other than having made the arguments over claim 1 discussed above. *See id.* at 38 (“Dependent claims 2–8 are therefore patentable for at least the same reasons, and no further discussion of additional reasons for patentability is deemed necessary” and “Patent Owner agrees with Petitioner that claim elements 9.1-9.3 are similar enough to claim element[s] 1.1-1.3 discussed above that those same reasons given above with respect to claim 1 demonstrate why claim 9 is patentable over the theories propounded in the Petition.”); *see also* Hr’g Tr. 12:3–8 (pointing out the lack of argument on dependent claims).

Regarding claim 2 (and claims 7 and 8 that depend therefrom), as we noted above (*see supra* Section II.B.3), under Ground 1 Petitioner asserts obviousness over Tan alone under the assumption that the phrase “at least” in the claim means *at least one of*. We find that this language does not mean *at least one of*, but that its plain meaning grammatically requires that *each* of the subsequently listed devices must be included. *Id.* For this reason, we discuss the patentability of claim 2 (and 7 and 8, below) in view of Petitioner’s Ground 3. However, as noted above, even were we to adopt Patent Owner’s proposed claim construction, as discussed, Tan teaches *at least one* of the listed devices (e.g., a telephone or global location sensor) and would, therefore, render the claim obvious without combination with other prior art.

Petitioner asserts that Tan renders obvious the claimed “*software applications*” of claim 2 (limitation 2.0) by disclosing its vehicle computer

system runs various types of computer programs, which are suitable for use with radios, mobile phones, personal computers, as well as disclosing an internet news application and a wireless communications application, where only one of the foregoing (“*at least one of*”) is required by the claim limitation. Pet. 61 (citing Ex. 1003 ¶¶ 253–257; Ex. 1025, 2:44–46, 3:19–22, 3:24–32, 4:10–20). Petitioner asserts that the combination of Tan, Shuman, and Behr renders obvious the claimed “*communication device*” (limitation 2.1) including all the listed devices because Tan discloses telephones, navigation computers, hardware with optical sensors, GPS receivers with satellite signal sensors with clocks, heading sensors, and speed sensors; Shuman discloses GPS like Tan’s that senses heading, altitude, and bearing, and an external light sensor with optical capabilities; and Behr discloses GPS that determines a route based on routing restrictions and time of day (temporal sensor), and a pager. *Id.* at 61–65 (citing Ex. 1003 ¶¶ 68–74, 259–263; Ex. 1012, 8:46–55, 10:29–32; Ex. 1013, 63–70; Ex. 1025, 2:41–50, 3:14–19; Ex. 1029, 8:43–49, 8:53–61). Petitioner also asserts that the “*at least one sensor*” limitation (2.2) is taught by Tan in disclosing a sensor that senses vehicle speed and movement, as discussed above for limitation 1.1. *Id.* at 66 (citing Ex. 1003 ¶¶ 168, 267–268; Ex. 1025, 4:4–9, 5:16–20). Finally, Petitioner asserts that limitation 2.3 (“*controller prevents . . . original format . . . and provides said at least one output . . . in a different format*”) is obvious over Tan’s disclosure of reformatting its display if the vehicle is sensed to be moving, as with limitation 1.2, discussed above. *Id.* at 67 (citing Ex. 1003 ¶¶ 169, 269–270; Ex. 1025, 1:46–61, 4:39–60, 5:18–32, Figs. 2, 3).

Petitioner asserts that it would have been obvious to the ordinarily skilled artisan to combine Shuman with Tan because Shuman's teachings on its GPS would illuminate the capabilities of and data provided by Tan's GPS; these are the same or similar devices and may have the same or similar capabilities. *Id.* at 63 (citing Ex. 1003 ¶ 261). Petitioner asserts that it would have been obvious to the ordinarily skilled artisan to also combine Behr with Tan because Behr's disclosure of monitoring the time of day to ensure its GPS provides relevant, safe, and legal instructions would also similarly support Tan's GPS functioning, and also because there would have been a benefit to including Behr's pager's functionality in Tan's system because such was a relevant communication technology. *Id.* at 64–65 (citing Ex. 1003 ¶¶ 263, 265).

We agree with Petitioner's assertions and reasoning regarding combining these prior art references with a reasonable expectation of success, and Patent Owner does not argue otherwise. *See generally* Resp.

Regarding claim 3 (“*the controller resides on at least one of portable multifunction telematic device, a built in telematic controller or a remote controller in communication with the vehicle, the driver, the software application, the input and the output to the driver*”), which depends from independent claim 1, Petitioner asserts that Tan renders the claimed elements obvious in disclosing its vehicle computer system 10 can take the form of a radio, an integrated mobile phone, or an integrated personal computer, which would include the computer and software that controls the output/functionality of the system respective of the driver. Pet. 30–31 (citing Ex. 1003 ¶¶ 171–175; Ex. 1025, 2:39–56, 3:14–55, 4:4–9).

Petitioner asserts that claim 4 (“*the software application resides on at least one of portable multifunction telematic device, a built in telematic controller or a remote controller in communication with the vehicle the driver, the software application, the input and the output to the driver*”), which depends from independent claim 1, would have been obvious over Tan because the reference discloses the vehicle computer system 10 can be a built-in telematic device with the controller for the system’s output/functionality. *Id.* at 32–33 (citing Ex. 1003 ¶¶ 177–179; Ex. 1025, 2:39–56, 3:24–25, 3:37–38, 4:10–60, Figs. 2–4).

Regarding claim 7 (“*the data indicating at least one distracting feature resides on at least one or more of a portable multifunction telematic device a built in telematic controller or a remote controller in communication with the vehicle, the driver, the software application, the input and the output to the driver, whereas such communication is carried out wirelessly via LAN, WAN, Cellular or WIFI*”), which depends from claim 2 (addressed above), Petitioner asserts that it is obvious because Tan discloses its vehicle computer system’s operating system receives data on vehicle motion to determine the output and functionality of the telematic device display, and because Tan discloses wireless communications with external networks. *Id.* at 67–68 (citing Ex. 1003 ¶¶ 181–184, 274–275; Ex. 1025, 3:19–23, 5:18–32).

As for claim 8 (“*the driving environment data provided to the system includes at least one of a vehicle data, traffic data, driver related data, applications in use data, other vehicles in traffic data, GPS data, location data, heading data, bearing data, navigation data, passengers data, pedestrian data, weather data, infrastructure data, location data and*

temporal data related to the driving environment”), which also depends from claim 2, Petitioner asserts it is obvious because Tan discloses GPS data and vehicle speed/movement data is indicative of the driving environment, as discussed above concerning limitation 1.1. *Id.* at 68–69 (citing Ex. 1003 ¶¶ 186, 277; Ex. 1025, Abstract, 3:13–22, 4:4–9, 5:16–20).

Regarding independent claim 9, Petitioner asserts it is “substantially identical” to claim 1, with no patentably distinct subject matter recited compared to claim 1. *Id.* at 34–36. Thus, Petitioner cites the same evidence and asserts claim 9 would have been obvious over Tan for the same reasons as for claim 1. *Id.* (citing Ex. 1003 ¶¶ 128–139, 141–157, 187–190). As noted above, Patent Owner agrees that claims 1 and 9 are substantially identical, or at least “similar enough” that their patentability stands or falls together. Resp. 38.

As with independent claim 1, we find Petitioner has established by a preponderance of the evidence that claims 3, 4, and 9 are obvious over Tan. Furthermore, we also find Petitioner has established by a preponderance of the evidence that claims 2, 7, and 8 are obvious over Tan, Shuman, and Behr. To summarize, we agree with Petitioner that each of claims 1–4 and 7–9 is obvious under Grounds 1 or 3, as discussed above.

2. *Obviousness of Claims 1, 3, 4, and 9 over Boies (Ground 2)*

Under Ground 2, Petitioner asserts that the ’994 patent’s claims 1–4 and 7–9 would have been obvious over Boies. Pet. 36–60. Petitioner begins with independent claim 1 and addresses how Boies teaches each limitation thereof. *Id.* at 36–49 (citing Ex. 1003 ¶¶ 104–107, 191–198, 200–207, 209–215, 217–222; Ex. 1026, Abstract, 1:12–19, 1:35–42, 2:5–3:24, 4:4–14, Figs. 1, 2).

Regarding claim 1's limitation 1.0 (*"A safety control system for vehicles comprising: a telematic device running at least one software application and having at least one input and at least one output"*), Petitioner asserts it is taught by Boies's disclosure of its own motor vehicle safety system, which includes an on-board computer and software that determines the state of the vehicle's electronic devices as a function of speed to minimize driver distractions, including the functioning of, for example, a GPS and a cellular phone, which are telematic devices having output and user input. Pet. 36–42 (citing Ex. 1001, 16:58–59 (a telephone is a telematic device); Ex. 1003 ¶¶ 104–107, 191–198; Ex. 1026, Abstract, 1:12–19, 2:5–3:13, 4:4–14, Figs. 1, 2).

Turning to claim 1's limitation 1.1 (*"at least one sensor operable to sense at least one condition related to a driving environment and data providing information indicating at least one distracting feature for at least one software application"*), Petitioner asserts this is taught by Boies in disclosing a speed sensor 10 that provides data to the on-board computer on vehicle speed as a distracting condition/feature (which the computer uses to determine whether to limit system functionality). *Id.* at 42–43 (citing Ex. 1001, 17:58–63, Fig. 5b, claim 8 (identifying vehicle speed as a distracting vehicle condition); Ex. 1003 ¶¶ 200–207; Ex. 1026, Abstract, 1:35–42, 2:6–11, 2:24–52, 4:4–14).

Regarding limitation 1.2 (*"a controller in communication with the sensor and the data and the software application and the telematic device, the controller configured to prevent the at least one application output from being provided to the driver in the original format of the at least one output and to provide the at least one output to the driver in a different format"*),

Petitioner asserts this is taught by Boies in disclosing an on-board computer and a gating module in communication with a speed sensor, where “the gating module uses speed information from the on-board computer to function as a controller and prevent an output from a GPS mapping system [and cellular phone], and instead provide that output in a different format.” *Id.* at 44–46 (citing Ex. 1003 ¶¶ 209–215; Ex. 1026, 2:17–20, 2:24–36, 4:4–13, Fig. 2).

Finally, regarding claim 1’s limitation 1.3 (“*wherein the controller controls when at least one input into the software application and at least one output from the software application are provided to the driver so that prior to permitting the driver to access the input or prior to providing an output from the software application on the telematic device to the driver, the controller determines whether said at least one condition is within a threshold and permits the driver to access said input or provides said output to said driver only when said at least one condition is within the threshold*”), Petitioner asserts that it is taught by Boies because the reference discloses controlling the functionality of the vehicle’s GPS and cellular phone (as noted above) to enable or disable functions based on vehicle speed data, for example, if the vehicle is traveling above 30 MPH certain output and input functionality is permitted and if the vehicle is traveling above 50 MPH less output and input functionality is permitted. *Id.* at 47–49 (citing Ex. 1003 ¶¶ 217–222; Ex. 1026, 2:62–3:4, 3:14–22, 4:4–13, Fig. 2).

In view of the above-discussed assertions by Petitioner and the related evidence of record, Petitioner has accounted for all elements of claim 1 in Boies’s disclosure by a preponderance of evidence. We agree with Petitioner that Boies teaches the safety control system of claim 1 so as to

render it obvious. We address Patent Owner’s arguments to the contrary and why they are not persuasive below. We do not necessarily address issues not in dispute. *See In re NuVasive, Inc.*, 841 F.3d at 974.

Patent Owner first argues that Petitioner waived arguments over Boies alone because Petitioner indicated that a determination of obviousness “requires additional features from supplemental sources such as from the knowledge of skilled artisans.” Resp. 38–39. This is not a persuasive argument. We do not agree that Petitioner admits that Boies does not suggest all of the features of claim 1. Rather, we read the Petition as taking the position that the person of ordinary skill in the art would have had some knowledge applicable to a reading of Boies. As we noted above, all obviousness patentability analyses require consideration of the invention and prior art from the perspective of the person of ordinary skill in the art, meaning such a hypothetical person’s knowledge is always considered. *See KSR*, 550 U.S. at 418 (one must consider “the background knowledge possessed by a person having ordinary skill in the art”).

Patent Owner argues that Boies fails to teach a “telematic device,” based on its proposed definition thereof, which we have not adopted. Resp. 40; *see supra* Section II.B.1. Patent Owner argues that a “telematic device” must provide multiple applications, like navigation, phone interface, internet access, radio, and vehicle status. Resp. 41. Patent Owner states that “the parties seem to be in agreement regarding the computing platforms that qualify as a telematic device including computers, PDAs and cell phones and the like.” *Id.* at 42 (citing Pet. 15). But, Patent Owner argues that in the 1990s and early 2000s mobile phones performed only one function—making

wireless calls. *Id.* at 42–43. Patent Owner argues that a “telematic device” must be a multi-function, integrated device. *Id.* at 44–46.

At oral argument, Patent Owner clarified its position on “telematic device” and the disclosures of Boies (and Hardouin), that, in the mid-1990s when Boies was published, the cellular phones would have been “single-function phones,” not “multi-function devices” that qualify as telematic devices. *See* Hr’g Tr. 44:1–15. Patent Owner took the position at oral argument that the written description of the ’994 patent requires its disclosed cellular phone to have internet accessing capabilities, thereby qualifying as a telematic device, and that the meaning of the term in the claims should reflect this requirement.

These arguments are not persuasive.

Although Patent Owner identifies where the Specification discusses “a multifunction device,” Patent Owner has not shown how the Specification supports its position that these teachings limit the meaning of “telematic device.” We disagree with the position, and we decline to read Patent Owner’s proffered limitation into the claims. *See generally* Resp.; Hr’g Tr. As we determined above (*supra* Section II.B.1), the scope of the claim term “telematic device” includes a cellular telephone, as well as a variety of other devices, none of which are limited in the fashion proposed by Patent Owner.

In any event, the ’994 patent does not go into any detail on the capabilities of its disclosed cellular phone telematic device, e.g., it does not explain that it can necessarily access the internet. *See generally* Ex. 1001. Any argument that the cellphones of the prior art and the phones of the ’994 patent were, for some reason, different as of the date of the invention is meritless as neither the ’994 patent nor the prior art qualifies the capabilities

of their mobile phones in any way. *See* Hr’g Tr. 63:17–66:7 (the Panel specifically inquired of Patent Owner why the prior art’s mobile phones would have been understood to be different than the cellular phone of the ’994 patent as of its filing date, but no persuasive reason could be provided; however, Patent Owner conceded that as of the ’994 patent’s filing date “someone seeing the word [cellular] phone in a patent would understand that’s a telematic device.”). *KSR*, 550 U.S. at 399 (obviousness is analyzed as of the time the invention was made, i.e., the effective filing date); *Graham*, 383 U.S. 691–92 (quoting § 103: “A patent may not be obtained . . . 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”). Thus, Patent Owner’s arguments are unpersuasive.

Patent Owner’s next argument is that Boies fails to teach limitation 1.2 in that the reference has no *controller in communication with a sensor* because Boies’s gating module is not in communication with Boies’s sensor and Boies’s on-board computer is an intervening device that receives a “speed signal” from the “speed sensor” and supplies an output of “data representing the speed of the vehicle” to the gating module. Resp. 45–47 (citing Ex. 2027 ¶¶ 92–96; Ex. 1026, 2:5–12, Fig. 1). Patent Owner argues at length that the data output by the sensor is not usable by the gating module without the intervening computer transforming it. *Id.* at 47–49 (citing Ex. 2027 ¶¶ 97–100). Patent Owner also argues that, based on its proposed claim construction of “communication,” there is no information exchanged by individuals in Boies. *Id.* at 49–50; *see supra* Section I.B.2.

Patent Owner's arguments are not persuasive. At the outset we note we have not adopted Patent Owner's interpretation that claim 1 requires communication between individuals. The fact that Boies's disclosure includes a computer along the communication line between a speed sensor and a gating module does not demonstrate that the sensor and gating module (the claimed controller) are not in communication. The claim does not recite that the controller and sensor must be in direct communication; it only requires that they be "in communication." Ex. 1001, 22:50. Moreover, at oral argument Patent Owner agreed that the claimed communication between claimed *sensor* and *controller* (limitation 1.2) need not be direct communication. Hr'g Tr. 51:3–6 ("JUDGE FLAX: So on this term, are you saying that it has to be direct communication? MR. SHANAHAN: No, Your Honor. That's why we have a supplemental declaration. Our expert never said that.").

Boies is quite clear that the gating module functions to control the functioning of the GPS or on-board cellular telephone when vehicle speed data is supplied to the rules based system of the gating module, that the speed data is generated by the speed sensor to the onboard computer, and that the speed data is then output as representational data to the gating module so that "[v]ehicle speed is then monitored, preferably in real time, by gating module 14." Ex. 1026, 1:26–4:14, Fig. 1. Mr. Andrews's testimony on this is that both Boies's on-board computer and gating module are in communication with its speed sensor in this way. Ex. 1003 ¶ 209; *see also* Ex. 1039 ¶¶ 18, 27, 29, 35–37; Reply 11–13. We agree—absent such communication between the sensor and the gating module, the gating module could not function to regulate the functionality and output of Boies's

GPS or cellular phone based on speed. *See* Ex. 1003 ¶¶ 210–215; *see also* Ex. 1026, 1:26–4:14, Fig. 1 (disclosing such communication and functioning).

Patent Owner presents no other arguments over claim 1 and Ground 2. As stated above, we are persuaded by Petitioner’s positions and evidence that claim 1 is obvious over Boies. We now turn to the other claims challenged under Ground 2.

Patent Owner does not address Petitioner’s assertions or the patentability of these claims under Ground 2 in any way other than the arguments over claim 1 discussed above. *See* Resp. 50 (“Dependent claims 2-4 and 7-9 are therefore patentable over *Boies* for at least the same reasons claim 1 is patentable over *Boies*. EX. 2027, ¶ 103” and “Patent Owner agrees with Petitioner that claim elements 9.0 and 9.2 are similar enough to claim elements 1.0 and 1.2 discussed above that those same reasons given above demonstrate why claim 9 elements 9.0 and 9.2 are patentable over the theories propounded with respect to claim 1. *See* Petition at 58-60. Accordingly, claim 9 is patentable over the positions provided by Petitioner for the same reasons claim 1 is patentable. EX. 2027, ¶ 104.”).

Regarding dependent claims 2, 7, and 8, Petitioner states, “[i]n this Ground 2, Petitioner applies [Patent Owner’s] apparent claim construction that the ‘communication device’ includes ‘at least *one of*’ of the devices recited in limitation [2.1] – *not* ‘each’ of the recited devices.” Pet. 52. We have not adopted this interpretation of the disputed claim language. *See supra* Section II.B.3. For this reason, and because we have already found and explained above that claims 2, 7, and 8 are proven by a preponderance of the evidence to be obvious over Tan, Shuman, and Behr under Ground 3,

we will not address dependent claims 2, 7, and 8 under Ground 2 other than to acknowledge that Petitioner did not assert the correct claim construction for this challenge.

Regarding dependent claim 3, Petitioner asserts that Boies renders it obvious by disclosing a vehicle safety system is used to control a GPS and on-board cellular phone, each of which Petitioner asserts would have been obvious to be a built-in or portable device based on the ordinarily skilled artisan's reading of Boies. Pet. 54–55 (citing Ex. 1003 ¶¶ 235–236; Ex. 1026, 2:24–3:4, 4:4–14).

Petitioner asserts that Boies renders dependent claim 4 obvious because the reference discloses “pseudocode” representing software run by the system (e.g., the GPS or on-board cellular telephone, which, as noted, can be built-in or portable) so that such a system is functionally regulated based on the afore-discussed sensor input. *Id.* at 55–56 (citing Ex. 1003 ¶¶ 238–241; Ex. 1026, 2:37–3:13, 3:29–31, 4:4–14).

Regarding independent claim 9, Petitioner asserts it is “substantially identical” to independent claim 1 and that the same evidence supports its obviousness. *Id.* at 58–60 (citing, *inter alia*, Ex. 1003 ¶¶ 191–223, 246–249). As noted above, Patent Owner agrees on the similarities between claims 9 and 1. Resp. 50.

As with independent claim 1, we find Petitioner has established by a preponderance of the evidence that claims 3, 4, and 9 are obvious over Boies under Ground 2. Therefore, to summarize, Petitioner has met its burden to prove claims 1, 3, 4, and 9 are unpatentable under this ground (claims 2, 7, and 8 are not analyzed under this ground).

3. *Obviousness of Claim 10 over Hardouin (Ground 4)*

Under Ground 4, Petitioner asserts that independent claim 10 would have been obvious over Hardouin. Pet. 69–80 (citing Ex. 1001, 8:21–26, 14:58, 16:57–59, 17:58–63, Fig. 5B; Ex. 1003 ¶¶ 109, 278–282, 284–287, 289–291, 293–296; Ex. 1027, Abstract, 1:10–16, 1:24–42, 1:57–2:3, 2:7–20, 2:29–37, 2:39–3:33, Fig. 1–3; Ex. 1030, 23:55–59). As with the other grounds, under Ground 4, Petitioner maps the disclosure of Hardouin to the limitations of claim 10.

Regarding claim 10’s limitation 10.0 (“*A safety control system for driving residing on a portable communication telematic device, the safety control system comprising: a portable communication device running at least one software application and having at least one of an input and at least one output*”), Petitioner asserts it would be obvious over Hardouin’s disclosure of a portable, wireless telephone for use in and out of a vehicle and a system that regulates the input/output and functionality of the wireless telephone via software on the device based on the speed of the vehicle so as to mitigate a dangerous driving condition. *Id.* at 70–72 (citing Ex. 1001, 16:57–59 (confirming a cellular phone is a telematic device); Ex. 1003 ¶¶ 278–282; Ex. 1027, 1:10–16, 1:24–42, 1:57–2:3, 2:17–20, 2:32–37, 2:39–3:33, Fig. 1–3).

Turning to limitation 10.1 (“*at least one sensor operable to sense at least one condition related to driving environment and data providing information indicating at least one distracting feature for at least one software application*”), Petitioner asserts that it is taught by Hardouin in disclosing its wireless telephone has a speed transceiver 129 (connected to GPS and/or speedometer) that receives data used by its control unit to

calculate vehicle speed. *Id.* at 72–74 (citing Ex. 1001, 17:58–63, Fig. 5B (confirming that vehicle speed is a distracting condition of the driving environment); Ex. 1003 ¶¶ 284–287; Ex. 1027, Abstract, 1:10–13, 1:67–2:3, 2:7–15, 2:39–3:33, Figs. 1–3).

Regarding claim 10’s limitation 10.2 (“*a controller in communication with the sensor and the data and the software application and the telematic device, wherein the controller prevents said at least one application output from being provided to the driver in the original format of said at least one output, and provides said at least one output to the driver in a different format*”), Petitioner asserts that Hardouin’s control unit 101 performs the claimed steps in that it is in communication with the speed transceiver sensor and its associated data, and is a part of and in communication with the telephone. *Id.* at 74–75 (citing Ex. 1003 ¶ 289; Ex. 1027, 2:39–43, Fig. 1).

Further, Petitioner asserts that this control unit prevents application output from the telephone to the driver in an original format (full phone function and notifications) and provides it in a different format because, if the system senses a vehicle speed exceeding some predefined speed, the control unit mutes the telephone so as not to alert the user, which is a different output according to the ’944 patent and related U.S. Patent 9,047,170 (Ex. 1030, “the ’170 patent”). Petitioner cites the ’944 patent’s disclosure that muting an alarm in response to exceeding a threshold is a form of different output for a device. *Id.* at 76 (citing Ex. 1001, 8:21–26, 14:58). Petitioner also cites the ’170 patent’s claims that state, “the step of providing said at least one output to the driver in a different format comprises selecting at least one from the group consisting of . . . muting the telematic device.” *Id.* (citing Ex. 1030, 23:55–59). Petitioner cites

Mr. Andrews’s testimony at paragraphs 290–291 as support for its position that, according to the inventor and the intrinsic record, fully muting a wireless telephone is an output different than allowing the phone to alert a user to a call (the “*original format*”). *Id.*

For context, the ’170 patent and the ’994 patent share the same named inventor, Mouhamad Ahmad Naboulsi, and have substantially similar written descriptions, and the ’994 patent states that it “is a continuation of U.S. patent application Ser. No. 14/661,598 filed Mar. 18-2015, which claims the benefit of an[d] priority from U.S. patent application Ser. No. 13/663,085, filed Oct. 29, 2012,” which is the patent application that issued as the ’170 patent. Ex. 1001, code (72), 1:6–9; Ex. 1030, codes (21), (72). The ’994 patent expressly incorporates by reference the disclosure of the ’170 patent (via its application). Ex. 1001, 1:17. Patent Owner cites *Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003) for its holding that “the same claim term in the same patent or related patents carries the same construed meaning,” and cites *Z4 Technologies, Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1348 (Fed. Cir. 2007) for its holding that it is correct to construe a claim term in a first patent as having the same meaning as the same claim term in a related patent. Reply 17. We agree with Petitioner’s interpretation of this claim limitation, and that Hardouin teaches it by disclosing a controller that mutes a cellular phone as a function of vehicle speed.

Finally, regarding limitation 10.3 (“*wherein the controller controls when at least one input into the software application and at least one output from the software application are provided to the driver so that prior to permitting the driver to access said input or prior to providing an output*”

from the software application on the telematic device to the driver, the controller determines whether said at least one condition is within a thresholds and permits the driver to access said input or provides said output to said driver only when said at least one condition is within the threshold”), Petitioner asserts that this is taught by Hardouin in disclosing the functioning of the wireless telephone is inhibited (as noted above) if the speed of the wireless phone in the vehicle exceeds a predefined speed (e.g., 5 MPH). Pet. 77–80 (citing Ex. 1003 ¶¶ 293–295; Ex. 1027, Abstract, 1:25–28, 1:37–40, 2:16–19, 2:29–32, 2:39–3:15, Figs. 2–3).

In view of the above-discussed assertions by Petitioner and the related evidence of record, Petitioner has accounted for all elements of claim 10 in Hardouin’s disclosure by a preponderance of evidence. We agree with Petitioner that Hardouin teaches the safety control system of claim 10 so as to render it obvious. We address Patent Owner’s arguments to the contrary and why they are not persuasive below. We do not necessarily address issues not in dispute. *See In re NuVasive, Inc.*, 841 F.3d at 974.

Similar to its argument over Ground 2, Patent Owner argues that Hardouin fails to teach a *telematic device*, based on Patent Owner’s claim construction of the term. Resp. 52. Like Boies, Hardouin teaches a mobile telephone and for the same reasons discussed above, we find that Hardouin teaches a telematic device and find Patent Owner’s argument unpersuasive.

Next Patent Owner argues that Hardouin does not teach the second “different” output of limitation 10.2 because disabling all features of a mobile phone does not qualify as output in a different format. *Id.* at 53–59. This is not a persuasive argument because, as initially asserted by Petitioner (Pet. 76–80), the intrinsic record of the ’994 patent, which includes the

disclosure of the related '170 patent and, in particular, its claims that share terminology with claim 10 of the '994 patent, expressly defines that:

providing said at least one output to the driver in a different format comprises selecting at least one from the group consisting of changing the volume, changing the sound effect, changing the tactile feedback, ***muting the telematic device***, converting text to speech, blocking video output but permitting audio output, and replacing video output with a different display.

Ex. 1030, 23:55–61 (dependent claim 14) (emphasis added); *see also* Reply 15–20 (further addressing this point). This claimed step of providing output in a different format further defines a method recited by the '170 patent's claim 1, which recites “[a] method for controlling a telematic device in a vehicle operated by a driver” that is quite similar to the method of claim 10 in that the system senses movement, determines if a threshold is met, and prevents output in an original format and provides output in a different format. Ex. 1030, 22:55–23:6. The “different format” of claim 14 of the '170 patent informs the meaning of the “different format” of claim 10 of the '994 patent; a point of law and fact conceded by Patent Owner at the final hearing. Hr’g Tr. 30:13–16 (JUDGE FLAX: Let me ask you this. Are you disputing that your related patent’s claims would be informative of the language of your challenged patent’s claims? MR. SHANAHAN: No. I think it’s relevant.”).

We agree with Petitioner’s position that Hardouin teaches “[i]f control unit 101 determines that the speed is above a predefined amount, it does not alert the user of the wireless telephone via audio transducer 117 or vibration transducer 118,” that the '170 patent identifies “muting the telematic device” as providing the telematic device output in “a different format,” that

providing the output in a different format has the same meaning in the '170 and '994 patents, and that Hardouin therefore teaches limitation 10.2.

Ex. 1027, 2:17–20; Ex. 1030, 23:55–61; *see also* Ex. 1003 ¶¶ 289–291, 293–296 (Mr. Andrews discussing the same). Therefore, we are unpersuaded by Patent Owner's argument on this issue.

Finally, Patent Owner argues Petitioner did not sufficiently identify how Hardouin teaches a controller that determines if a threshold is exceeded to control the output of the telematic device as recited in claim 10, because Hardouin does not teach the second different output claimed. Resp. 59–60. We are not persuaded.

Petitioner identifies in Hardouin the telematic device (wireless telephone), the sensor (speed transceiver associated with GPS/speedometer), and the controller (control unit 101), required by claim 10 to perform all the recited steps. Pet. 69–80; *see also* Ex. 1003 ¶¶ 109, 278–282, 284–287, 289–291, 293–296 (addressing the same). Petitioner also explains how the ordinarily skilled artisan would have understood Hardouin in terms of how these elements perform the claimed functions. Pet. 69–80; Ex. 1003 ¶¶ 109, 278–282, 284–287, 289–291, 293–296. We find no deficiencies in Petitioner's assertions or evidence and, so, are unpersuaded by Patent Owner's argument.

In summary, we find Petitioner has established by a preponderance of the evidence that claim 10 is obvious over Hardouin.

III. PETITIONER'S MOTION TO EXCLUDE

Petitioner moves to exclude Exhibits 2030 and 2031. Mot. 1. Exhibit 2030 is U.S. Patent 8,301,108 B2 and Exhibit 2031 is a "Supplemental Declaration of John Peck." Patent Owner filed these exhibits on September

8, 2020, with Patent Owner’s Sur-Reply. Petitioner timely objected to the exhibits on September 9, 2022. Paper 19. Petitioner asserts that it requested Patent Owner withdraw the exhibits on the same day, which Patent Owner declined to do. Ex. 1043, 1. A series of communications between the parties followed, but Patent Owner, ultimately, maintained the Sur-Reply and exhibits as filed. Mot. 1–2; Ex. 1043, 2–6.

Petitioner requests that we exclude Exhibits 2030 and 2031 because they are new evidence other than deposition transcripts of the cross-examination of a reply witness, and are prohibited under 37 C.F.R. § 42.23(b), as explained in our Consolidated Trial Practice Guide. Mot. 1. Patent Owner opposes the Motion, asserting that it submitted Exhibits 2030 and 2031 not as new evidence, but as rebuttal evidence to what it deemed to be new arguments raised in Petitioner’s Reply. Opp. 1.

Petitioner is correct that our Rules, as explained in our Consolidated Trial Practice Guide (2019) (“CTPG”), prohibit submitting new evidence (without authorization) with a sur-reply other than deposition transcripts of the cross-examination of a reply witness. *See* 37 C.F.R. § 42.23(b); CTPG 73–74. The Trial Practice Guide explains:

Sur-replies to principal briefs (i.e., to a reply to a patent owner response or to a reply to an opposition to a motion to amend) normally will be authorized by the scheduling order entered at institution. ***The sur-reply may not be accompanied by new evidence other than deposition transcripts of the cross-examination of any reply witness.*** Sur-replies should only respond to arguments made in reply briefs, comment on reply declaration testimony, or point to cross-examination testimony. As noted above, a sur-reply may address the institution decision if necessary to respond to the petitioner’s reply. This sur-reply practice essentially replaces the previous practice of filing observations on cross-examination testimony.

Generally, a reply or sur-reply may only respond to arguments raised in the preceding brief. 37 C.F.R. § 42.23, except as noted above. “Respond,” in the context of 37 C.F.R. § 42.23(b), does not mean proceed in a new direction with a new approach as compared to the positions taken in a prior filing. While replies and sur-replies can help crystalize issues for decision, a reply or sur-reply that raises a new issue or belatedly presents evidence may not be considered. The Board is not required to attempt to sort proper from improper portions of the reply or sur-reply.

CTPG 73–74 (emphasis added).

Patent Owner asserts that the claims from the ’108 patent (Ex. 2030) were included in the record because they were already in Exhibit 2018 (infringement contentions from district court litigation) and therefore were not new, but, in any event, were “added . . . for the Board’s convenience.” Opp. 2. We find unpersuasive Patent Owner’s assertion that Exhibit 2030 is not new. The evidence was not newly discovered (based on Patent Owner’s assertion), yet the Exhibit was not made of record prior to Patent Owner filing it with its Sur-Reply. It was submitted with the Sur-Reply as new evidence. Also, Patent Owner argues that Exhibit 2031 is submitted to demonstrate new arguments by Petitioner to which it responds. *Id.* at 3–4.

Patent Owner does not contend nor do we find that Exhibits 2030 and 2031 are deposition transcripts of the cross-examination of any reply witness. Moreover, a supplemental declaration by an expert witness is not a proper way to identify or object to what a party perceives to be “new arguments” in a reply. *See* CTPG 73–75. Thus, the Exhibits were improperly submitted, without authorization, and in violation of our Rules and Guidance.

Our Rules and Consolidated Trial Practice Guide are clear on this prohibition. And, the Consolidated Trial Practice Guide explains: “[w]here a party believes it has a basis to request relief on a ground not identified in the rules, the party should contact the Board and arrange for a conference call with the Board and opposing party to discuss the requested relief with the judge handling the proceeding.” CTPG 75. Thus, the Board identifies appropriate ways for a party to address matters that it considers to be beyond the specific procedures outlined in the Rules. Merely submitting new evidence was not authorized by Board Rules or Guidance and Patent Owner did not seek authorization to file the new evidence.

The facts warrant excluding Exhibits 2030 and 2031 and we *grant* the Motion. *See* CTPG 81.

IV. CONCLUSION

Petitioner establishes by a preponderance of the evidence that claims 1–4 and 7–10 of the '994 patent are unpatentable as obvious.¹¹ Our final decision is summarized as follows:

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–4, 7–9	103	Tan	1, 3, 4, 9 ¹²	
1–4, 7–9	103	Boies	1, 3, 4, 9 ¹³	
2, 7, 8	103	Tan, Shuman, Behr	2, 7, 8	
10	103	Hardouin	10	
Overall Outcome			1–4, 7–10	

Further, Petitioner's Motion to Exclude is *granted* for the reasons set forth above.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has proved by a preponderance of the evidence that claims 1–4, 7–10 of the '994 patent are unpatentable;

¹¹ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

¹² Claims 2, 7, and 8 are not analyzed under this ground.

¹³ Claims 2, 7, and 8 are not analyzed under this ground.

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2; and

FURTHER ORDERED that Petitioner's Motion to Exclude is *granted*.

IPR2021-01341
Patent 9,713,994 B2

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