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14/335,981	07/21/2014	Adam Leonard Van Wiemeersch	83432379(65080-1202)	1363
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Bejin Bieneman PLC			HILGENDORF, DALE W	
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300 River Place			PAPER NUMBER	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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docket@bvbip.com

<b>Office Action Summary</b>	<b>Application No.</b> 14/335,981	<b>Applicant(s)</b> VAN WIEMEERSCH ET AL.	
	<b>Examiner</b> DALE W. HILGENDORF	<b>Art Unit</b> 3662	<b>AIA (First Inventor to File) Status</b> Yes

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### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 7/21/2014.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims\*

- 5) ☒ Claim(s) 1-22 is/are pending in the application.  
5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-22 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

\* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

### Application Papers

- 10) ☒ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 7/21/2014 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

#### Certified copies:

- a) ☐ All    b) ☐ Some\*\*    c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)  
Paper No(s)/Mail Date 7/21/2014.
- 3) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 4) ☐ Other: \_\_\_\_.

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1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

#### **DETAILED ACTION**

2. Claims 1 thru 22 have been examined.

#### ***Specification***

3. The disclosure is objected to because of the following informalities: On page 2 line 1 (P[0006]), the word "vehicle101" should be "vehicle 101".

Appropriate correction is required.

4. The use of the trademarks BLUETOOTH (P[0008], P[0011], P[0013]), VISUAL BASIC, JAVA SCRIPT and PERL (P[0031]) have been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of 35 U.S.C. 112(b):  
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3 thru 8, 10, 14 thru 19 and 21 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

7. Regarding claims 3, 10, 14 and 21 each claim recites "a driver's hands" in lines 1 or 2. Independent claims 1 (line 3) and 12 (line 2) also recite "a driver's hands". It is unclear if this is the same driver's hands or a new driver's hands. The examiner assumes it is the same driver's hands for continued examination.

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8. Regarding claims 7 and 18 each claim recites "a passenger" in line 2. Independent claims 1 (line 5) and 12 (line 4) also recite "a vehicle passenger". It is unclear if this is the same passenger or a new passenger. The examiner assumes it is the same passenger for continued examination.

***Claim Rejections - 35 USC § 101***

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 2, 9 thru 13 and 20 thru 22 rejected under 35 U.S.C. 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. Claim(s) 1 and 12 is/are directed to the judicial exception of an abstract idea of a method of organizing human activities. The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the limitations of determining the location of the driver's hands, determining the position of the passenger and providing passenger access are all activities that may be performed by a person. The driver may determine their hands are on the wheel, that the passenger is seated with the seat belt on, and allow the passenger to change the radio. The limitations do not amount to significantly more than the abstract idea, the claims do not provide improvements to another technology, improvements to the function of the computer itself, or meaningful limitations beyond generally linking abstract idea to the technological environment. The applicant's specification (P[0030] thru P[0032]) describes the computing devices which would equate to generic computers which would implement the claimed invention. The addition of structure, such as sensors to the determination of the driver's hand location and sensors to the determination of passenger position would overcome this 101 rejection.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 of this title, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole

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would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 3, 5 thru 12, 14 and 16 thru 22 are rejected under 35 U.S.C. 103 as being unpatentable over Harter Jr. et al Patent Number 6,668,221 B2 in view of Naboulsi Patent Number 8,301,108 B2.

11. Regarding claims 1 and 12 Harter Jr et al teach the claimed system and method, a user discrimination system and method of controlling an electronic device (column 1 lines 66 and 67), comprising the claimed in-vehicle computer with a processor and memory, the HMI processor 36 in the vehicle (column 4 lines 37 thru 44) and the method is performed by a user discrimination control routine 60 to control the functionality of the infotainment device 16 (column 5 lines 11 thru 13), the claimed memory is not explicitly recited, but a memory is common and well-known in the art and the control routine would provide the programming for execution of the method, this programming would need to be stored in some kind of memory, the in-vehicle computer programmed to:

the claimed determine that a vehicle passenger is in a safe position with respect to the human machine interface, "The occupant sensor system 40 also includes a weight based sensor 42 and a belt tension switch 44. The weight based sensor 42 detects the amount of weight and the distribution of the weight on the passenger seat to detect the presence of a passenger other than the driver seated in the front passenger seat adjacent to the driver's seat. The belt tension switch 44 detects the tension on the seatbelt associated with the passenger seat. By knowing the seatbelt tension and weight distribution, the occupant sensor system 40 can determine if the passenger is a child or an adult. Accordingly, the occupant sensor system 40 determines the presence of a passenger, whether the passenger detected is a child or an adult, and whether the passenger is attempting to interface with the infotainment device 16. The occupant sensor system 40 provides the determined information to the human machine interface processor 36 which, in turn, further processes the information according to a control routine described hereinafter to control functionality made available by the infotainment device 16." (column 4 line 59 thru column 5 line 10 and Figure 4); and

the claimed provide passenger access to the human machine interface so that the passenger may access operations and the operations are inaccessible to the driver, "a user discrimination system

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and method of controlling an electronic device, such as an infotainment device, in a vehicle to inhibit functions made available to the driver while allowing enhanced functionality to another passenger in the vehicle” (column 1 lines 67 thru column 2 lines 3).

Harter Jr et al do not teach the claimed determine that a driver's hands are in a predetermined location including on a steering wheel, but does determine if the vehicle is being operated by the driver in step 63 (Figures 5A and 5B) the control routine 60 checks to determine if the vehicle transmission is in park, and thus the vehicle is not moving. If the vehicle transmission is in park, control routine 60 proceeds to step 84 to allow a first level of enhanced functionality of the infotainment device. If the vehicle transmission is not in park, indicative of a vehicle that is moving, control routine 60 proceeds to step 64 to allow a limited second level of base functionality.(column 5 lines17 thru 25) With the vehicle determined to not to be in park, then the driver is operating the vehicle, and the driver's access to the vehicle infotainment system is inhibited while allowing access to the passenger (which is the purpose of the claimed invention). Naboulsi teaches sensors S1 and S2 sense that both driver's hands are present on both sides of the steering wheel 4 to enable operation of the computer. (column 7 lines 29 thru 32) It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the user discrimination control of Harter Jr et al with the hand position sensors of Naboulsi in order to provide the safe control of a vehicle, to reduce the possibility of an accident to reduce or avoid driver distraction during operation of a vehicle. (Naboulsi column 2 lines 12 thru 18)

12. Regarding claims 3 and 14 Harter Jr et al do not teach the claimed plurality of sensors provide inputs for determining whether the driver's hands are at the predetermined location. Naboulsi teaches sensors S1 and S2 sense that both driver's hands are present on both sides of the steering wheel 4 to enable operation of the computer. (column 7 lines 29 thru 32) It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the user discrimination control of Harter Jr et al with the hand position sensors of Naboulsi in order to provide the safe control of a vehicle, to reduce the possibility of an accident to reduce or avoid driver distraction during operation of a vehicle. (Naboulsi column 2 lines 12 thru 18)

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13. Regarding claims 5 and 16 Harter Jr et al teach the claimed sensors include a sensor in a display of the human machine interface, the human machine interface may include touch screen inputs. (column 3 lines 13 thru 16)

14. Regarding claims 6 and 17 Harter Jr et al do not teach the claimed perform validation to determine whether signals from the sensors represent a human heartbeat. Naboulsi teaches one or both of the sensors S1, S2 indicate the heart pulse rate. (column 9 lines 34 thru 39) It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the user discrimination control of Harter Jr et al with the hand position sensors indicating heart pulse rate of Naboulsi in order to provide the safe control of a vehicle, to reduce the possibility of an accident to reduce or avoid driver distraction during operation of a vehicle. (Naboulsi column 2 lines 12 thru 18)

15. Regarding claims 7 and 18 Harter Jr et al teach the claimed plurality of sensors provide inputs to determine whether the passenger is in a safe position, "The occupant sensor system 40 also includes a weight based sensor 42 and a belt tension switch 44. The weight based sensor 42 detects the amount of weight and the distribution of the weight on the passenger seat to detect the presence of a passenger other than the driver seated in the front passenger seat adjacent to the driver's seat. The belt tension switch 44 detects the tension on the seatbelt associated with the passenger seat. By knowing the seatbelt tension and weight distribution, the occupant sensor system 40 can determine if the passenger is a child or an adult. Accordingly, the occupant sensor system 40 determines the presence of a passenger, whether the passenger detected is a child or an adult, and whether the passenger is attempting to interface with the infotainment device 16. The occupant sensor system 40 provides the determined information to the human machine interface processor 36 which, in turn, further processes the information according to a control routine described hereinafter to control functionality made available by the infotainment device 16." (column 4 line 59 thru column 5 line 10 and Figure 4)

16. Regarding claims 8 and 19 Harter Jr et al teach the claimed the sensors include one of a weight sensor, a camera and an occupant classification system, "The occupant sensor system 40 also includes a weight based sensor 42 and a belt tension switch 44. The weight based sensor 42 detects the amount of

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weight and the distribution of the weight on the passenger seat to detect the presence of a passenger other than the driver seated in the front passenger seat adjacent to the driver's seat. The belt tension switch 44 detects the tension on the seatbelt associated with the passenger seat. By knowing the seatbelt tension and weight distribution, the occupant sensor system 40 can determine if the passenger is a child or an adult. Accordingly, the occupant sensor system 40 determines the presence of a passenger, whether the passenger detected is a child or an adult, and whether the passenger is attempting to interface with the infotainment device 16. The occupant sensor system 40 provides the determined information to the human machine interface processor 36 which, in turn, further processes the information according to a control routine described hereinafter to control functionality made available by the infotainment device 16.” (column 4 line 59 thru column 5 line 10 and Figure 4)

17. Regarding claims 9 and 20 Harter Jr et al teach the claimed determine that the driver is coaching the passenger with respect to the operation of the human machine interface, decision step 82 determines if the driver has stared continuously at the human machine interface for a time period of greater than two seconds (Figure 5B and column 5 lines 55 thru 57) this occurs if the sensor curtain is broken (step 78) which identifies that the passenger is accessing the human machine interface (column 5 lines 46 thru 50); and

the claimed revoke the passenger access to the operations of the computer, “If the driver has been staring at the human machine interface for greater than two seconds, control routine 60 returns to step 63.” (column 5 lines 58 thru 60 and Figure 5B) and step 63 determines if the vehicle is in park, and if not in park (in operation) only base functionality is allowed. (Figure 5A step 64)

18. Regarding claims 10 and 21 Harter Jr et al do not teach the claimed determining driver's hands are at a predetermined location includes determining that the palms and fingers of both hands are on the steering wheel. Naboulsi teaches sensing the driver gripping the steering wheel (column 3 lines 59 thru 61), and sensing the gripping force (column 7 lines 13 thru 16). The gripping of a steering wheel is done by both the palm and fingers of a hand, it is obvious that the palm and fingers of the driver's hand are being sensed by the gripping force of the system of Naboulsi. Naboulsi also teaches the sensors S1 and S2 sense that both driver's hands are present on both sides of the steering wheel 4 to enable operation of



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the computer. (column 7 lines 29 thru 32) It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the user discrimination control of Harter Jr et al with the hand position sensors of Naboulsi in order to provide the safe control of a vehicle, to reduce the possibility of an accident to reduce or avoid driver distraction during operation of a vehicle. (Naboulsi column 2 lines 12 thru 18)

19. Regarding claims 11 and 22 Harter Jr et al teach the claimed human machine interface includes one of a visual display, touchscreen, speaker and microphone, "the human machine interface may include any of various inputs and output devices including other conventional inputs such as a microphone and touch screen inputs, and outputs including audio speakers and LED lights" (column 3 lines 13 thru 17).

20. Claims 2 and 13 are rejected under 35 U.S.C. 103 as being unpatentable over Harter Jr. et al Patent Number 6,668,221 B2 and Naboulsi Patent Number 8,301,108 B2, as applied to claims 1 and 12 above, and in further view of Forcke et al Patent Application Publication Number 2015/0120081 A1.

21. Regarding claims 2 and 13 Harter Jr et al and Naboulsi do not teach the claimed predetermined location for the driver's hands includes the gearshift knob. But Naboulsi does teach "the physiological conditions can be monitored by other sensors mounted elsewhere in the vehicle including on other locations" (column 9 lines 46 thru 48). Forcke et al teach "the person's pulse or blood pressure detected by a biometric sensor on a steering wheel or gear shifter of the vehicle" P[0049]. The gear shifter of Forcke et al would be the other location in the vehicle of Naboulsi. It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the user discrimination control of Harter Jr et al and the hand position sensors of Naboulsi with the biometric sensors on the gear shift of Forcke et al in order to provide safety monitoring for a human-driven vehicle to determine the driving safety and actively detecting whether a hand of a driver is operating the vehicle. (Forcke et al P[0006])

22. Claims 4 and 15 are rejected under 35 U.S.C. 103 as being unpatentable over Harter Jr. et al Patent Number 6,668,221 B2 and Naboulsi Patent Number 8,301,108 B2, as applied to claims 1, 3, 12 and 14 above, and in further view of Wada et al Patent Application Publication Number 2009/0231145 A1.

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23. Regarding claims 4 and 15 Harter Jr et al and Naboulsi do not teach the claimed sensors include one of a plurality of electrocardiogram sensors and a capacitive sensor. But Naboulsi does use sensors to determine physiological conditions including the gripping force applied by a hand of the driver while gripping the steering wheel, a predetermined pulse rate, temperature, blood pressure, blood oxygen level, and/or skin conductivity of the driver. (column 3 lines 59 thru 63) Wada et al teach "An electrocardiographic sensor 73b includes multiple electrodes provided for the ring 62 of the steering wheel 6. The electrocardiographic sensor 73b detects an electrocardiographic signal when the driver holds two different electrodes." (P[0115], and Figures 5A and 5B), and the sensors may include an "Electrostatic sensor: Checks for a change in electrostatic capacitance to detect an object or the user's hand." P[0225] It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the user discrimination control of Harter Jr et al and the hand position sensors of Naboulsi with the electrocardiogram sensor system and electrostatic capacitance sensor to detect a user's hand of Wada et al in order to. (Wada et al P[0006])

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DALE W. HILGENDORF whose telephone number is (571)272-9635. The examiner can normally be reached on Mon-Thur 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Helal Algahaim can be reached on 571-270-5227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DALE W HILGENDORF/  
Examiner, Art Unit 3662



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14/335,981	07/21/2014	Adam Leonard Van Wiemeersch	83432379(65080-1202)	1363
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Bejin Bieneman PLC			HILGENDORF, DALE W	
Ford Global Technologies, LLC			ART UNIT	
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Suite 1650			3662	
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<b>Office Action Summary</b>	<b>Application No.</b> 14/335,981	<b>Applicant(s)</b> VAN WIEMEERSCH ET AL.	
	<b>Examiner</b> DALE W. HILGENDORF	<b>Art Unit</b> 3662	<b>AIA (First Inventor to File) Status</b> Yes

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- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
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- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims\*

- 5) ☒ Claim(s) 1,2,4-13 and 15-24 is/are pending in the application.  
5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1,2,4-13 and 15-24 is/are rejected.
- 8) ☒ Claim(s) 24 is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

\* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto:PPHfeedback@uspto.gov).

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 7/21/2014 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
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- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

#### Certified copies:

- a) ☐ All    b) ☐ Some\*\*    c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
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  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 3) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)<br>Paper No(s)/Mail Date ____. | 4) <input type="checkbox"/> Other: ____.  |

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1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

#### **DETAILED ACTION**

2. Amended claims 1, 2, 4 thru 13 and 15 thru 24 have been entered into the record. Claims 3 and 14 were cancelled by the applicant.

3. The examiner requests that the applicant verifies the dependencies of the method claims 13 and 15 thru 22. The dependent claim have changed their dependency from the claims of 7/21/2014 without an indication of the being amended. The below rejections of claims 13 and 15 thru 22 are based on the current version of the claims.

#### ***Response to Amendment***

4. The amendments to the independent claims 1 and 12 overcome the 35 U.S.C. 101 rejection from the previous office action (11/24/2015). The 35 U.S.C. 101 rejection is withdrawn.

5. The amendments to the claims changed the 35 U.S.C. 112(b) rejections from the previous office action (11/24/2015). The previous 35 U.S.C. 112(b) rejections are withdrawn, and the 35 U.S.C. 112(b) rejections found below in this office action are the only pending 35 U.S.C. 112(b) rejections.

6. The amendments to the specification overcome the specification objections from the previous office action (11/24/2015). The specification objections are withdrawn.

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 2, 4 thru 13 and 15 thru 24 have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection.

#### ***Claim Objections***

8. Claims 13, 18, 20 and 22 are objected to because of the following informalities: Even though these claims appear not to be amended, the dependency has changed from claim 12 (claims of 7/21/2014) to claim 11 (current claims). The examiner assumes this is a typographical error because claim 11 is a system claim and claim 12 is a method claim (claims 13, 18, 20 and 22 are also dependent

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method claims). The examiner is examining these claims based on their dependency to claim 12.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 1, 2, 4 thru 13, 15 thru 22 and 24 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly amended limitations of claims 1 and 12 (and claim 24) recite identifying a driver of a vehicle based on data from an electrocardiogram sensor, but the applicant's disclosure does not have any recitation of an identification of a specific driver based on any sensor data. The examiner is unclear to the intended meaning of the limitation in question. There are two ways that this limitation may be interpreted. First, the recited "identify a driver" as the system is identifying individual and specific drivers based on the difference in the electrocardiogram sensor readings. If this is the intended interpretation, then this 112(a) rejection will stand. The second interpretation is that recited "identify a driver" is to identify that a generic driver is driving the vehicle, that the electrocardiogram sensor has identified that a person with a heartbeat is driving the vehicle. If this interpretation is correct, then this 112(a) rejection will be withdrawn and the 112(b) rejection below will stand.

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11. The following is a quotation of 35 U.S.C. 112(b):  
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1, 2, 4 thru 13 and 15 thru 24 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

13. Regarding claims 1, 12 and 24, and the claimed identifying a driver (claim 1 line 5, claim 12 line 2 thru 4, claim 24 line 2), it is unclear if this limitations is to identify a specific driver (where the electrocardiogram data acts as a unique identifier of an individual), or to identify that any driver with a heartbeat is driving the vehicle. The examiner assumes that the sensor identifies a generic driver for continued examination. If this is not the proper assumption, then the above 112(a) rejection will stand.

14. Regarding claims 7 and 18 each claim recites "a passenger" in line 2. Independent claims 1 (line 8) and 12 (line 7) also recite "a vehicle passenger". It is unclear if this is the same passenger or a new passenger. The examiner assumes it is the same passenger for continued examination.

15. Claim 8 recites the limitation "the second sensors" in line 1. There is insufficient antecedent basis for this limitation in the claim.

16. Regarding claims 10 and 21 each claim recites "a driver's hands" in line 1. Independent claims 1 (line 6) and 12 (line 4) also recite "the driver's hands". It is unclear if this is the same driver's hands or a new driver's hands. The examiner assumes it is the same driver's hands for continued examination.

17. Claim 23 recites the limitation "the passenger" in line 5. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:



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A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 of this title, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 6 thru 9, 11, 12, 18, 20 and 22 are rejected under 35 U.S.C. 103 as being unpatentable over Yanagidaira et al Patent Application Publication Number 2008/0071177 A1 in view of Harter Jr et al Patent Number 6,668,221 B2.

11. Regarding claims 1 and 12 Yanagidaira et al teach the claimed vehicle system and method, the system of Figures 1 or 13 and the method of Figures 2 or 5, comprising:

the claimed electrocardiogram sensor, "an electrode sensor that includes at least a pair of electrodes and detects heartbeats by detecting potential difference between portions of a body that directly contact the electrodes" P[0010], the electrodes 100a and 100b are positioned on the steering wheel 100 (Figure 1 and P[0042]), and "a bio-information detecting apparatus to be installed in a car which detects bio-information concerning the mental and physical states of the driver based on electro-cardio information" P[0045]; and

the claimed computer with a processor and memory, "The controller 120 includes a semiconductor memory, a CPU, etc., and also includes a memory unit 121, a calculating unit 122, a judging unit 123, a control unit 124, and an input setting unit 125." P[0056], the computer programmed to:

the claimed determine an identity of a driver of the vehicle based on the data from the electrocardiogram sensor, "The initial setting operation as above may be executed every time the driver gets in the car, or be executed regularly. When the driver has been changed, the heart rate and the heartbeat-interval reference value also change according to the driver. Therefore, in this case, the initial setting operation is executed again, or the initial setting values for each driver may be stored and the initial settings may be automatically changed by identifying a driver.

Means of identifying a driver may be key input of IDs, etc., finger prints, voices, facial characteristics, and other bio-information." P[0066];

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the claimed determine that the driver's hands are at a predetermined location in the vehicle on the steering wheel, "The steering wheel sensor 100 is configured such that the left hand contacts to the electrode 100a on one hand and the right hand contacts the electrode 100b on the other hand while a driver is operating the steering wheel." P[0049] and "The steering wheel sensor 100 can directly detect the potential difference between the hands obtained when the hands of the driver contact the electrodes 100a and 100b, as an electric signal as electro-cardio information (more specifically, electro-cardiogram) of the driver." P[0050];

Yanagidaira et al do not teach the claimed determine that a vehicle passenger is in a safe position with respect to the human machine interface, but do teach the detection of passengers using in-seat pressure sensors P[0125] and can detect the heartbeat of the passenger through the in-seat sensors P[0126]. Though the purpose of Yanagidaira et al is to detect the drowsiness of the driver and passengers, the function of the system to obtain the heartbeats of the occupants would be implemented in a system where that information would be used for other purposes. The system of Yanagidaira et al is to gather the information used by the access restriction system of Harter Jr et al. Harter Jr et al teach the claimed determine that a vehicle passenger is in a safe position with respect to the human machine interface, "The occupant sensor system 40 also includes a weight based sensor 42 and a belt tension switch 44. The weight based sensor 42 detects the amount of weight and the distribution of the weight on the passenger seat to detect the presence of a passenger other than the driver seated in the front passenger seat adjacent to the driver's seat. The belt tension switch 44 detects the tension on the seatbelt associated with the passenger seat. By knowing the seatbelt tension and weight distribution, the occupant sensor system 40 can determine if the passenger is a child or an adult. Accordingly, the occupant sensor system 40 determines the presence of a passenger, whether the passenger detected is a child or an adult, and whether the passenger is attempting to interface with the infotainment device 16. The occupant sensor system 40 provides the determined information to the human machine interface processor 36 which, in turn, further processes the information according to a control routine described hereinafter to control functionality made available by the infotainment device 16." (column 4 line 59 thru column 5 line 10 and Figure 4).

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Yanagidaira et al do not teach the claimed provide passenger access to the human machine interface so that the passenger may access operations and the operations are inaccessible to the driver. Harter Jr et al teach “a user discrimination system and method of controlling an electronic device, such as an infotainment device, in a vehicle to inhibit functions made available to the driver while allowing enhanced functionality to another passenger in the vehicle” (column 1 lines 67 thru column 2 lines 3).

It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the electro-cardio steering wheel detection system of Yanagidaira et al with the passenger detection and access restriction of Harter Jr et al in order to provide enhanced functionality of vehicle devices to the passengers other than the driver (Harter Jr et al column 1 lines 61 thru 63) and to minimize the distractions to the driver. (Harter Jr et al column 1 line 11)

12. Regarding claim 6 Yanagidaira et al teach the claimed perform validation to determine whether signals from the electrocardiogram sensors represent a human heartbeat, “bio-information detecting apparatus includes an electrode sensor that includes at least a pair of electrodes and detects heartbeats by detecting the potential difference between portions of the body that directly contact the electrodes, and an installed-in-seat sensor that detects heartbeats by detecting the vibration of the body surface associated with the heartbeats” P[0041].

13. Regarding claims 7 and 18 Yanagidaira et al do not teach the claimed plurality of second sensors provide inputs to determine whether the passenger is in a safe position. Harter Jr et al teach “The occupant sensor system 40 also includes a weight based sensor 42 and a belt tension switch 44. The weight based sensor 42 detects the amount of weight and the distribution of the weight on the passenger seat to detect the presence of a passenger other than the driver seated in the front passenger seat adjacent to the driver's seat. The belt tension switch 44 detects the tension on the seatbelt associated with the passenger seat. By knowing the seatbelt tension and weight distribution, the occupant sensor system 40 can determine if the passenger is a child or an adult. Accordingly, the occupant sensor system 40 determines the presence of a passenger, whether the passenger detected is a child or an adult, and whether the passenger is attempting to interface with the infotainment device 16. The occupant sensor system 40 provides the determined information to the human machine interface processor 36 which, in

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turn, further processes the information according to a control routine described hereinafter to control functionality made available by the infotainment device 16.” (column 4 line 59 thru column 5 line 10 and Figure 4) It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the electro-cardio steering wheel detection system of Yanagidaira et al with the passenger detection and access restriction of Harter Jr et al in order to provide enhanced functionality of vehicle devices to the passengers other than the driver (Harter Jr et al column 1 lines 61 thru 63) and to minimize the distractions to the driver. (Harter Jr et al column 1 line 11)

14. Regarding claim 8 Yanagidaira et al do not teach the claimed the sensors include one of a weight sensor, a camera and an occupant classification system. Harter Jr et al teach “The occupant sensor system 40 also includes a weight based sensor 42 and a belt tension switch 44. The weight based sensor 42 detects the amount of weight and the distribution of the weight on the passenger seat to detect the presence of a passenger other than the driver seated in the front passenger seat adjacent to the driver's seat. The belt tension switch 44 detects the tension on the seatbelt associated with the passenger seat. By knowing the seatbelt tension and weight distribution, the occupant sensor system 40 can determine if the passenger is a child or an adult. Accordingly, the occupant sensor system 40 determines the presence of a passenger, whether the passenger detected is a child or an adult, and whether the passenger is attempting to interface with the infotainment device 16. The occupant sensor system 40 provides the determined information to the human machine interface processor 36 which, in turn, further processes the information according to a control routine described hereinafter to control functionality made available by the infotainment device 16.” (column 4 line 59 thru column 5 line 10 and Figure 4) It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the electro-cardio steering wheel detection system of Yanagidaira et al with the passenger detection and access restriction of Harter Jr et al in order to provide enhanced functionality of vehicle devices to the passengers other than the driver (Harter Jr et al column 1 lines 61 thru 63) and to minimize the distractions to the driver. (Harter Jr et al column 1 line 11)

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15. Regarding claims 9 and 20 Yanagidaira et al do not teach the claimed determine that the driver is coaching the passenger with respect to the operation of the human machine interface and the claimed revoke the passenger access to the operations of the computer.

Harter Jr et al teach, decision step 82 determines if the driver has stared continuously at the human machine interface for a time period of greater than two seconds (Figure 5B and column 5 lines 55 thru 57) this occurs if the sensor curtain is broken (step 78) which identifies that the passenger is accessing the human machine interface (column 5 lines 46 thru 50); and

the claimed revoke the passenger access to the operations of the computer, "If the driver has been staring at the human machine interface for greater than two seconds, control routine 60 returns to step 63." (column 5 lines 58 thru 60 and Figure 5B) and step 63 determines if the vehicle is in park, and if not in park (in operation) only base functionality is allowed. (Figure 5A step 64)

It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the electro-cardio steering wheel detection system of Yanagidaira et al with the passenger detection and access restriction of Harter Jr et al in order to provide enhanced functionality of vehicle devices to the passengers other than the driver (Harter Jr et al column 1 lines 61 thru 63) and to minimize the distractions to the driver. (Harter Jr et al column 1 line 11)

16. Regarding claims 11 and 22 Yanagidaira et al teach the claimed human machine interface includes one of a visual display, touchscreen, speaker and microphone, "the control unit 124 may switch the directivity of speakers" P[0129] and the system includes a data display P[0141].

17. Claims 2, 13 and 17 are rejected under 35 U.S.C. 103 as being unpatentable over Yanagidaira et al Patent Application Publication Number 2008/0071177 A1 in view of Harter Jr et al Patent Number 6,668,221 B2, as applied to claims 1 and 12 above, and in further view of Forcke et al Patent Application Publication Number 2015/0120081 A1.

18. Regarding claims 2 and 13 Yanagidaira et al and Harter Jr et al do not teach the claimed predetermined location for the driver's hands includes the gearshift knob. But Yanagidaira et al do teach that the electro-cardio signals may be monitored from different locations to include the steering wheel and vehicle seats. P[0081] Forcke et al teach "the person's pulse or blood pressure detected by a biometric

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sensor on a steering wheel or gear shifter of the vehicle” P[0049]. It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the electro-cardio steering wheel detection system of Yanagidaira et al and the passenger detection and access restriction of Harter Jr et al with the biometric sensors on the gear shift of Forcke et al in order to provide safety monitoring for a human-driven vehicle to determine the driving safety and actively detecting whether a hand of a driver is operating the vehicle. (Forcke et al P[0006])

19. Regarding claim 17 Yanagidaira et al teach the claimed perform validation to determine whether signals from the electrocardiogram sensors represent a human heartbeat, “bio-information detecting apparatus includes an electrode sensor that includes at least a pair of electrodes and detects heartbeats by detecting the potential difference between portions of the body that directly contact the electrodes, and an installed-in-seat sensor that detects heartbeats by detecting the vibration of the body surface associated with the heartbeats” P[0041].

20. Claims 4 and 10 are rejected under 35 U.S.C. 103 as being unpatentable over Yanagidaira et al Patent Application Publication Number 2008/0071177 A1 and Harter Jr et al Patent Number 6,668,221 B2, as applied to claim 1 above, and in further view of Harris Patent Application Publication Number 2010/0297930 A1.

21. Regarding claim 4 Yanagidaira et al and Harter Jr et al do not teach the claimed sensors include a capacitive sensor to assist in locating the driver's hands. Harris teaches a detection system that uses capacitive touch strips to indicate a human hand is touching the strips P[0040] and that the strips may be located on a steering wheel (Figure 6 and P[0042]). A person would be required to maintain contact with the capacitance strips on the steering wheel in order operate the vehicle P[0042]. The system of Harris would be used in conjunction with Yanagidaira et al by placing the strips in a location other than the electro-cardio sensors to indicate that the driver's hand have moved from the sensors but still remain at a different location on the steering wheel. It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the electro-cardio steering wheel detection system of Yanagidaira et al and the passenger detection and access restriction of Harter Jr et al with the capacitive touch strips of Harris in order to prevent a driver from using a portable

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electronic device improperly while driving (keep the driver and vehicle safe by not diverting the driver's attention away from the road). (Harris P[0005])

22. Regarding claim 10 Yanagidaira et al teach the claimed determining driver's hands are at a predetermined location includes determining that the palms and fingers of both hands are on the steering wheel, "The steering wheel sensor 100 is configured such that the left hand contacts to the electrode 100a on one hand and the right hand contacts the electrode 100b on the other hand while a driver is operating the steering wheel." P[0049], the system of Yanagidaira et al determines that both hands are in contact with the steering wheel, and a hand constitutes the fingers and palm, so it is reasonable to assume the determination of both the right and left hands on the steering wheel includes the palm and fingers of each hand are on the steering wheel.

23. Claims 15 and 21 are rejected under 35 U.S.C. 103 as being unpatentable over Yanagidaira et al Patent Application Publication Number 2008/0071177 A1, Harter Jr et al Patent Number 6,668,221 B2 and Forcke et al Patent Application Publication Number 2015/0120081 A1, as applied to claims 12 and 13 above, and in further view of Harris Patent Application Publication Number 2010/0297930 A1.

24. Regarding claim 15 Yanagidaira et al, Harter Jr et al and Forcke et al do not teach the claimed sensors include a capacitive sensor to assist in locating the driver's hands. Harris teaches a detection system that uses capacitive touch strips to indicate a human hand is touching the strips P[0040] and that the strips may be located on a steering wheel (Figure 6 and P[0042]). A person would be required to maintain contact with the capacitance strips on the steering wheel in order operate the vehicle P[0042]. The system of Harris would be used in conjunction with Yanagidaira et al by placing the strips in a location other than the electro-cardio sensors to indicate that the driver's hand have moved from the sensors but still remain at a different location on the steering wheel. It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the electro-cardio steering wheel detection system of Yanagidaira et al, the passenger detection and access restriction of Harter Jr et al and the biometric sensors on the gear shift of Forcke et al with the capacitive touch strips of Harris in order to prevent a driver from using a portable electronic device

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improperly while driving (keep the driver and vehicle safe by not diverting the driver's attention away from the road). (Harris P[0005])

25. Regarding claim 21 Yanagidaira et al teach the claimed determining driver's hands are at a predetermined location includes determining that the palms and fingers of both hands are on the steering wheel, "The steering wheel sensor 100 is configured such that the left hand contacts to the electrode 100a on one hand and the right hand contacts the electrode 100b on the other hand while a driver is operating the steering wheel." P[0049], the system of Yanagidaira et al determines that both hands are in contact with the steering wheel, and a hand constitutes the fingers and palm, so it is reasonable to assume the determination of both the right and left hands on the steering wheel includes the palm and fingers of each hand are on the steering wheel.

26. Claim 5 is rejected under 35 U.S.C. 103 as being unpatentable over Yanagidaira et al Patent Application Publication Number 2008/0071177 A1 and Harter Jr et al Patent Number 6,668,221 B2, as applied to claim 1 above, and in further view of Suzuki Patent Number 7,239,947 B2.

27. Regarding claim 5 Yanagidaira et al do not teach the claimed sensor in a display of the human machine interface to provide data of the location of the driver's hands. Harter Jr et al teach the human machine interface may include touch screen inputs, (column 3 lines 13 thru 16) but Harter Jr et al do not teach the claimed HMI provides data for the location of the driver's hands. Suzuki teaches "Operation equipment for a vehicle includes a display having a touch switch with a touch sensor for detecting an operation of a passenger or a driver of the vehicle" (abstract) and "In FIG. 4, the hand, which is drawn in a solid line, is the right hand of the passenger, and the hand, which is drawn in a dotted line, is the left hand of the driver. Therefore, in a case where the passenger sitting on the passenger seat operates the touch switch 3 or the panel switch 4, the hand of the operator, i.e., the hand of the passenger moves closer to the screen 5a of the display 5. Then, the touch sensor detects the hand of the passenger moving closer to the screen 5a, so that the switch signal controller 2 determines that the passenger operates the touch switch 3 or the panel switch 4. On the other hand, when the finger of the operator moves closer to the screen 5a, the touch sensor detects the finger so that the switch signal controller 2 determines the finger of the driver moves closer to the screen 5a. Thus, the touch sensor can distinguish an operation of the



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passenger from an operation of the driver.” (column 6 lines 32 thru 47 and Figure 4) It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the electro-cardio steering wheel detection system of Yanagidaira et al and the passenger detection and access restriction of Harter Jr et al with the driver/passenger operation determination of Suzuki in order to provide for operation equipment without any outside sensor that is capable of determining a driver's operation and a passenger's operation to reduce the cost of the equipment and the required space for the equipment. (Suzuki column 2 lines 5 thru 16)

28. Claims 16 and 19 are rejected under 35 U.S.C. 103 as being unpatentable over Yanagidaira et al Patent Application Publication Number 2008/0071177 A1, Harter Jr et al Patent Number 6,668,221 B2 and Forcke et al Patent Application Publication Number 2015/0120081 A1, as applied to claims 12 and 13 above, and in further view of Suzuki Patent Number 7,239,947 B2.

29. Regarding claim 16 Yanagidaira et al (and Forcke et al) do not teach the claimed sensor in a display of the human machine interface to provide data of the location of the driver's hands. Harter Jr et al teach the human machine interface may include touch screen inputs, (column 3 lines 13 thru 16) but Harter Jr et al do not teach the claimed HMI provides data for the location of the driver's hands. Suzuki teaches “Operation equipment for a vehicle includes a display having a touch switch with a touch sensor for detecting an operation of a passenger or a driver of the vehicle” (abstract) and “In FIG. 4, the hand, which is drawn in a solid line, is the right hand of the passenger, and the hand, which is drawn in a dotted line, is the left hand of the driver. Therefore, in a case where the passenger sitting on the passenger seat operates the touch switch 3 or the panel switch 4, the hand of the operator, i.e., the hand of the passenger moves closer to the screen 5a of the display 5. Then, the touch sensor detects the hand of the passenger moving closer to the screen 5a, so that the switch signal controller 2 determines that the passenger operates the touch switch 3 or the panel switch 4. On the other hand, when the finger of the operator moves closer to the screen 5a, the touch sensor detects the finger so that the switch signal controller 2 determines the finger of the driver moves closer to the screen 5a. Thus, the touch sensor can distinguish an operation of the passenger from an operation of the driver.” (column 6 lines 32 thru 47 and Figure 4) It would have been obvious to a person having ordinary skill in the art before the effective filing

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date of the claimed invention to combine the electro-cardio steering wheel detection system of Yanagidaira et al, the passenger detection and access restriction of Harter Jr et al and the biometric sensors on the gear shift of Forcke et al with the driver/passenger operation determination of Suzuki in order to provide for operation equipment without any outside sensor that is capable of determining a driver's operation and a passenger's operation to reduce the cost of the equipment and the required space for the equipment. (Suzuki column 2 lines 5 thru 16)

30. Regarding claim 19 Yanagidaira et al do not teach the claimed the sensors include one of a weight sensor, a camera and an occupant classification system. Harter Jr et al teach "The occupant sensor system 40 also includes a weight based sensor 42 and a belt tension switch 44. The weight based sensor 42 detects the amount of weight and the distribution of the weight on the passenger seat to detect the presence of a passenger other than the driver seated in the front passenger seat adjacent to the driver's seat. The belt tension switch 44 detects the tension on the seatbelt associated with the passenger seat. By knowing the seatbelt tension and weight distribution, the occupant sensor system 40 can determine if the passenger is a child or an adult. Accordingly, the occupant sensor system 40 determines the presence of a passenger, whether the passenger detected is a child or an adult, and whether the passenger is attempting to interface with the infotainment device 16. The occupant sensor system 40 provides the determined information to the human machine interface processor 36 which, in turn, further processes the information according to a control routine described hereinafter to control functionality made available by the infotainment device 16." (column 4 line 59 thru column 5 line 10 and Figure 4) It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the electro-cardio steering wheel detection system of Yanagidaira et al with the passenger detection and access restriction of Harter Jr et al in order to provide enhanced functionality of vehicle devices to the passengers other than the driver (Harter Jr et al column 1 lines 61 thru 63) and to minimize the distractions to the driver. (Harter Jr et al column 1 line 11)

31. Claim 23 is rejected under 35 U.S.C. 103 as being unpatentable over Harter Jr et al Patent Number 6,668,221 B2 in view of Naboulsi Patent Number 8,301,108 B2 and Rajeevalochana et al Patent Application Publication Number 2014/0274023 A1.

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32. Regarding claim 23 Harter Jr et al teach the claimed system for a vehicle, a user discrimination system of controlling an electronic device (column 1 lines 66 and 67), comprising the claimed computer with a processor and memory, the HMI processor 36 in the vehicle (column 4 lines 37 thru 44) performs a user discrimination control routine 60 to control the functionality of the infotainment device 16 (column 5 lines 11 thru 13), the claimed memory is not explicitly recited, but a memory is common and well-known in the art and the control routine would provide the programming for execution, this programming would need to be stored in some kind of memory, the computer programmed to:

the claimed determine that the driver is coaching the passenger concerning operation of the HMI, decision step 82 determines if the driver has stared continuously at the human machine interface for a time period of greater than two seconds (Figure 5B and column 5 lines 55 thru 57) this occurs if the sensor curtain is broken (step 78) which identifies that the passenger is accessing the human machine interface (column 5 lines 46 thru 50); and

the claimed disabling all occupant access to the HMI based on the identified coaching, "If the driver has been staring at the human machine interface for greater than two seconds, control routine 60 returns to step 63." (column 5 lines 58 thru 60 and Figure 5B) and step 63 determines if the vehicle is in park, and if not in park (in operation) only base functionality is allowed. (Figure 5A step 64)

Harter Jr et al do not teach the claimed the claimed determine that a driver's hands are on a steering wheel, but does determine if the vehicle is being operated by the driver in step 63 (Figures 5A and 5B) the control routine 60 checks to determine if the vehicle transmission is in park, and thus the vehicle is not moving. If the vehicle transmission is in park, control routine 60 proceeds to step 84 to allow a first level of enhanced functionality of the infotainment device. If the vehicle transmission is not in park, indicative of a vehicle that is moving, control routine 60 proceeds to step 64 to allow a limited second level of base functionality.(column 5 lines 17 thru 25) With the vehicle determined to not to be in park, then the driver is operating the vehicle, and the driver's access to the vehicle infotainment system is inhibited while allowing access to the passenger (which is the purpose of the claimed invention). Naboulsi teaches sensors S1 and S2 sense that both driver's hands are present on both sides of the steering wheel 4 to enable operation of the computer. (column 7 lines 29 thru 32) It would have been

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obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the user discrimination control of Harter Jr et al with the hand position sensors of Naboulsi in order to provide the safe control of a vehicle, to reduce the possibility of an accident to reduce or avoid driver distraction during operation of a vehicle. (Naboulsi column 2 lines 12 thru 18)

Harter Jr et al and Naboulsi do not teach the claimed detecting speech recognition.

Rajeevalochana et al teach a voice recognition module to determine if a person is reading the text from a phone P[0024], the system is for prevent a driver from using their phone while driving. (title and abstract) The voice recognition system of Rajeevalochana et al would be implemented in the Harter Jr et al and Naboulsi combination to prevent the driver from being distracted when driving. Harter Jr et al already determines if a person is distracted by their eye stare (claimed coaching of the passenger), and the voice recognition would be the next logical step in the coaching or direction of a passenger's actions. It would have been obvious to a person having ordinary skill in the art before the effective filing date of the claimed invention to combine the user discrimination control of Harter Jr et al and the hand position sensors of Naboulsi with the voice recognition to prevent driver distraction of Rajeevalochana et al in order to prevent a driver of a vehicle from sending or receiving text messages while the vehicle they are driving is in motion. (Rajeevalochana et al P[0002])

***Allowable Subject Matter***

33. Claim 24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112(b) and 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), 1st paragraph and 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims, or moving the limitations into the independent claim.

34. The following is a statement of reasons for the indication of allowable subject matter: The reasons for indicating allowable subject matter over the prior art of record is based on the combination of limitations from claims 23 and 24. Specifically, the limitations of the determination that a driver's hands are on the steering wheel, the determination that speech recognition is coaching the passenger to operate the HMI, the disabling of all access to the HMI based on a positive determination of coaching, and an electrocardiogram sensor identifying that a driver is operating the vehicle. The combination of

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these limitations are a non-obvious combination and are the reason for indicating allowable subject matter over the prior art of record.

### ***Conclusion***

35. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DALE W. HILGENDORF whose telephone number is (571)272-9635. The examiner can normally be reached on Mon-Thur 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Helal Algahaim can be reached on 571-270-5227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/DALE W HILGENDORF/  
Examiner, Art Unit 3662