Electronic Acknowledgement Receipt

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Application Number:	13679204
International Application Number:	
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Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
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Filer Authorized By:	
Attorney Docket Number:	6583-318
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	ADS.pdf	1067982 3db22cf0dbc9e408da8d11ecbdc4e97c0e7f93ce	no	6

Warnings:	
Information:	

2		Application.pdf	244804 67af59e63c203699ce8ae120d59516ca5448b5c9	yes	50

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Specification	1	45
Claims	46	49
Abstract	50	50

Warnings:					
Information:					
3	Drawings-only black and white line drawings	Drawings.pdf	224711 fb10975a90a644e28aebf96ca5ecd34594333d4d	no	17
Warnings:					
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			Total Files Size (in bytes):	1537497	

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New International Application Filed with the USPTO as a Receiving Office
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ABSTRACT

Methods and systems for a complete vehicle ecosystem are provided. Specifically, systems that when taken alone, or together, provide an individual or group of individuals with an intuitive and comfortable vehicular environment. The present disclosure includes a system to recognize the drivers and/or passengers within the automobile. Based on the recognition, the vehicle may change a configuration of the automobile to match predetermined preferences for the driver and/or passenger.

PTO/AIA/14 (08-12)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-318
	Application Number	
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
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Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Christopher	P.	Ricci	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

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All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

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Application Information:

Title of the Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES		
Attorney Docket Number	6583-318	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	17	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-318
	Application Number	
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES	

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	**Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

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Customer Number	22442		

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This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61560509	2011-11-16
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61637164	2012-04-23
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61646747	2012-05-14
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61653275	2012-05-30
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61653264	2012-05-30
Prior Application Status	Pending		Remove

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-318
	Application Number	
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES	

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61653563	2012-05-31
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61663335	2012-06-22
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61672483	2012-07-17
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61714016	2012-10-15

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Application Number	Country i	Filing Date (YYYY-MM-DD)	Priority Claimed
			◉ Yes ○ No

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Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-318
	Application Number	
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES	

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

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Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

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◉	Assignee	○	Legal Representative under 35 U.S.C. 117
○	Person to whom the inventor is obligated to assign.	○	Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :	
If the Assignee is an Organization check here.	☒
Organization Name	Flextronics AP, LLC

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-318
	Application Number	
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES	

Email Address	

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Signature	/Tadd F. Wilson/			Date (YYYY-MM-DD)	2012-11-16
First Name	Tadd F.	Last Name	Wilson	Registration Number	54544

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] The present application claims the benefits of and priority, under 35 U.S.C. § 119(e), to U.S. Provisional Application Serial Nos. 61/560,509, filed on November 26, 2011, entitled "Complete Vehicle Ecosystem;" 61/637,164, filed on April 23, 2012, entitled "Complete Vehicle Ecosystem;" 61/646,747, filed on May 14, 2012, entitled "Branding of Electrically Propelled Vehicles Via the Generation of Specific Operating Sounds;" 61/653,275, filed on May 30, 2012, entitled "Vehicle Application Store for Console;" 61/653,264, filed on May 30, 2012, entitled "Control of Device Features Based on Vehicle State;" 61/653,563, filed on May 31, 2012, entitled "Complete Vehicle Ecosystem;" 61/663,335, filed on June 22, 2012, entitled "Complete Vehicle Ecosystem;" 61/672,483, filed on July 17, 2012, entitled "Vehicle Climate Control;" and 61/714,016, filed on October 15, 2012, entitled "Vehicle Middleware." The entire disclosures of the applications listed above are hereby incorporated by reference, in their entirety, for all that they teach and for all purposes.

[0002] This application is also related to U.S. Patent Application Nos. 13/420,236, filed on March 14, 2012, entitled, "Configurable Vehicle Console;" 13/420,240, filed on March 14, 2012, entitled "Removable, Configurable Vehicle Console;" 13/462,593, filed on May 2, 2012; 13/462,596, filed on May 2, 2012, entitled "Configurable Heads-Up Dash Display;" __/___,___, filed on November 16, 2012, entitled "Implementation of Conquest Functionality in Automotive Consule" (Attorney Docket No. 6583-228); __/___,___, filed on November 16, 2012, entitled "Car Application Store for Console" (Attorney Docket No. 6583-230); __/___,___, filed on November 16, 2012, entitled "Sharing Applications/Media Between Car and Phone (Hydroid)" (Attorney Docket No. 6583-231); __/___,___, filed on November 16, 2012, entitled "In-Cloud Connection for Car Multimedia" (Attorney Docket No. 6583-232); __/___,___, filed on November 16, 2012, entitled "Music Streaming" (Attorney Docket No. 6583-233); __/___,___, filed on November 16, 2012, entitled "Activate/Deactivate Features of Console/Car Based on Location (State Law Compliance) " (Attorney Docket No. 6583-234); __/___,___, filed on November 16, 2012, entitled "Insurance Tracking" (Attorney Docket No. 6583-235); __/___,___, filed on November 16, 2012, entitled "Law Breaking/Behavior Sensor" (Attorney Docket No. 6583-236); __/___,___, filed on November 16, 2012, entitled "Etiquette Suggestion"

(Attorney Docket No. 6583-237); __/___,___, filed on November 16, 2012, entitled "Parking Space Finder Based on Parking Meter Data" (Attorney Docket No. 6583-238); __/___,___, filed on November 16, 2012, entitled "Parking Meter Expired Alert" (Attorney Docket No. 6583-239); __/___,___, filed on November 16, 2012, entitled "Object Sensing (Pedestrian Avoidance/Accident Avoidance) " (Attorney Docket No. 6583-240); __/___,___, filed on November 16, 2012, entitled "Proximity Warning Relative to Other Cars" (Attorney Docket No. 6583-241); __/___,___, filed on November 16, 2012, entitled "Street Side Sensors" (Attorney Docket No. 6583-242); __/___,___, filed on November 16, 2012, entitled "Car Location" (Attorney Docket No. 6583-263); __/___,___, filed on November 16, 2012, entitled "Universal Bus in the Car" (Attorney Docket No. 6583-244); __/___,___, filed on November 16, 2012, entitled "Mobile Hot Spot/Router/Application Share site or Network" (Attorney Docket No. 6583-245); __/___,___, filed on November 16, 2012, entitled "Universal Console Chassis for the Car" (Attorney Docket No. 6583-246); __/___,___, filed on November 16, 2012, entitled "Middleware" (Attorney Docket No. 6583-247); __/___,___, filed on November 16, 2012, entitled "Real Time Traffic" (Attorney Docket No. 6583-248); __/___,___, filed on November 16, 2012, entitled "Map Updating" (Attorney Docket No. 6583-249); __/___,___, filed on November 16, 2012, entitled "Indications Call Mechanic" (Attorney Docket No. 6583-250); __/___,___, filed on November 16, 2012, entitled "Felon Identifier" (Attorney Docket No. 6583-251); __/___,___, filed on November 16, 2012, entitled "Behavioral Tracking and Vehicle Applications" (Attorney Docket No. 6583-252); __/___,___, filed on November 16, 2012, entitled "Improvements to Controller Area Network Bus" (Attorney Docket No. 6583-314); __/___,___, filed on November 16, 2012, entitled "Location Information Exchange Between Vehicle and Device" (Attorney Docket No. 6583-315); __/___,___, filed on November 16, 2012, entitled "In Car Communication Between Devices" (Attorney Docket No. 6583-316); __/___,___, filed on November 16, 2012, entitled "Configurable Hardware Unit for Car Systems" (Attorney Docket No. 6583-317); __/___,___, filed on November 16, 2012, entitled "Feature Recognition for Configuring a Vehicle Console and Associated Devices" (Attorney Docket No. 6583-318); __/___,___, filed on November 16, 2012, entitled "Configurable Vehicle Console" (Attorney Docket No. 6583-412); __/___,___, filed on November 16, 2012, entitled "Configurable Dash Display" (Attorney Docket No. 6583-413); __/___,___, filed on November 16, 2012, entitled "Configurable Heads-Up Dash Display" (Attorney Docket No. 6583-414); and

__/___,___, filed on November 16, 2012, entitled "Removable, Configurable Vehicle Console" (Attorney Docket No. 6583-415). The entire disclosures of the applications listed above are hereby incorporated by reference, in their entirety, for all that they teach and for all purposes.

BACKGROUND

[0003] Whether using private, commercial, or public transport, the movement of people and/or cargo has become a major industry. In today's interconnected world daily travel is essential to engaging in commerce. Commuting to and from work can account for a large portion of a traveler's day. As a result, vehicle manufacturers have begun to focus on making this commute, and other journeys, more enjoyable and easier.

[0004] Currently, vehicle manufacturers attempt to entice travelers to use a specific conveyance based on any number of features. Most of these features focus on vehicle safety or efficiency. From the addition of safety-restraints, air-bags, and warning systems to more efficient engines, motors, and designs, the vehicle industry has worked to appease the supposed needs of the traveler. Recently, however, vehicle manufactures have shifted their focus to user and passenger comfort as a primary concern. Making an individual more comfortable while traveling instills confidence and pleasure in using a given vehicle and increases an individual's preference for a given manufacturer and/or vehicle type.

[0005] One way to instill comfort in a vehicle is to create an environment within the vehicle similar to that of an individual's home. Integrating features in a vehicle that are associated with comfort found in an individual's home can ease a traveler's transition from home to vehicle. Several manufacturers have added comfort features in vehicles such as the following: leather seats, adaptive and/or personal climate control systems, music and media players, ergonomic controls, Internet connectivity, etc. However, because these manufacturers have added features to a conveyance, they have built comfort around a vehicle and failed to build a vehicle around comfort. Thus, the vehicle as an ecosystem has not been fully considered.

SUMMARY

[0006] There is a need for a vehicle ecosystem that can integrate both physical and mental comforts while seamlessly operating with current electronic devices to result in a totally intuitive and immersive user experience. These and other needs are addressed by the various aspects, embodiments, and/or configurations of the present disclosure. Also, while the disclosure is

presented in terms of exemplary embodiments, it should be appreciated that individual aspects of the disclosure can be separately claimed.

[0007] The present disclosure can provide a number of advantages depending on the particular aspect, embodiment, and/or configuration. Currently, the vehicle industry is dominated by conveyances offering a separate comfort experience from a home, work, or other aspect of a traveler's life. Unfortunately, current vehicles include a series of separate devices that work together while an individual or individuals are associated with the vehicle. Technology areas and devices such as user interfaces, applications, tracking capabilities, hardware, and/or location-based communications, could be combined together, or used separately, to form a complete vehicle ecosystem. This ecosystem can provide a connected and intuitive user experience for any traveler.

[0008] A series of devices associated with a vehicle along with other devices can form a complete and familiar user experience. In particular, the devices, applications, interfaces, hardware, and software may combine to form a user-friendly environment while traveling or otherwise moving from one location to another and/or when a vehicle is at rest. Moreover, aspects of the present disclosure may provide communication between the vehicle and a user at any given time. Specifically, communication between a vehicle and another device may also relay information to an individual and/or group of individuals. This communication between a vehicle and at least one other device may include, but is not limited to, communication between a vehicle and: 1) at least one mobile device, 2) at least one other vehicle, 3) another system/group of devices, 4) a non-mobile device, and 5) combinations thereof. These and other advantages will be apparent from the disclosure.

[0009] The present disclosure describes a method executed by a vehicle system. The vehicle system can automatically determine a person is within a vehicle; automatically identify the person; determine if there is a setting to be stored for the person; and store the setting.

[0010] The term "ecosystem" or "vehicle ecosystem," as used herein, refers to a community of person(s) in conjunction with the vehicle or other device components of their environment (for example, climate control, safety features, mobile devices, multimedia sources etc.), interacting as a system.

[0011] The term "environment" or "vehicle environment," as used herein, refers to the surroundings or conditions in which a person operates a vehicle.

[0012] The term "sensor," as used herein, refers to a converter or instrument that measures a physical quantity or quality and converts the measurement into a signal which can be read, observed, stored, and/or understood by an observer or by another instrument.

[0013] The term "stimulus," as used herein, refers to some event or something external that influences an activity.

[0014] The term "automotive navigation system" is a satellite navigation system designed for use in automobiles. It typically uses a GPS navigation device to acquire position data to locate the user on a road in the unit's map database. Using the road database, the unit can give directions to other locations along roads also in its database. Dead reckoning using distance data from sensors attached to the drivetrain, a gyroscope and an accelerometer can be used for greater reliability, as GPS signal loss and/or multipath can occur due to urban canyons or tunnels.

[0015] The term "bus" and variations thereof, as used herein, refers to a subsystem that transfers information and/or data between various components. A bus generally refers to the collection communication hardware interface, interconnects, bus architecture, and/or protocol defining the communication scheme for a communication system and/or communication network. A bus may also be specifically refer to a part of a communication hardware that interfaces the communication hardware with the interconnects that connect to other components of the corresponding communication network. The bus may be for a wired network, such as a physical bus, or wireless network, such as part of an antenna or hardware that couples the communication hardware with the antenna. A bus architecture supports a defined format in which information and/or data is arranged when sent and received through a communication network. A protocol may define the format and rules of communication of a bus architecture.

[0016] The terms "communication device," "smartphone," and "mobile device," and variations thereof, as used herein, are used interchangeably and include any type of device capable of communicating with one or more of another device and/or across a communications network, via a communications protocol, and the like. Exemplary communication devices may include but are not limited to smartphones, handheld computers, laptops, netbooks, notebook computers, subnotebooks, tablet computers, scanners, portable gaming devices, phones, pagers, GPS modules, portable music players, and other Internet-enabled and/or network-connected devices.

[0017] The terms "head unit," "dash," "dashboard," and variations thereof, as used herein, are used interchangeably and include any panel and/or area of a vehicle disposed adjacent to an

operator, user, and/or passenger. Typical dashboards may include but are not limited to one or more control panel, instrument housing, head unit, indicator, gauge, meter, light, audio equipment, computer, screen, display, HUD unit, and graphical user interface.

[0018] The term "electronic address" refers to any contactable address, including a telephone number, instant message handle, e-mail address, Universal Resource Locator ("URL"), Universal Resource Identifier ("URI"), Address of Record ("AOR"), electronic alias in a database, like addresses, and combinations thereof.

[0019] The term "communication system" or "communication network" and variations thereof, as used herein, refers to a collection of communication components capable of one or more of transmission, relay, interconnect, control, or otherwise manipulate information or data from at least one transmitter to at least one receiver. As such, the communication may include a range of systems supporting point-to-point to broadcasting of the information or data. A communication system may refer to the collection individual communication hardware as well as the interconnects associated with and connecting the individual communication hardware. Communication hardware may refer to dedicated communication hardware or may refer a processor coupled with a communication means (*i.e.* an antenna) and running software capable of using the communication means to send a signal within the communication system. Interconnect refers some type of wired or wireless communication link that connects various components, such as communication hardware, within a communication system. A communication network may refer to a specific setup of a communication system with the collection of individual communication hardware and interconnects having some definable network topography. A communication network may include wired and/or wireless network having a pre-set to an ad hoc network structure.

[0020] The phrases "at least one", "one or more", and "and/or" are open-ended expressions that are both conjunctive and disjunctive in operation. For example, each of the expressions "at least one of A, B and C", "at least one of A, B, or C", "one or more of A, B, and C", "one or more of A, B, or C" and "A, B, and/or C" means A alone, B alone, C alone, A and B together, A and C together, B and C together, or A, B and C together.

[0021] The term "a" or "an" entity," as used herein, refers to one or more of that entity. As such, the terms "a" (or "an"), "one or more" and "at least one" can be used interchangeably

herein. It is also to be noted that the terms "comprising", "including", and "having" can be used interchangeably.

[0022] The term "automatic" and variations thereof, as used herein, refers to any process or operation done without material human input when the process or operation is performed. However, a process or operation can be automatic, even though performance of the process or operation uses material or immaterial human input, if the input is received before performance of the process or operation. Human input is deemed to be material if such input influences how the process or operation will be performed. Human input that consents to the performance of the process or operation is not deemed to be "material".

[0023] The term "computer-readable medium," as used herein, refers to any tangible storage and/or transmission medium that participate in providing instructions to a processor for execution. Such a medium may take many forms, including but not limited to, non-volatile media, volatile media, and transmission media. Non-volatile media includes, for example, NVRAM, or magnetic or optical disks. Volatile media includes dynamic memory, such as main memory. Common forms of computer-readable media include, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, or any other magnetic medium, magneto-optical medium, a CD-ROM, any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, a RAM, a PROM, and EPROM, a FLASH-EPROM, a solid state medium like a memory card, any other memory chip or cartridge, a carrier wave as described hereinafter, or any other medium from which a computer can read. A digital file attachment to e-mail or other self-contained information archive or set of archives is considered a distribution medium equivalent to a tangible storage medium. When the computer-readable media is configured as a database, it is to be understood that the database may be any type of database, such as relational, hierarchical, object-oriented, and/or the like. Accordingly, the disclosure is considered to include a tangible storage medium or distribution medium and prior art-recognized equivalents and successor media, in which the software implementations of the present disclosure are stored.

[0024] The term "desktop," as used herein, refers to a metaphor used to portray systems. A desktop is generally considered a "surface" that typically includes pictures, called icons, widgets, folders, etc. that can activate show applications, windows, cabinets, files, folders, documents, and other graphical items. The icons are generally selectable to initiate a task through user interface interaction to allow a user to execute applications or conduct other operations.

[0025] The term "display," as used herein, refers to a portion of a screen used to display the output of a computer to a user.

[0026] The term "displayed image," as used herein, refers to an image produced on the display. A typical displayed image is a window or desktop. The displayed image may occupy all or a portion of the display.

[0027] The term "display orientation," as used herein, refers to the way in which a rectangular display is oriented by a user for viewing. The two most common types of display orientation are portrait and landscape. In landscape mode, the display is oriented such that the width of the display is greater than the height of the display (such as a 4:3 ratio, which is 4 units wide and 3 units tall, or a 16:9 ratio, which is 16 units wide and 9 units tall). Stated differently, the longer dimension of the display is oriented substantially horizontal in landscape mode while the shorter dimension of the display is oriented substantially vertical. In the portrait mode, by contrast, the display is oriented such that the width of the display is less than the height of the display. Stated differently, the shorter dimension of the display is oriented substantially horizontal in the portrait mode while the longer dimension of the display is oriented substantially vertical. The multi-screen display can have one composite display that encompasses all the screens. The composite display can have different display characteristics based on the various orientations of the device.

[0028] The term "gesture," as used herein, refers to a user action that expresses an intended idea, action, meaning, result, and/or outcome. The user action can include manipulating a device (e.g., opening or closing a device, changing a device orientation, moving a trackball or wheel, etc.), movement of a body part in relation to the device, movement of an implement or tool in relation to the device, audio inputs, etc. A gesture may be made on a device (such as on the screen) or with the device to interact with the device.

[0029] The term "module," as used herein, refers to any known or later developed hardware, software, firmware, artificial intelligence, fuzzy logic, or combination of hardware and software that is capable of performing the functionality associated with that element.

[0030] The term "gesture recognition" or "gesture capture," as used herein, refers to a sense or otherwise a detection of an instance and/or type of user gesture. The gesture capture can occur in one or more areas of the screen, A gesture region can be on the display, where it may be referred to as a touch sensitive display or off the display where it may be referred to as a gesture capture area.

[0031] A "multi-screen application," as used herein, refers to an application that is capable of producing one or more windows that may simultaneously occupy multiple screens. A multi-screen application commonly can operate in single-screen mode in which one or more windows of the application are displayed only on one screen or in multi-screen mode in which one or more windows are displayed simultaneously on multiple screens.

[0032] A "single-screen application," as used herein, refers to an application that is capable of producing one or more windows that may occupy only a single screen at a time.

[0033] The term "screen," "touch screen," or "touchscreen," as used herein, refers to a physical structure that enables the user to interact with the computer by touching areas on the screen and provides information to a user through a display. The touch screen may sense user contact in a number of different ways, such as by a change in an electrical parameter (e.g., resistance or capacitance), acoustic wave variations, infrared radiation proximity detection, light variation detection, and the like. In a resistive touch screen, for example, normally separated conductive and resistive metallic layers in the screen pass an electrical current. When a user touches the screen, the two layers make contact in the contacted location, whereby a change in electrical field is noted and the coordinates of the contacted location calculated. In a capacitive touch screen, a capacitive layer stores electrical charge, which is discharged to the user upon contact with the touch screen, causing a decrease in the charge of the capacitive layer. The decrease is measured, and the contacted location coordinates determined. In a surface acoustic wave touch screen, an acoustic wave is transmitted through the screen, and the acoustic wave is disturbed by user contact. A receiving transducer detects the user contact instance and determines the contacted location coordinates.

[0034] The term "window" refers to a, typically rectangular, displayed image on at least part of a display that contains or provides content different from the rest of the screen. The window may obscure the desktop.

[0035] The terms "determine", "calculate" and "compute," and variations thereof, as used herein, are used interchangeably and include any type of methodology, process, mathematical operation or technique.

[0036] It shall be understood that the term "means" as used herein shall be given its broadest possible interpretation in accordance with 35 U.S.C., Section 112, Paragraph 6. Accordingly, a claim incorporating the term "means" shall cover all structures, materials, or acts set forth herein,

and all of the equivalents thereof. Further, the structures, materials or acts and the equivalents thereof shall include all those described in the summary of the invention, brief description of the drawings, detailed description, abstract, and claims themselves.

[0037] The term "vehicle" as used herein includes any conveyance, or model of a conveyance, where the conveyance was originally designed for the purpose of moving one or more tangible objects, such as people, animals, cargo, and the like. The term "vehicle" does not require that a conveyance moves or is capable of movement. Typical vehicles may include but are in no way limited to cars, trucks, motorcycles, busses, automobiles, trains, railed conveyances, boats, ships, marine conveyances, submarine conveyances, airplanes, space craft, flying machines, human-powered conveyances, and the like.

[0038] The preceding is a simplified summary of the disclosure to provide an understanding of some aspects of the disclosure. This summary is neither an extensive nor exhaustive overview of the disclosure and its various aspects, embodiments, and/or configurations. It is intended neither to identify key or critical elements of the disclosure nor to delineate the scope of the disclosure but to present selected concepts of the disclosure in a simplified form as an introduction to the more detailed description presented below. As will be appreciated, other aspects, embodiments, and/or configurations of the disclosure are possible utilizing, alone or in combination, one or more of the features set forth above or described in detail below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0039] Fig. 1 depicts an embodiment of a vehicle operating environment;

[0040] Fig. 2 is a block diagram of an embodiment of a vehicle system;

[0041] Fig. 3 is a block diagram of an embodiment of a vehicle interior environment separated into areas and/or zones;

[0042] Fig. 4 depicts an embodiment of a sensor configuration for a vehicle;

[0043] Fig. 5 is a block diagram of an embodiment of a vehicle control system;

[0044] Fig. 6 another block diagram of an embodiment of a vehicle control system;

[0045] Fig. 7A is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0046] Fig. 7B is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0047] Fig. 7C is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0048] Fig. 7D is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0049] Fig. 7E is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0050] Fig. 7F is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0051] Fig. 7G is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0052] Fig. 7H is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0053] Fig. 7I is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0054] Fig. 7J is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0055] Fig. 7K is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0056] Fig. 8 is a diagram of an embodiment of a data structure for storing information about a user of a vehicle;

[0057] Fig. 9 is a flow diagram of a method for storing setting associated with a user;

[0058] Fig. 10 is a flow diagram of a method for establishing settings associated with a user;

[0059] Fig. 11 is a flow diagram of a method for storing setting associated with a user;

[0060] Fig. 12 is a flow diagram of a method for storing gestures associated with a user;

[0061] Fig. 13 is a flow diagram of a method for reacting to a gesture performed by a user;

[0062] Fig. 14 is a flow diagram of a method for storing health data associated with a user;

[0063] Fig. 15 is a flow diagram of a method for reacting to a gesture performed by a user.

[0064] In the appended figures, similar components and/or features may have the same reference label. Further, various components of the same type may be distinguished by following the reference label by a letter that distinguishes among the similar components. If only the first reference label is used in the specification, the description is applicable to any one of the

similar components having the same first reference label irrespective of the second reference label.

DETAILED DESCRIPTION

[0065] Presented herein are embodiments of a complete vehicle ecosystem. The ecosystem can comprise single devices or a compilation of devices. This device, or these devices, may be capable of communicating with other devices and/or to an individual or group of individuals. Further, this device, or these devices, can receive user input in unique ways. The overall design and functionality of each device provides for an enhanced user experience making the device more useful and more efficient. As described herein, the device(s) may be electrical, mechanical, electro-mechanical, software-based, and/or combinations thereof.

[0066] A vehicle environment 100 that may contain a vehicle ecosystem is shown in Fig. 1. The vehicle environment 100 can contain areas associated with a vehicle or conveyance 104. The vehicle 104 is shown as a police car but can be any type of conveyance. The environment 100 can include at least three zones. A first zone 108 may be inside a vehicle 104. The zone 108 includes any interior space, trunk space, engine compartment, or other associated space within or associated with the vehicle 104. The interior environment 108 can be defined by one or more techniques, for example, geo-fencing.

[0067] A second zone 112 may be delineated by line 120. The zone 112 is created by a range of one or more sensors associated with the vehicle 104. Thus, the area 112 is exemplary of the range of those sensors and what can be detected by those sensors associated with the vehicle 104. The rest of the environment includes all space beyond the range of the sensors and is represented by 116. Thus, the environment 100 may have an area 116 that includes all areas beyond the sensor range 112. The area 116 may include future locations of travel that the vehicle 104 may proceed to in the future.

[0068] An embodiment of a vehicle system 200 is shown in Fig. 2. The vehicle system 200 may consist of hardware and/or software that conduct various operations for or with the vehicle 104. The operations can include, but are not limited to providing information to the user, receiving input from the user, and controlling the functions or operation of the vehicle 104, etc. The vehicle system 200 can include a vehicle control system 204. The vehicle control system 204 can be any type of computing system operable to conduct the operations as described herein.

[0069] The vehicle control system 204 may interact with a memory or storage system 208 that stores system data. System data 208 may be any type of data needed for the vehicle control system 204 to control effectively the vehicle 104. An example of some of the data that may be stored by the vehicle control system 204 may be as described in conjunction with Fig. 8. The system data 208 can represent any type of database or other storage system. Thus, the system data 208 can be a flat file data system, an object-oriented data system, or some other data system that may interface with the vehicle control system 204.

[0070] The vehicle control system 204 may communicate with a device or user interface 212. The user interface 212 may be as described in conjunction with Fig. 5. The user interface 212 may be operable to receive user input either through touch input, on one or more user interface buttons, or through a graphical user interface that may include a gesture capture region, as described in conjunction with Fig. 5. Further, the symbol 212 can represent a device that is located or associated with the vehicle 104. The device 212 can be a mobile device, including, but not limited to, a mobile telephone, a mobile computer, or other type of computing system or device that is either permanently located in or temporarily associated with the automobile 104. Thus, the vehicle control system 204 can interface with the device 212 and leverage the devices computing capability to provide one or more of the features or functions as described herein.

[0071] The device or user interface 212 can receive input or provide information to a user 216. The user 216 may thus interact with the vehicle control system 204 through the interface or device 212. Further, the device 212 may include or have access to device data 220. The device data 220 can be any type of data that is used in conjunction with the device 212, including, but not limited to, multimedia data, preferences data, bioinformatics, data associated with the user 216, or other types of data. The data may be stored in a device data 220 as a storage system similar to that described in conjunction with system data 208.

[0072] The vehicle control system 204 may also communicate with or through a communication network 224. The communication network 224 can represent any type of wireless or wired communication system that may be included within the vehicle 104 or operable to communicate outside the vehicle 104. Thus, the communication network 224 can include a local area communication capability and a wide area communication capability. For example, the communication network 224 can include a Bluetooth wireless system, an 802.11G or 802.11N wireless system, a CAN bus, an Ethernet network within the vehicle 104, or other types

of communication networks that may function with or be associated with the vehicle 104. Further, the communication network 224 can also include wide area communication capabilities, including one or more of, but not limited to, a cellular communication capability, satellite telephone communication capability, a wireless wide area network communication capability, or other types of communication capabilities that allow for the vehicle control system 204 to communicate outside the vehicle 104.

[0073] The vehicle control system 204 may communicate through the communication network 224 to a server 228 that may be located in a facility that is not within physical proximity to the vehicle 104. Thus, the server 224 may represent a cloud computing system or cloud storage that allows the vehicle control system 204 to either gain access to further computing capabilities or to storage in a location outside of the vehicle 104. The server 228 can include a computer processor and memory and be similar to any computing system as understood to one skilled in the art.

[0074] Further, the server 228 may be associated with stored data 232. The stored data 232 may be stored in any system or by any method, as described in conjunction with system data 208 and/or device data 220. The stored data 232 can include information that may be associated with one or more users 216 or associated with one or more vehicles 104. The stored data 232, being stored in a cloud or in a distant facility, may be exchanged among vehicles 104 or may be used by a user 216 in different locations or with different vehicles 104.

[0075] The vehicle control system 204 may also communicate with one or more sensors 236/242, which are either associated with the vehicle 104 or communicate with the vehicle 104. Vehicle sensors 242 may include one or more sensors for providing information to the vehicle control system 204 that determine or provide information about the environment 100 in which the vehicle 104 is operating. Embodiments of these sensors may be as described in conjunction with Fig. 4. Non-vehicle sensor 236 can be any type of sensor that isn't currently associated with the vehicle 104. For example, non-vehicle sensor 236 can be sensors in a traffic system operated by a third party that provides data to the vehicle control system 204. Further, the non-vehicle sensor 236 can be other types of sensors which provide information about the distant environment 116 or other information about the vehicle 104 or the environment 100. These non-vehicle sensors 236 may be operated by third parties but provide information to the vehicle control system 204. Examples of information that may be used by the vehicle control system

204 may include weather tracking data, user health tracking data, vehicle maintenance data , or other types of data, which may provide environmental or other data to the vehicle control system 204.

[0076] An arrangement or configuration for sensors within a vehicle 104 is as shown in Fig. 3. The sensor arrangement 300 can include one or more areas 308 within the vehicle. An area can be a larger part of the environment inside or outside of the vehicle 104. Thus, area one 308A may include the area within the trunk space or engine space of the vehicle 104 and/or the front passenger compartment. Area three 308B may include a portion of the interior space 108 of the vehicle 104. The area N, 308N may include the trunk space or rear compartment area, when included within the vehicle 104. The interior space 108 may also be divided into areas. Thus, one area may be associated with the front passenger's and driver's seats, a second area may be associated with the middle passengers' seats, and a third area may be associated with a rear passenger's seat. Each area 308 may include one or more sensors that are positioned or operate to provide environmental information about that area 308.

[0077] Each area 308 may be further separated into one or more zones 312 within the area 308. For example, area 1 308A may be separated into zone A, 312a, and zone B, 312a. Each zone 312 may be associated with a particular portion of the interior occupied by a passenger. For example, zone A, 312a may be associated with a driver. Zone B, 312b, may be associated with a front passenger. Each zone 312 may include one or more sensors that are positioned or configured to collect information about the environment or ecosystem associated with that zone or person.

[0078] A passenger area 308b may include more than two zones as described in conjunction with area 308a. For example, area 308b may include three zones, 312c, 312d, and 312e. These three separate zones 312c, 312d, and 312e may be associated with three passenger seats typically found in the rear passenger area of an automobile 104. An area 308N and may include a single zone 312N as there may be no separate passenger areas but may include be a single trunk area within the vehicle 104. The number of zones 312 is unlimited within the areas as the areas are also unlimited inside the vehicle 104. Further, it should be noted that there may be one or areas 308 or zones 312 that may be located outside the vehicle 104 that may have a specific set of sensors associated therewith.

[0079] A set of sensors or vehicle components 400 associated with the vehicle 404 may be as shown in Fig. 4. The vehicle 104 includes, among many other components common to vehicles, wheels 407, a power source 409 (such as an engine, motor, or energy storage system (e.g., battery or capacitive energy storage system)), a manual or automatic transmission 412, a manual or automatic transmission gear controller 416, a power controller 420 (such as a throttle), a vehicle control system 204, the display device 212, a braking system 436, a steering wheel 440, a power source activation/deactivation switch 444 (e.g., an ignition), an occupant seating system 448, a wireless signal receiver 453 to receive wireless signals from signal sources such as roadside beacons and other electronic roadside devices, and a satellite positioning system receiver 457 (e.g., a Global Positioning System ("GPS") (US), GLONASS (Russia), Galileo positioning system (EU), Compass navigation system (China), and Regional Navigational Satellite System (India) receiver).

[0080] The vehicle 104 includes a number of sensors in wireless or wired communication with the vehicle control system 204 and/or display device 212 to collect sensed information regarding the vehicle state, configuration, and/or operation. Exemplary sensors include wheel state sensor 460 to sense one or more of vehicle speed, acceleration, deceleration, wheel rotation, wheel speed (e.g., wheel revolutions-per-minute), wheel slip, and the like, a power source energy output sensor 464 to sense a power output of the power source 409 by measuring one or more of current engine speed (e.g., revolutions-per-minute), energy input and/or output (e.g., voltage, current, fuel consumption, and torque) (e.g., turbine speed sensor, input speed sensor, crankshaft position sensor, manifold absolute pressure sensor, mass flow sensor, and the like), and the like, a switch state sensor 468 to determine a current activation or deactivation state of the power source activation/deactivation switch 444, a transmission setting sensor 470 to determine a current setting of the transmission (e.g., gear selection or setting), a gear controller sensor 472 to determine a current setting of the gear controller 416, a power controller sensor 474 to determine a current setting of the power controller 420, a brake sensor 476 to determine a current state (braking or non-braking) of the braking system 436, a seating system sensor 478 to determine a seat setting and current weight of seated occupant, if any) in a selected seat of the seating system 448, exterior and interior sound receivers 490 and 492 (e.g., a microphone and other type of acoustic-to-electric transducer or sensor) to receive and convert sound waves into an equivalent analog or digital signal. Examples of other sensors (not shown) that may be employed include

safety system state sensors to determine a current state of a vehicular safety system (e.g., air bag setting (deployed or undeployed) and/or seat belt setting (engaged or not engaged)), light setting sensor (e.g., current headlight, emergency light, brake light, parking light, fog light, interior or passenger compartment light, and/or tail light state (on or off)), brake control (e.g., pedal) setting sensor, accelerator pedal setting or angle sensor, clutch pedal setting sensor, emergency brake pedal setting sensor, door setting (e.g., open, closed, locked or unlocked) sensor, engine temperature sensor, passenger compartment or cabin temperature sensor, window setting (open or closed) sensor, one or more cameras or other imaging sensors (which commonly convert an optical image into an electronic signal but may include other devices for detection objects such as an electromagnetic radiation emitter/receiver that emits electromagnetic radiation and receives electromagnetic waves reflected by the object) to sense objects, such as other vehicles and pedestrians and optionally determine the distance, trajectory and speed of such objects, in the vicinity or path of the vehicle, odometer reading sensor, trip mileage reading sensor, wind speed sensor, radar transmitter/receiver output, brake wear sensor, steering/torque sensor, oxygen sensor, ambient lighting sensor, vision system sensor, ranging sensor, parking sensor, heating, venting, and air conditioning (HVAC) sensor, water sensor, air-fuel ratio meter, blind spot monitor, hall effect sensor, microphone, radio frequency (RF) sensor, infrared (IR) sensor, vehicle control system sensors, wireless network sensor (e.g., Wi-Fi and/or Bluetooth sensor), cellular data sensor, and other sensors known to those of skill in the vehicle art.

[0081] In the depicted vehicle embodiment, the various sensors are in communication with the display device 212 and vehicle control system 204 via signal carrier network 480. As noted, the signal carrier network 480 can be a network of signal conductors, a wireless network (e.g., a radio frequency, microwave, or infrared communication system using a communications protocol, such as Wi-Fi), or a combination thereof.

[0082] In one implementation, the control system 424 receives and reads sensor signals, such as wheel and engine speed signals, as a digital input comprising, for example, a pulse width modulated (PWM) signal. The processor 304 can be configured, for example, to read each of the signals into a port configured as a counter or configured to generate an interrupt on receipt of a pulse, such that the processor 304 can determine, for example, the engine speed in revolutions per minute (RPM) and the speed of the vehicle in miles per hour (MPH). One skilled in the art will recognize that the two signals can be received from existing sensors in a vehicle comprising

a tachometer and a speedometer, respectively. Alternatively, the current engine speed and vehicle speed can be received in a communication packet as numeric values from a conventional dashboard subsystem comprising a tachometer and a speedometer. The transmission speed sensor signal can be similarly received as a digital input comprising a signal coupled to a counter or interrupt signal of the processor 304, or received as a value in a communication packet on the network or port interface 352 from an existing subsystem of the vehicle. The ignition sensor signal can be configured as a digital input, wherein a HIGH value represents that the ignition is on and a LOW value represents that the ignition is OFF. Three bits of the port interface 352 can be configured as a digital input to receive the gear shift position signal, representing eight possible gear shift positions. Alternatively, the gear shift position signal can be received in a communication packet as a numeric value on the port interface 352. The throttle position signal can be received as an analog input value, typically in the range 0-5 volts. Alternatively, the throttle position signal can be received in a communication packet as a numeric value on the port interface 352. The output of other sensors can be processed in a similar fashion.

[0083] Other sensors may be included and position in the interior space 108 of the vehicle 104. Generally, these interior sensors obtain data about the health of the driver and/or passenger(s), data about the safety of the driver and/or passenger(s), and/or data about the comfort of the driver and/or passenger(s). The health data sensors can include sensors in the steering wheel that can measure various health telemetry for the person (*e.g., heart rate, temperature, blood pressure, blood presence, blood composition, etc.*). Sensors in the seats may also provide for health telemetry (*e.g., presence of liquid, weight, weight shifts, etc.*). Infrared sensors could detect a person's temperature; optical sensors can determine a person's position and whether the person has become unconscious. Other health sensors are possible and included herein.

[0084] Safety sensors can measure whether the person is acting safely. Optical sensors can determine a person's position and focus. If the person stops looking at the road ahead, the optical sensor can detect the lack of focus. Sensors in the seats may detect if a person is leaning forward or may be injured by a seat belt in a collision. Other sensors can detect that the driver has at least one hand on a steering wheel. Other safety sensors are possible and contemplated as if included herein.

[0085] Comfort sensors can collect information about a person's comfort. Temperature sensors may detect a temperature of the interior cabin. Moisture sensors can determine a relative

humidity. Audio sensors can detect loud sounds or other distractions. Audio sensors may also receive input from a person through voice data. Other comfort sensors are possible and contemplated as if included herein.

[0086] An embodiment of a vehicle control system 204 and its associated components 204 may be as shown in Fig. 5. In general, the device 212 includes a front screen 212 with a touch sensitive display 568. The front screen 212 may be disabled and/or enabled by a suitable command. Moreover, the front screen 212 can be touch sensitive and can include different operative areas. For example, a first operative area, within the touch sensitive screen 212, may comprise a touch sensitive display 568. In general, the touch sensitive display 568 may comprise a full color, touch sensitive display. A second area within each touch sensitive screen 568 may comprise a gesture capture region 572. The gesture capture region 572 may comprise one or more areas or regions that is outside of the touch sensitive display 568 area or screen area 212, and that is capable of receiving input, for example in the form of gestures provided by a user. However, the one or more gesture capture regions 572 do not include pixels that can perform a display function or capability.

[0087] It is further anticipated that a third region of the touch sensitive screen 568 may comprise one or more configurable areas. The configurable area is capable of receiving input and has display or limited display capabilities. As can be appreciated, the configurable area may occupy any part of the touch sensitive screen 568 not allocated to a gesture capture region 572 or touch sensitive display 568. In embodiments, the configurable area may present different input options to the user. For example, the configurable area may display buttons or other relatable items. Moreover, the identity of displayed buttons, or whether any buttons are displayed at all within the configurable area of the touch sensitive screen 568 may be determined from the context in which the device 212 is used and/or operated. In an exemplary embodiment, the touch sensitive screen 568 comprises liquid crystal display devices extending across at least the region of the touch sensitive screen 568 that is capable of providing visual output to a user, and a resistive and/or capacitive input matrix over the regions of the touch sensitive screen 568 that are capable of receiving input from the user.

[0088] One or more display controllers 516 may be provided for controlling the operation of the touch sensitive screen 568, including input (touch sensing) and output (display) functions. In the exemplary embodiment illustrated in Fig. 5, a touch screen controller 516 is provided for the

touch screen 568. In accordance with some embodiments, the functions of a touch screen controller 516 may be incorporated into other components, such as a processor 504.

[0089] The processor 504 may comprise a general purpose programmable processor or controller for executing application programming or instructions. In accordance with at least some embodiments, the processor 504 may include multiple processor cores, and/or implement multiple virtual processors. In accordance with still other embodiments, the processor 504 may include multiple physical processors. As a particular example, the processor 504 may comprise a specially configured application specific integrated circuit (ASIC) or other integrated circuit, a digital signal processor, a controller, a hardwired electronic or logic circuit, a programmable logic device or gate array, a special purpose computer, or the like. The processor 504 generally functions to run programming code or instructions implementing various functions of the device 212.

[0090] A device 212 may also include memory 508 for use in connection with the execution of application programming or instructions by the processor 504, and for the temporary or long term storage of program instructions and/or data. As examples, the memory 508 may comprise RAM, DRAM, SDRAM, or other solid state memory. Alternatively or in addition, data storage 512 may be provided. Like the memory 508, the data storage 512 may comprise a solid state memory device or devices. Alternatively or in addition, the data storage 512 may comprise a hard disk drive or other random access memory.

[0091] In support of communications functions or capabilities, the device 212 can include a cellular telephony module 528. As examples, the cellular telephony module 528 can comprise a GSM, CDMA, FDMA and/or analog cellular telephony transceiver capable of supporting voice, multimedia and/or data transfers over a cellular network. Alternatively or in addition, the device 212 can include an additional or other wireless communications module 532. As examples, the other wireless communications module 532 can comprise a Wi-Fi, BLUETOOTH TM, WiMax, infrared, or other wireless communications link. The cellular telephony module 528 and the other wireless communications module 532 can each be associated with a shared or a dedicated antenna 524.

[0092] A port interface 552 may be included. The port interface 552 may include proprietary or universal ports to support the interconnection of the device 212 to other devices or components, such as a dock, which may include additional or different capabilities from those

integral to the device 212. In addition to supporting an exchange of communication signals between the device 212 and another device or component, the docking port (not shown) and/or port interface 552 can support the supply of power to or from the device 212. The port interface 552 also comprises an intelligent element that comprises a docking module for controlling communications or other interactions between the device 212 and a connected device or component.

[0093] An input/output module 548 and associated ports may be included to support communications over wired networks or links, for example with other communication devices, server devices, and/or peripheral devices. Examples of an input/output module 548 include an Ethernet port, a Universal Serial Bus (USB) port, Institute of Electrical and Electronics Engineers (IEEE) 1594, or other interface.

[0094] An audio input/output interface/device(s) 544 can be included to provide analog audio to an interconnected speaker or other device, and to receive analog audio input from a connected microphone or other device. As an example, the audio input/output interface/device(s) 544 may comprise an associated amplifier and analog to digital converter. Alternatively or in addition, the device 212 can include an integrated audio input/output device 556 and/or an audio jack for interconnecting an external speaker or microphone. For example, an integrated speaker and an integrated microphone can be provided, to support near talk or speaker phone operations.

[0095] Hardware buttons 280 can be included for example for use in connection with certain control operations. Examples include a master power switch, volume control, etc., as described in conjunction with Fig. 2. One or more image capture interfaces/devices, such as a camera, can be included for capturing still and/or video images. Alternatively or in addition, an image capture interface/device can include a scanner or code reader. An image capture interface/device can include or be associated with additional elements, such as a flash or other light source.

[0096] The device 212 can also include a global positioning system (GPS) receiver 536. In accordance with embodiments of the present invention, the GPS receiver 536 may further comprise a GPS module that is capable of providing absolute location information to other components of the device 212. Other sensors 242 may also be included. For example, an accelerometer(s)/gyroscope(s) may also be included. For example, in connection with the display of information to a user and/or other functions, a signal from the accelerometer/gyroscope can be used to determine an orientation and/or format in which to

display that information to the user. In some embodiments, the accelerometer/gyroscope may comprise at least one accelerometer and at least one gyroscope.

[0097] Embodiments of the present invention can also include one or more magnetic sensing feature. The magnetic sensing feature can be configured to provide a signal indicating the position of the device relative to a vehicle-mounted position. This information can be provided as an input, for example to a user interface application, to determine an operating mode, characteristics of the touch sensitive display 568 and/or other device 212 operations. As examples, a magnetic sensing feature can comprise one or more of Hall-effect sensors, a multiple position switch, an optical switch, a Wheatstone bridge, a potentiometer, or other arrangement capable of providing a signal indicating of multiple relative positions the touch screens are in. Alternatively, the magnetic sensing feature may comprise one or more metallic elements used by other sensors associated with the console and/or vehicle to determine whether the device 212 is in a vehicle-mounted position. These metallic elements may include but are not limited to rare-earth magnets, electromagnets, ferrite and/or ferrite alloys, and/or other material capable of being detected by a range of sensors.

[0098] Communications between various components of the device 212 can be carried by one or more buses 520. In addition, power can be supplied to the components of the device 212 from a power source and/or power control module 560. The power control module 560 can, for example, include a battery, an AC to DC converter, power control logic, and/or ports for interconnecting the device 212 to an external source of power.

[0099] An embodiment of one or more software modules that may be associated with the vehicle control system 204 may be as shown in Fig. 6. The memory 508 may store and the processor 504 may execute one or more software components. These components can include at least one operating system (OS) 616, an application manager 662, a console desktop 666, and/or one or more applications 664a and/or 664b from an application store 660. The OS 616 can include a framework 620, one or more frame buffers 648, one or more drivers 612, and/or a kernel 618. The OS 616 can be any software, consisting of programs and data, which manages computer hardware resources and provides common services for the execution of various applications 664. The OS 616 can be any operating system and, at least in some embodiments, dedicated to mobile devices, including, but not limited to, Linux, ANDROID TM, iPhone OS

(IOS TM), WINDOWS PHONE 7 TM, etc. The OS 616 is operable to provide functionality to the device 212 by executing one or more operations, as described herein.

[00100] The applications 664 can be any higher level software that executes particular console functionality for the user. Applications 664 can include programs such as vehicle control applications, email clients, web browsers, texting applications, games, media players, office suites, etc. The applications 664 can be stored in an application store 660, which may represent any memory or data storage, and the management software associated therewith, for storing the applications 664. Once executed, the applications 664 may be run in a different area of memory 608.

[00101] The framework 620 may be any software or data that allows the multiple tasks running on the device to interact. In embodiments, at least portions of the framework 620 and the discrete components described hereinafter may be considered part of the OS 616 or an application 664. However, these portions will be described as part of the framework 620, but those components are not so limited. The framework 620 can include, but is not limited to, a Surface Cache module 628, a Window Management module 632, an Input Management module 636, an Application Model Manager 642, a Display Controller 644, one or more frame buffers 648, and/or an event buffer 666.

[00102] The Surface Cache module 628 includes any memory or storage and the software associated therewith to store or cache one or more images of applications, windows, and/or console screens. A series of active and/or non-active windows (or other display objects, such as, a desktop display) can be associated with each display. An active window (or other display object) is currently displayed. A non-active window (or other display objects) was opened and, at some time, displayed but are now not displayed. To enhance the user experience, before a window transitions from an active state to an inactive state, a "screen shot" of a last generated image of the window (or other display object) can be stored. The Surface Cache module 628 may be operable to store a bitmap of the last active image of a window (or other display object) not currently displayed. Thus, the Surface Cache module 628 stores the images of non-active windows (or other display objects) in a data store.

[0100] In embodiments, the Window Management module 632 is operable to manage the windows (or other display objects) that are active or not active on each of the displays. The Window Management module 632, based on information from the OS 616, or other components,

determines when a window (or other display object) is visible or not active. The Window Management module 632 may then put a non-visible window (or other display object) in a "not active state" and, in conjunction with the Task Management module 640 suspends the application's operation. Further, the Window Management module 632 may assign a display identifier to the window (or other display object) or manage one or more other items of data associated with the window (or other display object). The Window Management module 632 may also provide the stored information to the application 664, or other components interacting with or associated with the window (or other display object). The Window Management module 632 can also associate an input task with a window based on window focus and display coordinates within the motion space.

[0101] The Input Management module 636 is operable to manage events that occur with the device. An event is any input into the window environment, for example, a user interface interactions with a user. The Input Management module 636 receives the events and logically stores the events in an event buffer 656. Events can include such user interface interactions as a "down event," which occurs when the screen 204 receives a touch signal from a user, a "move event," which occurs when the screen 204 determines that a user's finger is moving across a screen(s), an "up event", which occurs when the device 212 determines that the user has stopped touching the screen 568 etc. These events are received, stored, and forwarded to other modules by the Input Management module 636. The Input Management module 636 may also map screen inputs to a motion space which is the culmination of all physical and virtual display available on the device.

[0102] The frame buffer 648 is a logical structure(s) used to render the user interface. The frame buffer 648 can be created and destroyed by the OS kernel 618. However, the Display Controller 644 can write the image data, for the visible windows, into the frame buffer 648. A frame buffer 648 can be associated with one screen or multiple screens. The association of a frame buffer 648 with a screen can be controlled dynamically by interaction with the OS kernel 618. A composite display may be created by associating multiple screens with a single frame buffer 648. Graphical data used to render an application's window user interface may then be written to the single frame buffer 648, for the composite display, which is output to the multiple screens 204. The Display Controller 644 can direct an application's user interface to a portion of the frame buffer 648 that is mapped to a particular display 208, thus, displaying the user interface

on only one screen 212. The Display Controller 644 can extend the control over user interfaces to multiple applications, controlling the user interfaces for as many displays as are associated with a frame buffer 648 or a portion thereof. This approach compensates for the physical screen 212 and any other console screens that are in use by the software component above the Display Controller 644.

[0103] The Application Manager 662 is an application that provides a presentation layer for the window environment. Thus, the Application Manager 662 provides the graphical model for rendering. Likewise, the Desktop 666 provides the presentation layer for the Application Store 660. Thus, the desktop provides a graphical model of a surface having selectable application icons for the Applications 664 in the Application Store 660 that can be provided to the Window Management Module 632 for rendering.

[0104] Further, the framework can include an Application Model Manager (AMM) 642. The Application Manager 662 may interface with the AMM 642. In embodiments, the AMM 642 receives state change information from the device 212 regarding the state of applications (which are running or suspended). The AMM 642 can associate bit map images from the Surface Cache Module 628 to the applications that are alive (running or suspended). Further, the AMM 642 may provide a list of executing applications to the Application Manager 662.

[0105] One or more gestures used to interface with the vehicle control system 204 may be as described in conjunction with figures 7A through 7K. Figs. 7A through 7H depict various graphical representations of gesture inputs that may be recognized by the screen(s) 212. The gestures may be performed not only by a user's body part, such as a digit, but also by other devices, such as a stylus, that may be sensed by the contact sensing portion(s) of a screen 212. In general, gestures are interpreted differently, based on where the gestures are performed (either directly on the display 568 or in the gesture capture region 572). For example, gestures in the display 568 may be directed to a desktop or application, and gestures in the gesture capture region 572 may be interpreted as for the system.

[0106] With reference to Figs. 7A-7H, a first type of gesture, a touch gesture 720, is substantially stationary on the screen 212 for a selected length of time. A circle 728 represents a touch or other contact type received at particular location of a contact sensing portion of the screen. The circle 728 may include a border 732, the thickness of which indicates a length of time that the contact is held substantially stationary at the contact location. For instance, a tap

720 (or short press) has a thinner border 732a than the border 732b for a long press 724 (or for a normal press). The long press 724 may involve a contact that remains substantially stationary on the screen for longer time period than that of a tap 720. As will be appreciated, differently defined gestures may be registered depending upon the length of time that the touch remains stationary prior to contact cessation or movement on the screen.

[0107] With reference to Fig. 7C, a drag gesture 700 on the screen 212 is an initial contact (represented by circle 728) with contact movement 736 in a selected direction. The initial contact 728 may remain stationary on the screen 212 for a certain amount of time represented by the border 732. The drag gesture typically requires the user to contact an icon, window, or other displayed image at a first location followed by movement of the contact in a drag direction to a new second location desired for the selected displayed image. The contact movement need not be in a straight line but have any path of movement so long as the contact is substantially continuous from the first to the second locations.

[0108] With reference to Fig. 7D, a flick gesture 704 on the screen 212 is an initial contact (represented by circle 728) with truncated contact movement 736 (relative to a drag gesture) in a selected direction. In embodiments, a flick has a higher exit velocity for the last movement in the gesture compared to the drag gesture. The flick gesture can, for instance, be a finger snap following initial contact. Compared to a drag gesture, a flick gesture generally does not require continual contact with the screen 212 from the first location of a displayed image to a predetermined second location. The contacted displayed image is moved by the flick gesture in the direction of the flick gesture to the predetermined second location. Although both gestures commonly can move a displayed image from a first location to a second location, the temporal duration and distance of travel of the contact on the screen is generally less for a flick than for a drag gesture.

[0109] With reference to Fig. 7E, a pinch gesture 708 on the screen 212 is depicted. The pinch gesture 708 may be initiated by a first contact 728 to the screen 212 by, for example, a first digit and a second contact 728b to the screen 212 by, for example, a second digit. The first and second contacts 728a,b may be detected by a common contact sensing portion of a common screen 212, by different contact sensing portions of a common screen 212, or by different contact sensing portions of different screens 212. The first contact 728a is held for a first amount of time, as represented by the border 732a, and the second contact 728b is held for a second amount of time,

as represented by the border 732b. The first and second amounts of time are generally substantially the same, and the first and second contacts 728a,b generally occur substantially simultaneously. The first and second contacts 728a,b generally also include corresponding first and second contact movements 736a,b, respectively. The first and second contact movements 736 a,b are generally in opposing directions. Stated another way, the first contact movement 736a is towards the second contact 736b, and the second contact movement 736b is towards the first contact 736a. More simply stated, the pinch gesture 708 may be accomplished by a user's digits touching the screen 212 in a pinching motion.

[0110] With reference to Fig. 7F, a spread gesture 710 on the screen 212 is depicted. The spread gesture 710 may be initiated by a first contact 728a to the screen 212 by, for example, a first digit and a second contact 728b to the screen 212 by, for example, a second digit. The first and second contacts 728a,b may be detected by a common contact sensing portion of a common screen 212, by different contact sensing portions of a common screen 212, or by different contact sensing portions of different screens 212. The first contact 728a is held for a first amount of time, as represented by the border 732a, and the second contact 728b is held for a second amount of time, as represented by the border 732b. The first and second amounts of time are generally substantially the same, and the first and second contacts 728a,b generally occur substantially simultaneously. The first and second contacts 728a,b generally also include corresponding first and second contact movements 736a,b, respectively. The first and second contact movements 736a,b are generally in a common direction. Stated another way, the first and second contact movements 736a,b are away from the first and second contacts 728a,b. More simply stated, the spread gesture 710 may be accomplished by a user's digits touching the screen 212 in a spreading motion.

[0111] The above gestures may be combined in any manner, such as those shown by Figs. 7G and 7H, to produce a determined functional result. For example, in Fig. 7G a tap gesture 720 is combined with a drag or flick gesture 712 in a direction away from the tap gesture 720. In Fig. 7H, a tap gesture 720 is combined with a drag or flick gesture 712 in a direction towards the tap gesture 720.

[0112] The functional result of receiving a gesture can vary depending on a number of factors, including a state of the vehicle 104, display 568, or screen 212, a context associated with the gesture, or sensed location of the gesture. The state of the vehicle commonly refers to one or

more of a configuration of the vehicle 104, a display orientation, and user and other inputs received by the vehicle 104. Context commonly refers to one or more of the particular application(s) selected by the gesture and the portion(s) of the application currently executing, whether the application is a single- or multi-screen application, and whether the application is a multi-screen application displaying one or more windows. Sensed location of the gesture commonly refers to whether the sensed set(s) of gesture location coordinates are on a touch sensitive display 568 or a gesture capture region 572, whether the sensed set(s) of gesture location coordinates are associated with a common or different display or screen 212, and/or what portion of the gesture capture region contains the sensed set(s) of gesture location coordinates.

[0113] A tap, when received by an a touch sensitive display 568, can be used, for instance, to select an icon to initiate or terminate execution of a corresponding application, to maximize or minimize a window, to reorder windows in a stack, and to provide user input such as by keyboard display or other displayed image. A drag, when received by a touch sensitive display 568, can be used, for instance, to relocate an icon or window to a desired location within a display, to reorder a stack on a display, or to span both displays (such that the selected window occupies a portion of each display simultaneously). A flick, when received by a touch sensitive display 568 or a gesture capture region 572, can be used to relocate a window from a first display to a second display or to span both displays (such that the selected window occupies a portion of each display simultaneously). Unlike the drag gesture, however, the flick gesture is generally not used to move the displayed image to a specific user-selected location but to a default location that is not configurable by the user.

[0114] The pinch gesture, when received by a touch sensitive display 568 or a gesture capture region 572, can be used to minimize or otherwise increase the displayed area or size of a window (typically when received entirely by a common display), to switch windows displayed at the top of the stack on each display to the top of the stack of the other display (typically when received by different displays or screens), or to display an application manager (a "pop-up window" that displays the windows in the stack). The spread gesture, when received by a touch sensitive display 568 or a gesture capture region 572, can be used to maximize or otherwise decrease the displayed area or size of a window, to switch windows displayed at the top of the stack on each display to the top of the stack of the other display (typically when received by different displays

or screens), or to display an application manager (typically when received by an off-screen gesture capture region on the same or different screens).

[0115] The combined gestures of Fig. 7G, when received by a common display capture region in a common display or screen 212, can be used to hold a first window location constant for a display receiving the gesture while reordering a second window location to include a window in the display receiving the gesture. The combined gestures of Fig. 7H, when received by different display capture regions in a common display or screen 212 or in different displays or screens, can be used to hold a first window location for a display receiving the tap part of the gesture while reordering a second window location to include a window in the display receiving the flick or drag gesture. Although specific gestures and gesture capture regions in the preceding examples have been associated with corresponding sets of functional results, it is to be appreciated that these associations can be redefined in any manner to produce differing associations between gestures and/or gesture capture regions and/or functional results.

[0116] Gestures that may be completed in three-dimensional space and not on a touch sensitive screen 568 or gesture capture region 572 may be as shown in Figs. 7I through 7K. The gestures may be completed in an area where a sensor 242, such as an optical sensor, infrared sensor, or other type of sensor, may detect the gesture. For example, the gesture 740 in Fig. 7I, a person may open their hand 764 and move their hand in a back and forth direction 748 as a gesture 740 to complete some function with the vehicle 104. For example gesture 764 may change the station of the radio in the vehicle 104. The sensors 242 may both determine the configuration of the hand and the vector of the movement. The vector and hand configuration can be interpreted to mean certain things to the vehicle control system 204 and produce different results.

[0117] In another example of a gesture 752 in Fig. 7J, a user may configure their hand 764 to extend two fingers and move the hand in an up and down operation 756. This gesture 752 may control the volume of the radio or some other function. Again, the sensors 242 may determine how the person has configured their hand gesture, and the vector of the movement. In another example of a gesture 760 shown in Fig. 7K, a user may extend their middle three fingers at an angle 45° from straight vertical and circle the hand in a counter-clockwise motion 764. This gesture 760 may cause the automobile to change the heat or do some other function. As can be understood by one skilled in the art, the configurations of the hand and the types of movement

are variable. Thus, the user may configure the hand 764 in any way imaginable and may also move that hand 764 in any direction with any vector in three-dimensional space.

[0118] The gestures 740, 752, 760, as shown in Fig. 7I through 7K, may occur in a predetermined volume of space within the vehicle 104. For example, a sensor 242 may be configured to identify such gestures 740, 752, 760 between the front passenger's and front driver's seats over a console area within the passenger compartment of the automobile 104. The gestures 740, 752, 760 may be made within area 1 304a between zones A 312a and B 312b. However, there may be other areas 308 where a user may use certain gestures, where sensors 242 may be able to determine a certain function is desired. Gestures that may be similar but used in different areas within the vehicle 104 may cause different functions to be performed. For example, the gesture 740 in Fig. 7I, if used in zone E 312e, may change the heat provided in zone E 312e, but may change the station of a radio if used in zone A312a. Further, the gestures may be made with other body parts or, for example, different expressions of a persons' face may be used to control functions in the vehicle 104. Also, the user may use two hands in some circumstances or do other types of physical movements that can cause different reactions in the vehicle 104.

[0119] An embodiment of a data structure 800 to store different settings is shown in Fig. 8. The data structure 800 may include one or more of data files or data objects 804. Thus, the data structure 800 may represent different types of data bases or data storage, for example, object-oriented data bases, flat file data structures, relational database, or other types of data storage arrangements. The data file 804 may include several portions 808-836 representing different types of data. Each of these types of data may be associated with a user, as shown in portion 808.

[0120] There may be one or more user records 840 and associated data stored within the data file 804. The user can be any person that uses or rides within the vehicle or conveyance 104. The user may be identified in portion 812. For the vehicle 104, the user may include a set of one or more features that may identify the user. These features may be the physical characteristics of the person that may be identified by facial recognition or some other type of system. In other embodiments, the user may provide a unique code to the vehicle control system 204 or provide some other type of data that allows the vehicle control system 204 to identify the user. The features or characteristics of the user are then stored in portion 812.

[0121] Each user identified in portion 808 may have a different set of settings for each area 308 and/or each zone 312 within the vehicle 104. Thus, each set of setting may also be associated with a predetermined zone 312 or area 308. The zone 312 is stored in portion 820 and the area 308 is stored in portion 816.

[0122] One or more settings may be stored in portion 824. These settings 824 may be the configurations of different functions within the vehicle 104 that are specified by or for that user. For example, the settings 824 may be the position of a seat, the position of a steering wheel, a heating/cooling setting, a radio setting, a cruise control setting, or some other type of setting associated with the vehicle 104. Further, in vehicles adapted to have a configurable console or a configurable dash or heads-up display, the settings 824 may also provide for how that heads-up display, dash, or console are configured for this particular user. Each setting 824 may be associated with a different area 308 or zone 312. Thus, there may be more settings 824 for when the user is the driver and in zone A, 312A, of area 1, 308A. However, there may be similar settings 824 among the different zones 312 or areas 308 as shown in portion 824. For example, the heating or radio settings for the user may be similar in every zone 312.

[0123] The sensors 242 within the vehicle 104 may be able to either obtain or track health data in portion 828. Health data 828 may include any type of physical characteristic associated with the user. For example, a heart rate, a blood pressure, a temperature, or other types of heath data may be obtained and stored in portion 828. The user may have this health data tracked over a period of time to allow for statistical analysis of the user's health while operating the vehicle 104. In this way if some function of the user's health deviates from a norm, the vehicle 104 may be able to determine there is a problem with the person and react to that data.

[0124] One or more gestures may be stored in portion 832. Thus, the gestures used and described in conjunction Fig. 7A through 7K may be configurable. These gestures may be determined or created by the user and stored in portion 832. A user may have different gestures for each zone 312 or area 308 within the vehicle. The gestures that do certain things while driving may do other things while in a different area 308 of the vehicle 104. Thus, the user may use a first set of gestures while driving and a second set while a passenger. Further, one or more users may share gestures as shown in portion 832. Each driver may have a common set of gestures that they use in zone A, 312a. Each of these gestures may be determined or captured

and then stored with their average characteristics (*e.g.,* vector, position of gesture, etc.) in portion 832.

[0125] One or more sets of safety parameters may be stored in portion 836. Safety parameters 836 may be common operating characteristics for this driver/passenger or for all drivers/passengers that if deviated from may determine there is a problem with the driver/passenger or the vehicle 104. For example, a certain route may be taken repeatedly and an average speed or mean speed may be determined. If the mean speed deviates by some number of standard deviations, a problem with the vehicle 104 or the user may be determined. In another example, the health characteristics or driving experience of the user may be determined. If the user drives in a certain position where their head occupies a certain portion of three-dimensional space within the vehicle 104, the vehicle control system 204 may determine that the safety parameter includes the users face or head being within this certain portion of the vehicle interior space. If the user's head deviates from that interior space for some amount of time, the vehicle control system 204 can determine that something is wrong with the driver and change the function or operation of the vehicle 104 to assist the driver. This may happen, for example, when a user falls asleep at the wheel. If the user's head droops and does no longer occupy a certain three dimensional space, the vehicle control system 204 can determine that the driver has fallen asleep and may take control of the operation of the vehicle 204 and steer the vehicle 204 to the side of the road. In other examples, if the user's reaction time is too slow or some other safety parameter is not nominal, the vehicle control system 204 may determine that the user is inebriated or having some other medical problem. The vehicle control system 204 may then assume control of the vehicle to ensure that the driver is safe.

[0126] An embodiment of a method 900 for storing settings for a user associated with vehicle 104 is shown in Fig. 9. While a general order for the steps of the method 900 is shown in Fig. 9. Generally, the method 900 starts with a start operation 904 and ends with an end operation 936. The method 900 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 9. The method 900 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 900 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-8.

[0127] A person may enter the vehicle space 108. One or more sensors 242 may then identify that a person is sitting within the vehicle 104, in step 908. For example, sensors 242, in a seat, may determine that some new amount of weight has been registered. The amount of weight may fall within predetermined parameters, *e.g.*, over a threshold. This weight may then be determined to be a person by one or more optical or other sensors. The vehicle control system 204 may then determine that a person is in a certain zone 312 or area 308. For example the sensors may send signals to the input management module 636 that an event has occurred. This information may be sent to the task management module 640 to determine the zone 312 and area 308 where the event occurred. Further, the task management module 640 may then identify the person, in step 912.

[0128] The vehicle control system 204 can receive the information from the sensors 242 and use that information to search the database 800 that may be stored within the system data 208. The sensor data may be compared to ID characteristics 812 to determine if the person has already been identified. The vehicle control system 204 may also send the characteristic data from the sensors to the communication network 224 to a server 228 to compare the sensor data to stored data 232 that may be stored in a cloud system. The person's features can be compared to stored features 812 to determine if the person in the vehicle 104 can be identified.

[0129] If the person has been identified previously and their characteristics stored in portion 812, the method 900 proceeds YES to step 916 where that person may be identified. In identifying a person, the information associated with that person 840 may be retrieved and provided to the vehicle control system 204 for further action. If a person cannot be identified by finding their sensor characteristics in portion 812, the method 900 proceeds NO to step 920. In step 920, the vehicle control system 204, using an application 660, may create a new record in table 800 for the user. This new record may store a user identifier and their characteristics 812. It may also store the area 308 and zone 312 in data portions 816 and 820. The new record may then be capable of receiving new settings data for this particular user. In this way, the vehicle 104 can automatically identify or characterize a person so that settings may be established for the person in the vehicle 104.

[0130] The input management module 636 may then determine if settings are to be stored, in step 924. Settings might be any configuration of the vehicle 104 that may be associated with the user. The determination may be made after receiving a user input from the user. For example,

the user may make a selection on a touch sensitive display 568 indicating that settings currently made are to be stored. In other situations, a period of time may elapse after the user has made a configuration. After determining that the user is finished making changes to the settings, based on the length of the period of time since the setting was established, the task management module 640 can save the setting. Thus, the vehicle control system 204 can make settings automatically based on reaching a steady state for settings for user.

[0131] The vehicle control system 204 may then store the settings for the person, in step 928. The task management module 640 can make a new entry for the user 808 in data structure 804. The new entry may be either a new user or a new settings listed in 824. The settings may be stored based on the area 308 and zone 312. As explained previously, the settings can be any kind of configuration of the vehicle 104 that may be associated with the user in that area 308 and the zone 312.

[0132] The settings may also be stored in cloud storage, in step 932. Thus the vehicle control system 204 can send the new settings to the server 228 to be stored in storage 232. In this way, these new settings may be ported to other vehicles for the user. Further, the settings in storage system 232 may be retrieved if local storage does not include the settings in storage system 208.

[0133] An embodiment of a method 1000 to configure the vehicle 104 based on stored settings is shown in Fig. 10. While a general order for the steps of the method 1000 is shown in Fig. 10. Generally, the method 1000 starts with a start operation 1004 and ends with an end operation 1028. The method 1000 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 10. The method 1000 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1000 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-9.

[0134] The input management module of the vehicle control system 204 can determine if a person is in a zone 312 or area 308, in step 1008. This determination may be made by receiving data from one or more sensors 242. The vehicle 104 can use facial recognition, weight sensors, heat sensors, or other sensors to determine i a person is occupying a certain zone 312.

[0135] Using the information from the sensors 242, the vehicle control system 204 can identify the person, in step 1012. The vehicle control system 204 can obtain characteristics for the user

currently occupying the zone 312 and compare those characteristics to the identifying features in portion 812 of data structure 804. Thus, the settings in portion 824 may be retrieved by identifying the correct zone312, area 308, and characteristics for the user.

[0136] The vehicle control system 204 can first determine if there are settings associated with the identified person for that zone 312 and/or area 308, in step 1016. After identifying the user by matching characteristics with the features in portion 812, the vehicle control system 204 can determine if there are settings for the user for the area 816 and zone 820 the user currently occupies. If there are settings, then the task management module 640 can make the determination that there are settings in portion 824, and the vehicle control system 204 may then read and retrieve those settings, in step 1020. The settings may be then used to configure or react to the presence of the user, in step 1024. Thus, these settings may be obtained to change the configuration of the vehicle 104, for example, how the position of the seats or mirrors are set, how the dash, console, or heads up display is configured, how the heat or cooling is configured, how the radio is configured, or how other different configurations are made.

[0137] Embodiment of a method 1100 for storing settings in cloud storage is shown in Fig. 11. While a general order for the steps of the method 1100 is shown in Fig. 11. Generally, the method 1100 starts with a start operation 1104 and ends with an end operation 1140. The method 1100 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 11. The method 1100 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1100 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-10.

[0138] The vehicle control system 204, such as the input management module 636, can determine if a person is in a zone 312 or area 308, in step 1108. As explained previously, the vehicle control system 204 can receive vehicle sensor data from vehicle sensors 242 that show a person has occupied a zone 312 or an area 308 of the vehicle 104. Using the vehicle sensor data, the vehicle control system 204 can determine characteristics of the person, in step 1112. These characteristics are compared to the features in portion 812 of the data structure 804. From this comparison, the vehicle control system 204 can determine if the person is identified within the data structure 804, instep 1116. If there is a comparison and the person can be identified, the

method 1100 proceeds YES to step 1120. However, if the person cannot be identified, the method 1100 proceeds NO, to step 1124.

[0139] In step 1120, the person is identified in portion 808 by the successful comparison of the characteristics and the features,. It should be noted that there may be a degree of variability between the characteristics and the features in portion 812. Thus the comparison may not be an exact comparison but may be use methods known in the art to make a statistically significant comparison between the characteristics received from the sensors 242 and the features stored in portion 812. In step 1124, the characteristics received from sensors 242 are used to characterize the person. In this way, the received characteristics may be used as an ID in portion 812 for a new entry for a new user in portion 808.

[0140] The user may make one or more settings for the vehicle 104. The vehicle control system 204, specifically the task management module 640, may determine if the settings are to be stored, in step 1128. If the settings are to be stored, the method 1100 proceeds YES to step 1136. If the settings are not to be stored or if there are no settings to be stored, the method 1100 proceeds NO to step 1132. In step 1132, the vehicle control system 204 can retrieve the settings in the portion 824 of the data structure 804. Retrieval of the settings may be as described in conjunction with Fig. 10. If settings are to be stored, the vehicle control system 204 can send those settings to server 228 to be stored in data storage 232, in step 1136. Data storage 232 acts as cloud storage that can be used to retrieve information on the settings from other vehicles or from other sources. Thus, the cloud storage 232 allows for permanent and more robust storage of user preferences for the settings of the vehicle 104.

[0141] An embodiment of a method 1200 for storing gestures associated with the user is shown in Fig. 12. While a general order for the steps of the method 1200 is shown in Fig. 12. Generally, the method 1200 starts with a start operation 1204 and ends with an end operation 1240. The method 1200 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 12. The method 1200 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1200 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-11.

[0142] Vehicle control system 204 may receive sensor data from sensors 242 to determine a person is occupying a zone 312 in an area 308 of the vehicle 104, in step 1208. The sensor data may provide characteristics for the person, in step 1212. The vehicle control system 204 may then use the characteristics to determine if the person can be identified, in step 1216. The vehicle control system 204 may compare the characteristics to the features in portion 812 for the people having been recognized and having data associated therewith. If a comparison is made between the characteristics and the features in portion 812, the person can be identified, and the method 1200 proceeds YES to step 1220. If there is no comparison, the method 1200 may proceed NO to step 1224. In step 1220, the person may be identified by the vehicle control system 204. Thus, the person's features and associated data record 840 may be determined and the user identified in portion 808. If the person is not identified, the vehicle control system 204 can characterize the person by establishing a new record in data structure 804 using the characteristics, received from the sensors 242, for the features in portion 812.

[0143] Thereinafter, the vehicle control system 204 may determine if gestures are to be stored and associated with the user. The vehicle control system 204 may receive user input on a touch sensitive display 568 or some other type of gesture capture region 572 which acknowledges that the user wishes to store one or more gestures. Thus, the user may create their own gestures such as those described in conjunction with figures 7A through 7K. These gestures may then be characterized and stored in data structure 804. If there are gestures to be stored, the method 1200 proceeds YES to step 1236. If gestures are not to be stored the method 1200 may proceed NO to step 1232. In step 1232, the vehicle control system 204 can retrieve current gestures from portion 832, which are associated with user 840. These gestures may be used then to configure how the vehicle 104 will react if a gesture is received. If gestures are to be stored, the vehicle control system 204 may store characteristics as received from sensor 242 or from one more user interface inputs. These characteristics may then be used to create the stored gestures 832, in data structure 804. The characteristics may include what the gesture looks like or appears and also what affect the gesture should have. This information may then be used to change the configuration or operation of the vehicle 104 based on the gesture if it is received at a later time.

[0144] An embodiment of a method 1300 for receiving a gesture and configuring the vehicle 104 based on the gesture may be as provided in Fig. 13. While a general order for the steps of the method 1300 is shown in Fig. 13. Generally, the method 1300 starts with a start operation

1304 and ends with an end operation 1328. The method 1300 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 13. The method 1300 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1300 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-12.

[0145] A vehicle control system 204 can receive sensor data from vehicle sensors 242. The vehicle sensor data can be used by the vehicle control system 204 to determine that a person is in a zone 312 or area 308, in step 1308. The vehicle sensor data may then be used to compare against feature characteristics 812 to identify a person, in step 1312. The vehicle control system 204 thereinafter may receive a gesture, in step 1316. The gesture may be perceived by vehicle sensors 242 or received in a gesture capture, region 572. The gesture may be as described in conjunction with Fig. 7A through 7K. Upon receiving the gesture, the vehicle control system 204 can compare the gesture to gesture characteristics in portion 832, in step 1320. The comparison may be made so that a statistically significant coorelation between the sensor data or gesture data and the gesture characteristic 832 is made. Upon identifying the gesture, the task management module 640 or the vehicle control system 204 can configure the vehicle 104 and/or react to the gesture, in step 1324. The configuration or reaction to the gesture may be as prescribed in the gesture characteristic 832.

[0146] An embodiment of a method 1400 for storing health data may be as shown in Fig. 14. While a general order for the steps of the method 1400 is shown in Fig. 14. Generally, the method 1400 starts with a start operation 1404 and ends with an end operation 1444. The method 1400 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 14. The method 1400 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1400 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-13.

[0147] Vehicle control system 204 can receive sensor data from sensors 242. The sensor data may be used to determine that a person is in a zone 312 or area 308, in step 1408. The sensor data may then be used to determine characteristics of the person, in step 1412. From the

characteristics, the vehicle control system 204 can determine if a person may be identified in data structure 804. If the person is identified in step 1416, the method 1400 proceeds YES to step 1416. If the person cannot be identified, the method 1400 proceeds NO to step 1420. A person may be identified by matching the characteristics of a person from the sensor data to the features shown in portion 812. If these comparisons are statistically significant, the person may be identified in portion 808, in step 1416. However, if the person is not identified in portion 808, the vehicle control system 204 can characterize the person using the vehicle sensor data, in step 1420. In this way, the vehicle control system 204 can create a new record for a new user in data structure 804.

[0148] Thereinafter, the vehicle control system 204 may receive health and/or safety data from the vehicle sensors 242, in step 1424. The vehicle control system 204 can determine if the health or safety data is to be stored, in step 1428. The determination is made as to whether or not there is sufficient health data or safety parameters, in portion 828 and 836, to provide a reasonable baseline data pattern for the user 840. If there is data to be received and stored, the vehicle control system 204 can store the data for the person in portions 828 and 836 of the data structure 804, in step 1432. The vehicle control system 204 may then wait a period of time, in step 1436. The period of time may be any amount of time from seconds to minutes to days. Thereinafter, the vehicle control system 204 can receive new data from vehicle sensors 242, in step 1428. Thus, the vehicle control system 204 can receive data periodically and update or continue to refine the health data and safety parameters in data structure 804. Thereinafter, the vehicle control system 204 may optionally store the health and safety data in cloud storage 232 by sending it through the communication network 224 to the server 228, in step 1440.

[0149] An embodiment of a method 1500 for monitoring the health of a user may be as shown in Fig. 15. While a general order for the steps of the method 1500 is shown in Fig. 15. Generally, the method 1500 starts with a start operation 1504 and ends with an end operation 1524. The method 1500 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 15. The method 1500 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1500 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-14.

[0150] The vehicle control system 204 can receive health data from sensors 242. The health data may be received in step 1508. The vehicle control system 204 may then compare the received health data to stored health parameters in portion 828 or portion 836, in step 1512. The comparison may check if there is statistically significant separation or disagreement between the received health data and the stored health data. Thus, the vehicle control system 204 can make a health comparison of the user based on a baseline of health data previously stored. A statistically significant comparison may include determining if there are any parameters more than three statistical deviations from the average or norm, any parameter that is increasing or decreasing over a period of eight different measurements, a measurement that is more than two statistic deviations from the norm more than three measurements consecutively, or other types of statistical comparisons.

[0151] If the vehicle control system 204 determines that measured health parameter does deviate from the norm, the vehicle control system 204 can determine whether the health data is within acceptable limits, step 1516. If the health data is within acceptable limits, the method 1500 proceeds YES back to receiving new health data, in step 1508. In this way, the health data is periodically or continually monitored to ensure that the driver is in a healthy state and able to operate the vehicle. If the health data is not within acceptable parameters, the method 1500 may proceed NO to step 1520 where the vehicle control system 204 may react to the change in the health data. The reaction may include any measure to provide for the safety of the user, such as stopping the vehicle, beginning to drive the vehicle, driving the vehicle to a new location, such as a hospital, waking the driver with an alarm or other noise, or performing some other function that may help maintain the health or safety of the user.

[0152] The health data received may be a reaction from the driver. For example, the driver may call for help or ask the vehicle for assistance. For example, the driver or passenger may say that they are having a medical emergency and ask the car to perform some function to help. The function to help may include driving the person to a hospital or stopping the car and calling for emergency assistance.

[0153] Furthermore, while the exemplary aspects, embodiments, and/or configurations illustrated herein show the various components of the system collocated, certain components of the system can be located remotely, at distant portions of a distributed network, such as a LAN and/or the Internet, or within a dedicated system. Thus, it should be appreciated, that the

components of the system can be combined in to one or more devices, such as a tablet-like device, or collocated on a particular node of a distributed network, such as an analog and/or digital telecommunications network, a packet-switch network, or a circuit-switched network. It will be appreciated from the preceding description, and for reasons of computational efficiency, that the components of the system can be arranged at any location within a distributed network of components without affecting the operation of the system. For example, the various components can be located in a switch such as a PBX and media server, gateway, in one or more communications devices, at one or more users' premises, or some combination thereof. Similarly, one or more functional portions of the system could be distributed between a telecommunications device(s) and an associated computing device.

[0154] Furthermore, it should be appreciated that the various links connecting the elements can be wired or wireless links, or any combination thereof, or any other known or later developed element(s) that is capable of supplying and/or communicating data to and from the connected elements. These wired or wireless links can also be secure links and may be capable of communicating encrypted information. Transmission media used as links, for example, can be any suitable carrier for electrical signals, including coaxial cables, copper wire and fiber optics, and may take the form of acoustic or light waves, such as those generated during radio-wave and infra-red data communications.

[0155] Also, while the flowcharts have been discussed and illustrated in relation to a particular sequence of events, it should be appreciated that changes, additions, and omissions to this sequence can occur without materially affecting the operation of the disclosed embodiments, configuration, and aspects.

[0156] In yet another embodiment, the systems and methods of this disclosure can be implemented in conjunction with a special purpose computer, a programmed microprocessor or microcontroller and peripheral integrated circuit element(s), an ASIC or other integrated circuit, a digital signal processor, a hard-wired electronic or logic circuit such as discrete element circuit, a programmable logic device or gate array such as PLD, PLA, FPGA, PAL, special purpose computer, any comparable means, or the like. In general, any device(s) or means capable of implementing the methodology illustrated herein can be used to implement the various aspects of this disclosure. Exemplary hardware that can be used for the disclosed embodiments, configurations and aspects includes computers, handheld devices, telephones (e.g., cellular,

Internet enabled, digital, analog, hybrids, and others), and other hardware known in the art. Some of these devices include processors (e.g., a single or multiple microprocessors), memory, nonvolatile storage, input devices, and output devices. Furthermore, alternative software implementations including, but not limited to, distributed processing or component/object distributed processing, parallel processing, or virtual machine processing can also be constructed to implement the methods described herein.

[0157] In yet another embodiment, the disclosed methods may be readily implemented in conjunction with software using object or object-oriented software development environments that provide portable source code that can be used on a variety of computer or workstation platforms. Alternatively, the disclosed system may be implemented partially or fully in hardware using standard logic circuits or VLSI design. Whether software or hardware is used to implement the systems in accordance with this disclosure is dependent on the speed and/or efficiency requirements of the system, the particular function, and the particular software or hardware systems or microprocessor or microcomputer systems being utilized.

[0158] In yet another embodiment, the disclosed methods may be partially implemented in software that can be stored on a storage medium, executed on programmed general-purpose computer with the cooperation of a controller and memory, a special purpose computer, a microprocessor, or the like. In these instances, the systems and methods of this disclosure can be implemented as program embedded on personal computer such as an applet, JAVA® or CGI script, as a resource residing on a server or computer workstation, as a routine embedded in a dedicated measurement system, system component, or the like. The system can also be implemented by physically incorporating the system and/or method into a software and/or hardware system.

[0159] Although the present disclosure describes components and functions implemented in the aspects, embodiments, and/or configurations with reference to particular standards and protocols, the aspects, embodiments, and/or configurations are not limited to such standards and protocols. Other similar standards and protocols not mentioned herein are in existence and are considered to be included in the present disclosure. Moreover, the standards and protocols mentioned herein and other similar standards and protocols not mentioned herein are periodically superseded by faster or more effective equivalents having essentially the same functions. Such

replacement standards and protocols having the same functions are considered equivalents included in the present disclosure.

[0160] The present disclosure, in various aspects, embodiments, and/or configurations, includes components, methods, processes, systems and/or apparatus substantially as depicted and described herein, including various aspects, embodiments, configurations embodiments, subcombinations, and/or subsets thereof. Those of skill in the art will understand how to make and use the disclosed aspects, embodiments, and/or configurations after understanding the present disclosure. The present disclosure, in various aspects, embodiments, and/or configurations, includes providing devices and processes in the absence of items not depicted and/or described herein or in various aspects, embodiments, and/or configurations hereof, including in the absence of such items as may have been used in previous devices or processes, e.g., for improving performance, achieving ease and\or reducing cost of implementation.

[0161] The foregoing discussion has been presented for purposes of illustration and description. The foregoing is not intended to limit the disclosure to the form or forms disclosed herein. In the foregoing Detailed Description for example, various features of the disclosure are grouped together in one or more aspects, embodiments, and/or configurations for the purpose of streamlining the disclosure. The features of the aspects, embodiments, and/or configurations of the disclosure may be combined in alternate aspects, embodiments, and/or configurations other than those discussed above. This method of disclosure is not to be interpreted as reflecting an intention that the claims require more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive aspects lie in less than all features of a single foregoing disclosed aspect, embodiment, and/or configuration. Thus, the following claims are hereby incorporated into this Detailed Description, with each claim standing on its own as a separate preferred embodiment of the disclosure.

[0162] Moreover, though the description has included description of one or more aspects, embodiments, and/or configurations and certain variations and modifications, other variations, combinations, and modifications are within the scope of the disclosure, e.g., as may be within the skill and knowledge of those in the art, after understanding the present disclosure. It is intended to obtain rights which include alternative aspects, embodiments, and/or configurations to the extent permitted, including alternate, interchangeable and/or equivalent structures, functions, ranges or steps to those claimed, whether or not such alternate, interchangeable and/or equivalent

structures, functions, ranges or steps are disclosed herein, and without intending to publicly dedicate any patentable subject matter.

[0163] The embodiments can include a method, comprising: automatically determining a person is within a vehicle; automatically identifying the person; determining if there is a setting to be stored for the person; and storing the setting. The method further comprises determining if the person can be identified; and, if the person cannot be identified, characterizing the person. Automatically determining a person is within a vehicle can comprise receiving sensor data from at least one sensor that indicates the person is within the vehicle. Also, automatically identifying the person comprises comparing the sensor data to feature data in a data structure; and determining if the sensor data is substantially similar to the feature data, wherein determining if there is a setting to be stored for the person comprises determining if the person has made a setting, and wherein determining if there is a setting to be stored for the person further comprises waiting a period of time to determine if the settings have achieved a steady state. The setting can be stored in cloud storage. The setting can be one or more of, but is not limited to, a position of a seat, a position of a mirror, a heat or cold setting, a configuration of a console, a configuration of a dash, a configuration of a heads up display, or a setting for a radio. The person in the vehicle can occupy an area or zone within the vehicle, and wherein the setting is associated with the person in the area or zone.

[0164] Embodiments can further include: a vehicle system, comprising one or more sensors and a vehicle control system. The vehicle control system can comprise a processor and a memory, wherein the processor is operable to: receive sensor data from the one or more sensors; based on the sensor data, automatically determine a person is within a vehicle; based on the sensor data, automatically identify the person; determine if the person has made a setting; and store the setting. The sensor data may be an image of the person and the processor can match the image to a stored image in a data structure. The sensor data can also be voice data from the person and the processor is operable to match the voice data to stored voice data in a data structure.

[0165] Embodiments may further include a computer readable medium having stored thereon computer-executable instructions, the computer-executable instructions comprising: instructions to receive sensor data from the one or more sensors; based on the sensor data, instructions to automatically determine a person is within a vehicle; based on the sensor data, instructions to

automatically identify the person; instructions to retrieve one or more settings associated with the identified person; and instructions to automatically configure the vehicle according to the retrieved settings. Automatically determining the person is within a vehicle can comprise instructions to determine an area or zone in which the person occupies, wherein the settings retrieved are associated with the determined area or zone, wherein the settings are retrieved from a data structure, and wherein the data structure is stored in cloud storage.

What is claimed is:

1. A method, comprising:
automatically determining a person is within a vehicle;
automatically identifying the person;
determining if there is a setting to be stored for the person; and
storing the setting.

2. The method of claim 1, further comprising: determining if the person can be identified.

3. The method of claim 2, further comprising: if the person cannot be identified, characterizing the person.

4. The method of claim 3, wherein automatically determining a person is within a vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle.

5. The method of claim 4, wherein automatically identifying the person comprises:
comparing the sensor data to feature data in a data structure; and
determining if the sensor data is substantially similar to the feature data.

6. The method of claim 5, wherein determining if there is a setting to be stored for the person comprises determining if the person has made a setting.

7. The method of claim 6, wherein determining if there is a setting to be stored for the person further comprises waiting a period of time to determine if the settings have achieved a steady state.

8. The method of claim 1, wherein the setting is stored in cloud storage.

9. The method of claim 1, wherein the setting is one of a position of a seat, a position of a mirror, a heat or cold setting, a configuration of a console, a configuration of a dash, a configuration of a heads up display, or a setting for a radio.

10. The method of claim 1, wherein the person occupies an area or zone within the vehicle, and wherein the setting is associated with the person in the area or zone.

11. A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive sensor data from the one or more sensors;

based on the sensor data, automatically determine a person is within a vehicle;

based on the sensor data, automatically identify the person;

determine if the person has made a setting; and

store the setting.

12. The device of claim 11, wherein the sensor data is an image of the person.

13. The device of claim 12, wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure.

14. The device of claim 11, wherein the sensor data is voice data from the person.

15. The device of claim 14, wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure.

16. A computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine a person is within a vehicle;

based on the sensor data, instructions to automatically identify the person;

instructions to retrieve one or more settings associated with the identified person; and

instructions to automatically configure the vehicle according to the retrieved settings.

17. The computer readable medium of claim 16, wherein in automatically determining the person is within a vehicle comprises instructions to determine an area or zone in which the person occupies.

18. The computer readable medium of claim 17, wherein the settings retrieved are associated with the determined area or zone.

19. The computer readable medium of claim 18, wherein the settings are retrieved from a data structure.

20. The computer readable medium of claim 19, wherein the data structure is stored in cloud storage.

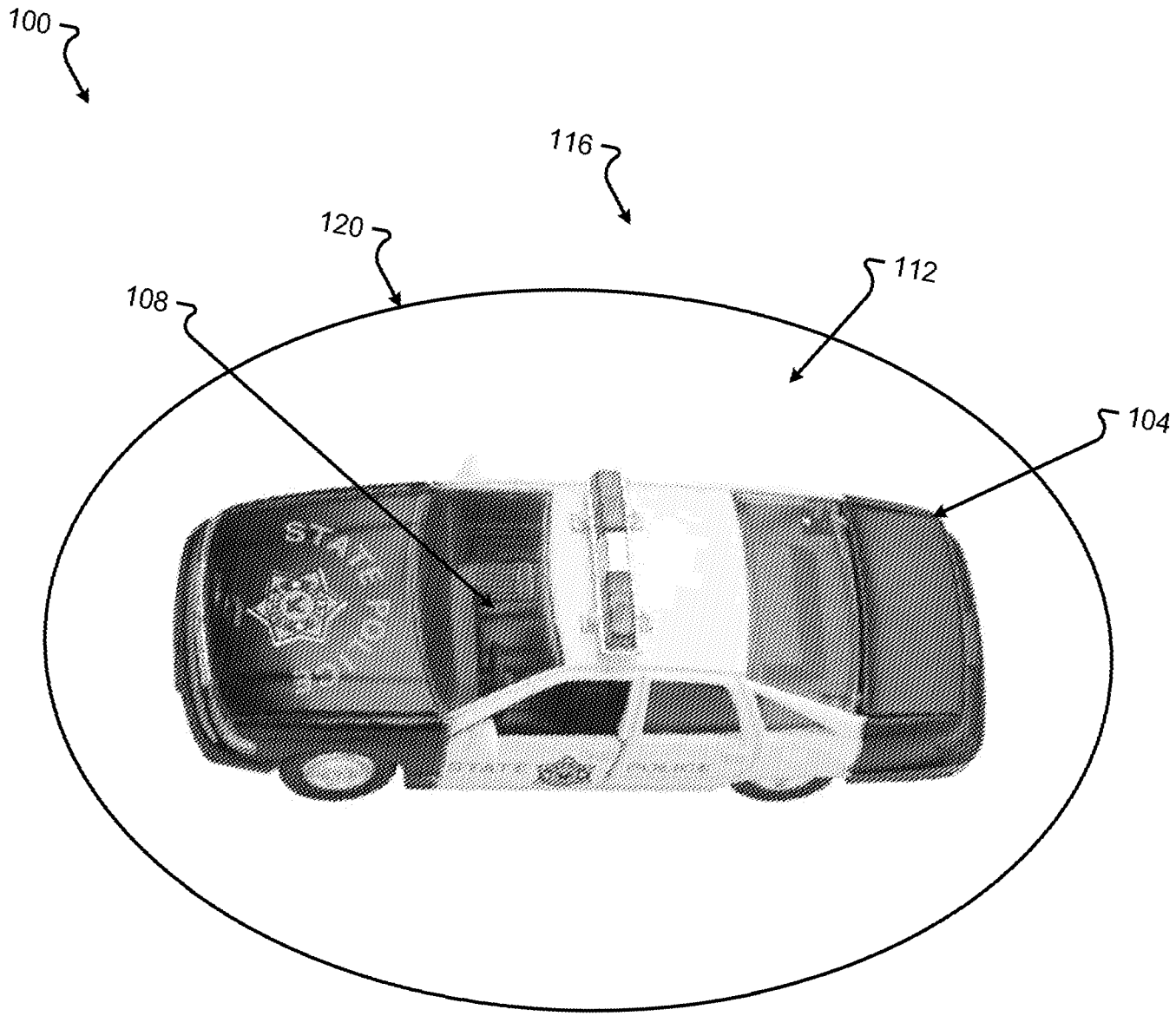


Fig. 1

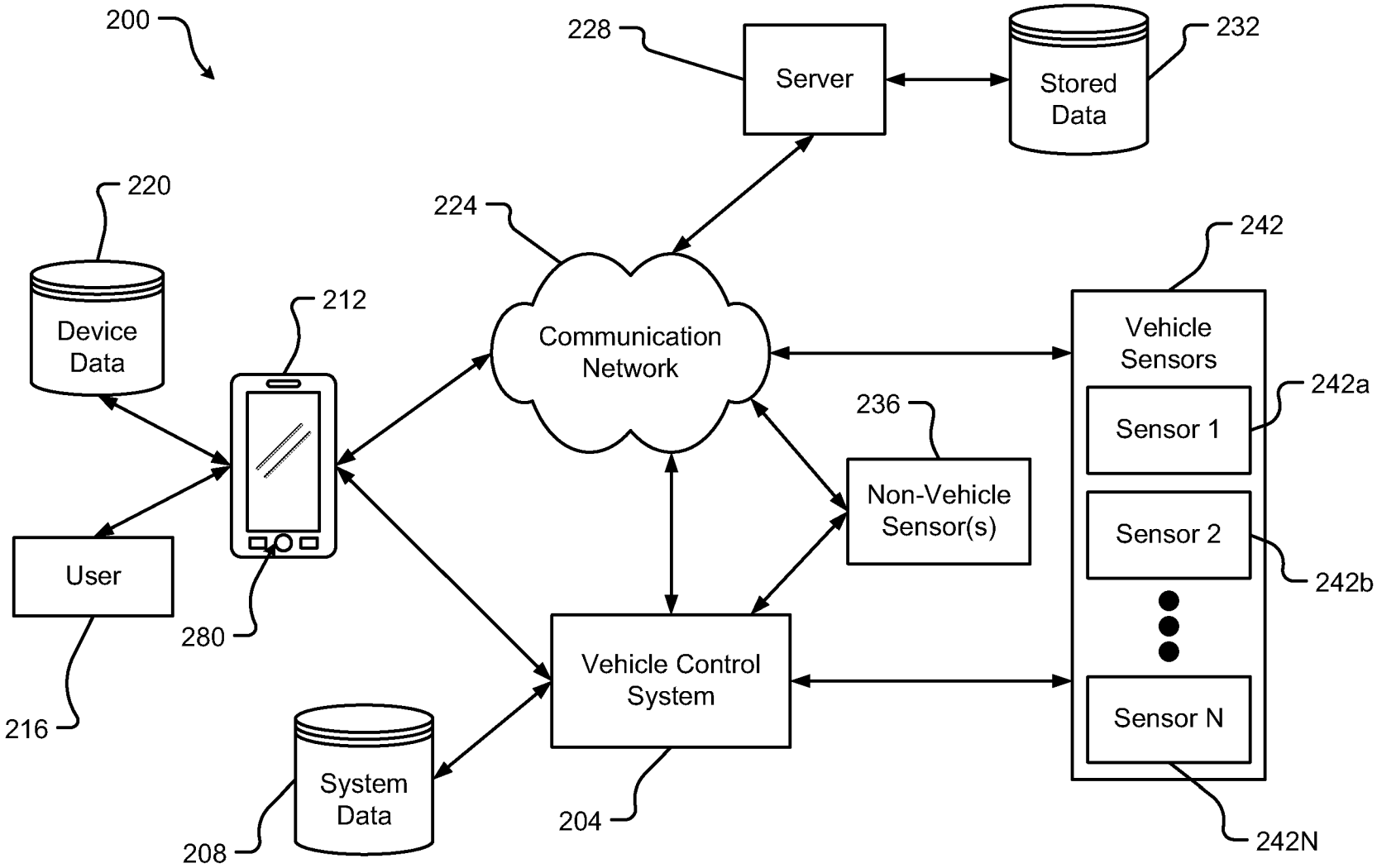

200
228
Server
232
Stored Data
220
Device Data
224
Communication Network
242
Vehicle Sensors
212
236
Non-Vehicle Sensor(s)
242a
Sensor 1
Sensor 2
242b
User
280
Vehicle Control System
216
System Data
208
204
Sensor N
242N

Fig. 2

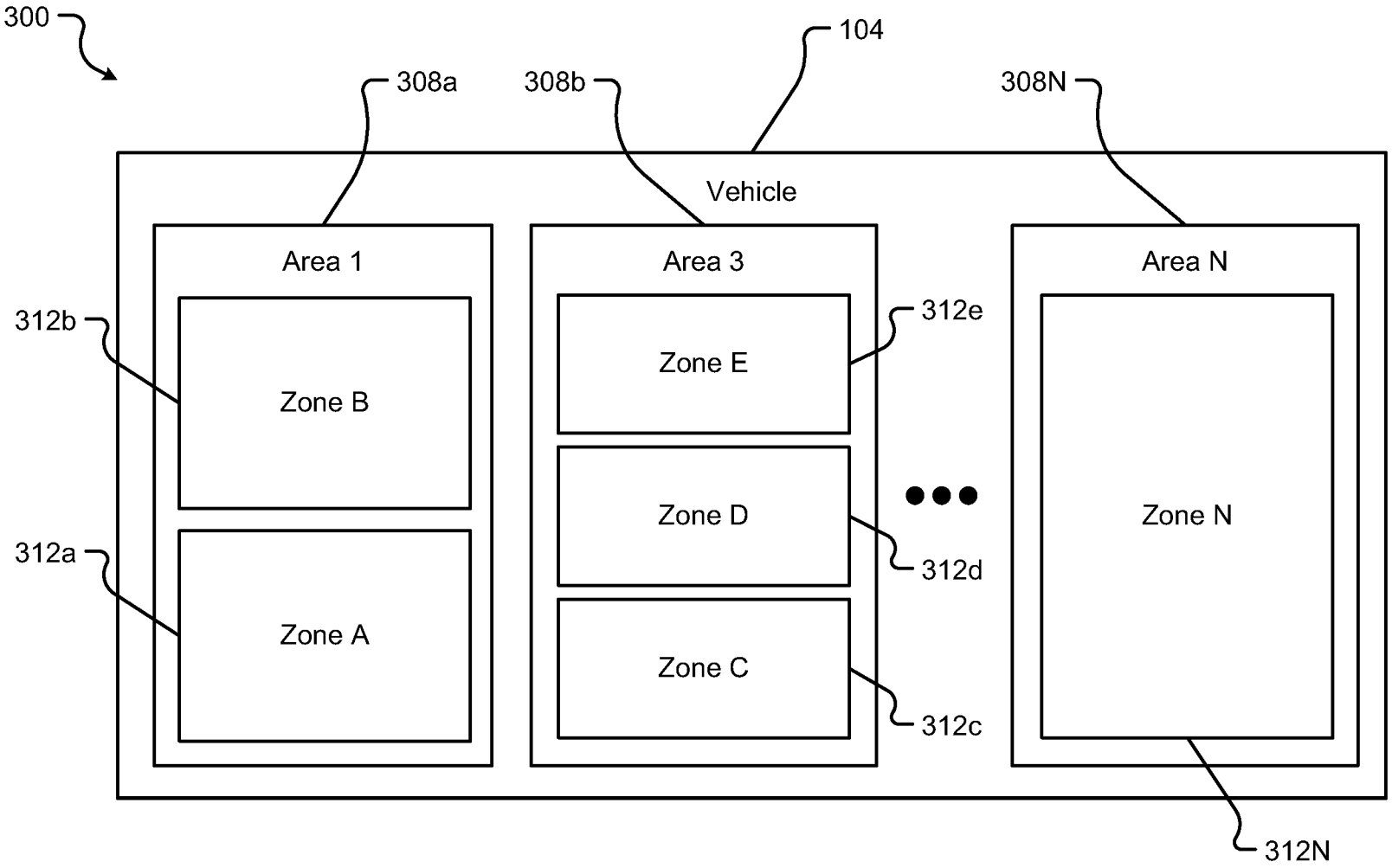

300
104
308a
308b
308N
Vehicle
Area 1
Area 3
Area N
312b
Zone B
312e
Zone E
Zone D
312d
Zone N
312a
Zone A
Zone C
312c
312N

Fig. 3

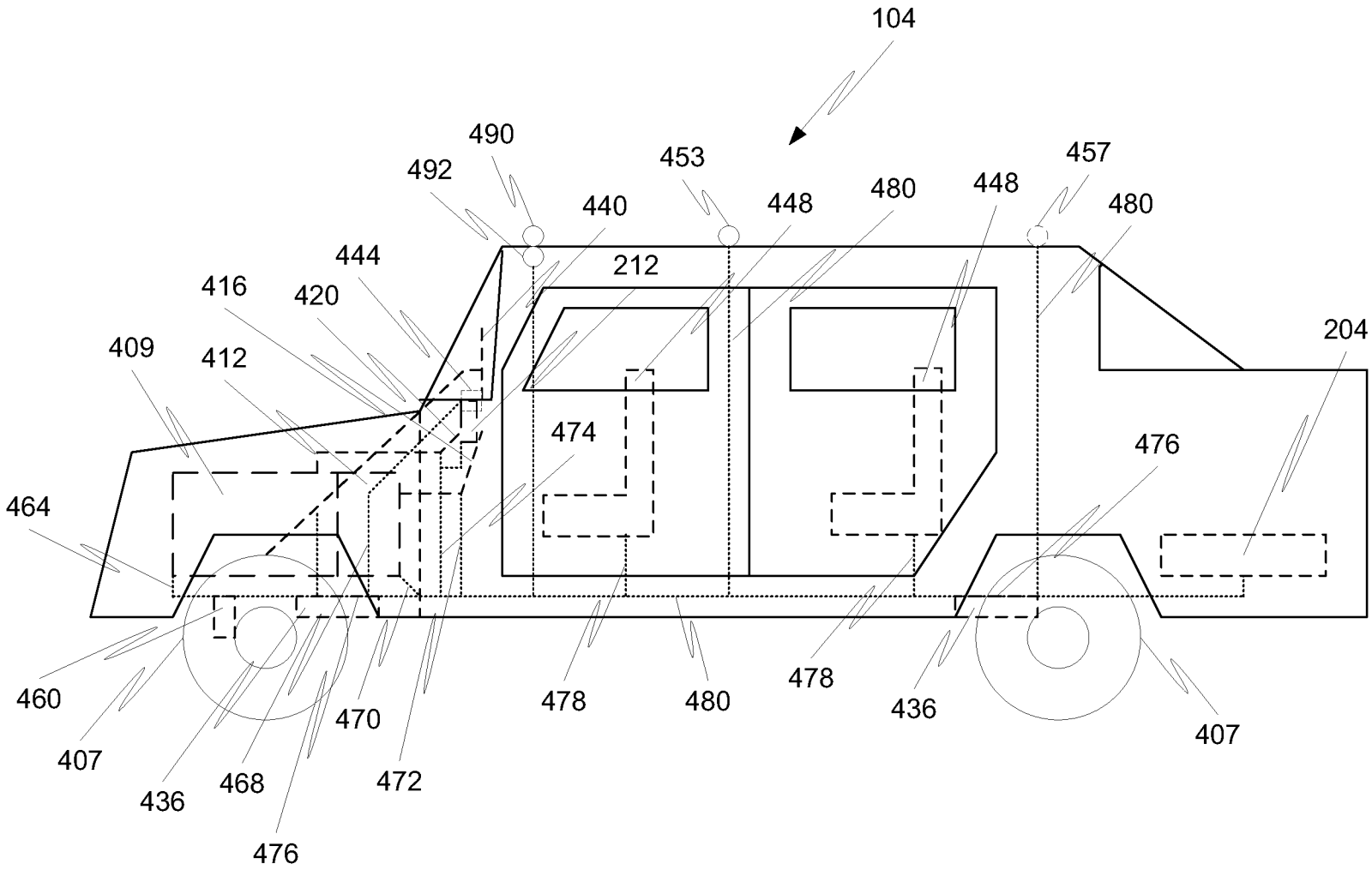

104
490
492
453
457
440
448
480
448
480
444
212
416
420
204
409
412
474
476
464
460
407
436
468
470
472
476
478
480
478
436
407

FIG. 4

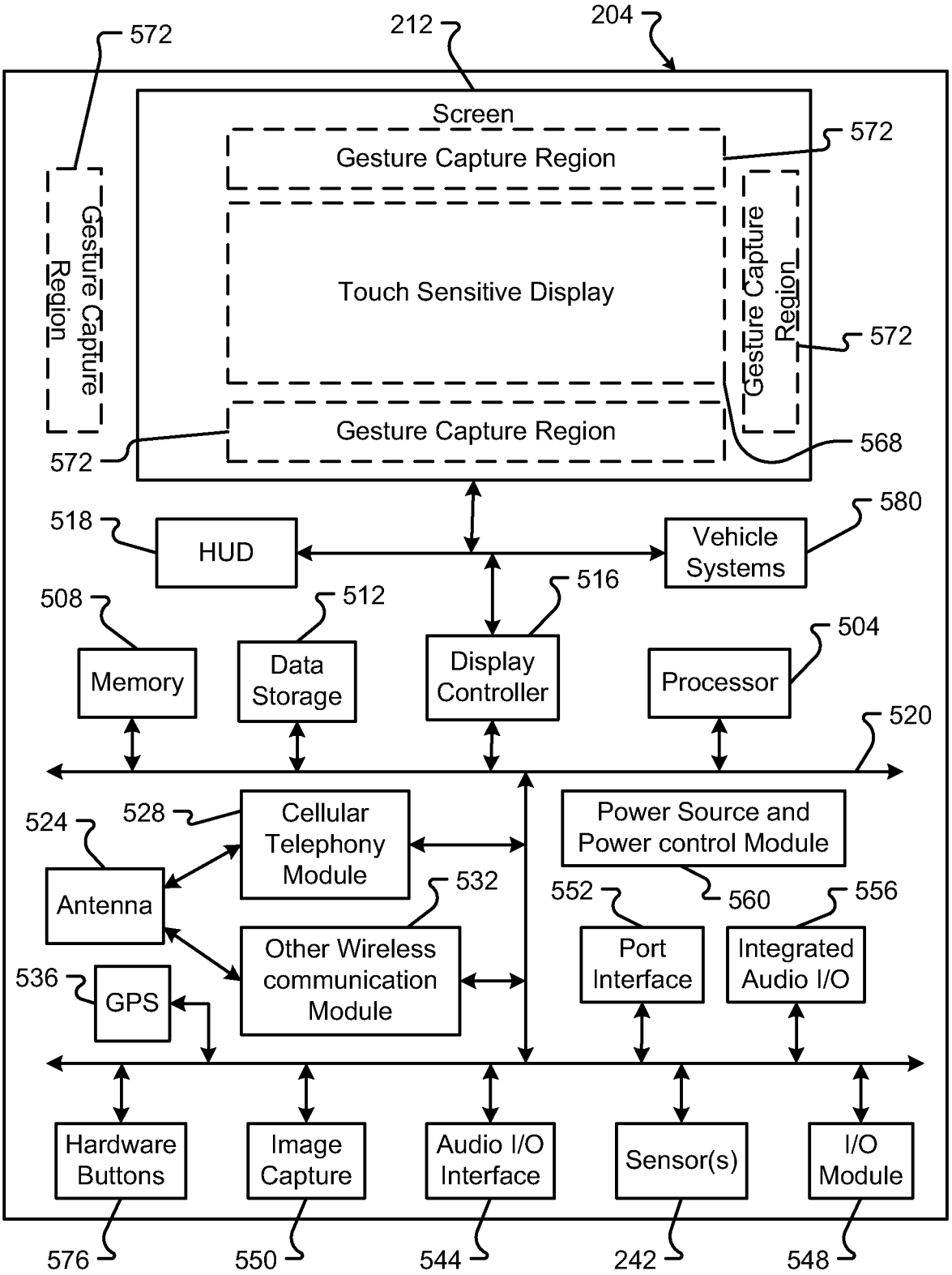

572
212
204
Screen
Gesture Capture Region
572
Gesture Capture Region
Touch Sensitive Display
572
Gesture Capture Region
572
Gesture Capture Region
568
518
HUD
580
Vehicle Systems
516
508
512
504
Memory
Data Storage
Display Controller
Processor
520
524
528
Cellular Telephony Module
Power Source and Power control Module
Antenna
532
552
560
556
Other Wireless communication Module
Port Interface
Integrated Audio I/O
536
GPS
Hardware Buttons
Image Capture
Audio I/O Interface
Sensor(s)
I/O Module
576
550
544
242
548

Fig. 5

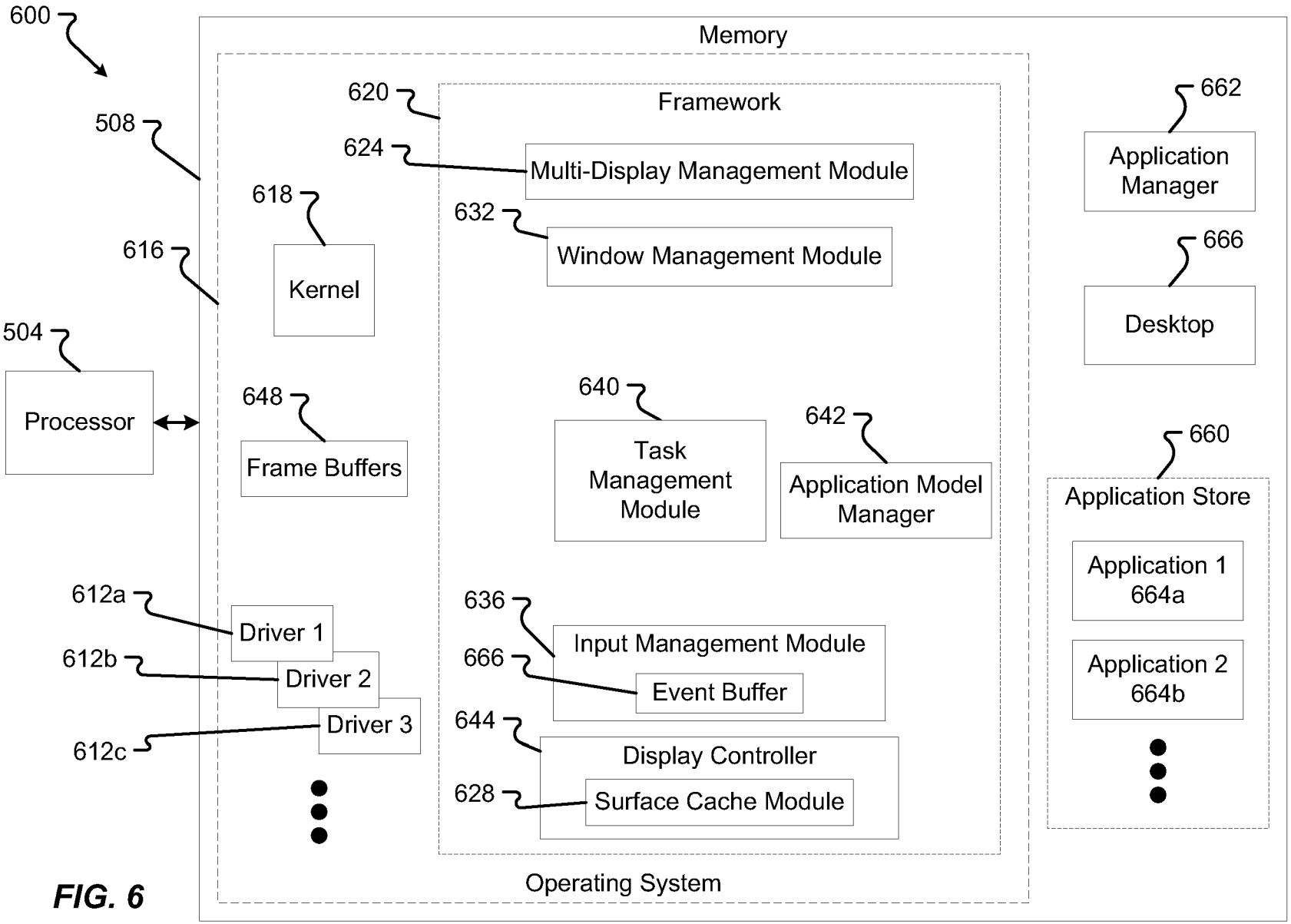

600
Memory
508
620
Framework
624
Multi-Display Management Module
618
632
Window Management Module
616
Kernel
504
Processor
648
Frame Buffers
640
Task Management Module
642
Application Model Manager
612a
Driver 1
612b
Driver 2
612c
Driver 3
636
Input Management Module
666
Event Buffer
644
Display Controller
628
Surface Cache Module
Operating System
662
Application Manager
666
Desktop
660
Application Store
Application 1 664a
Application 2 664b

FIG. 6

Tap

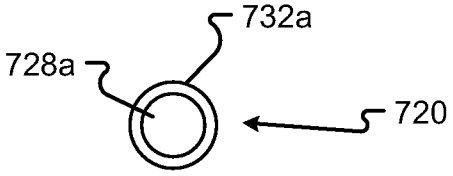


FIG. 7A

Long Press

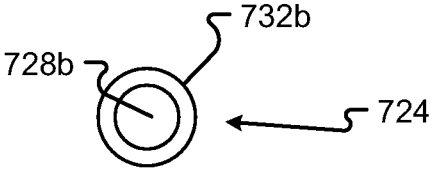


FIG. 7B

Drag

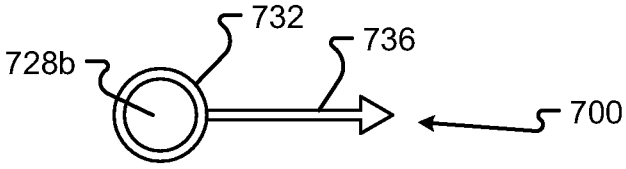


FIG. 7C

Flick

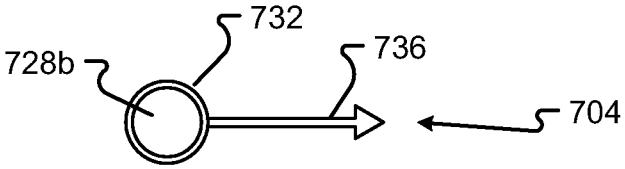


FIG. 7D

Pinch

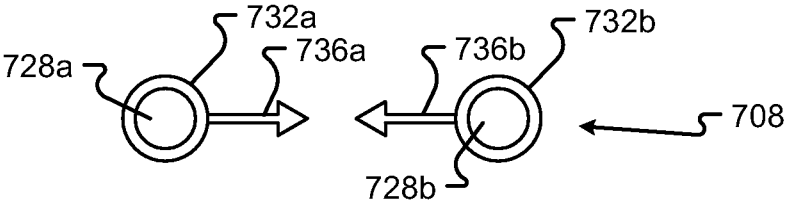


FIG. 7E

Spread

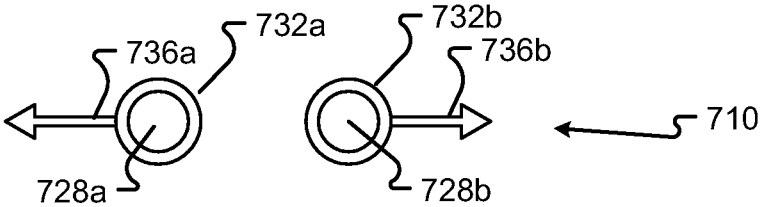


FIG. 7F

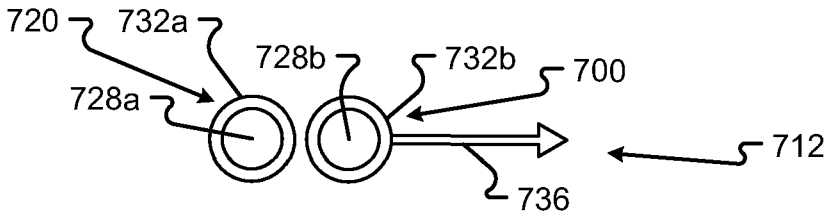

720
732a
728b
732b
700
728a
712
736

FIG. 7G

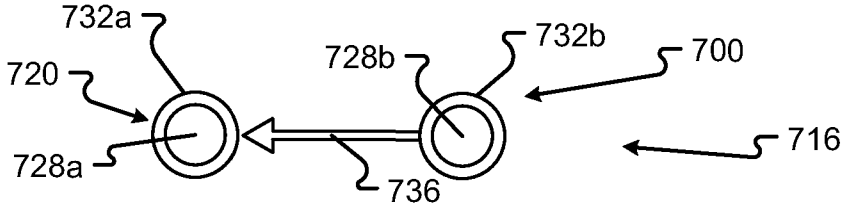

732a
732b
700
720
728b
716
728a
736

FIG. 7H

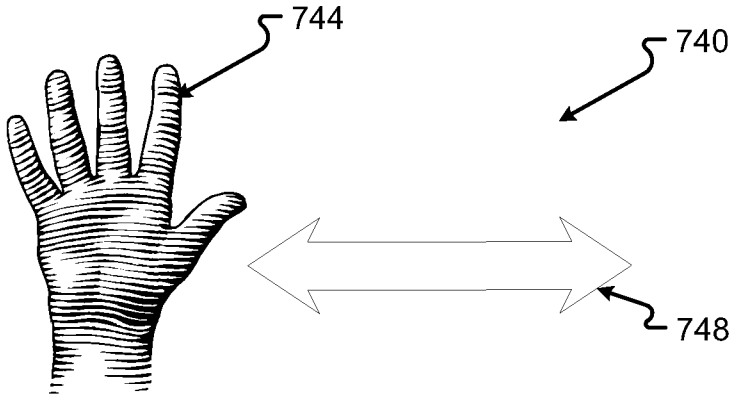


FIG. 7I

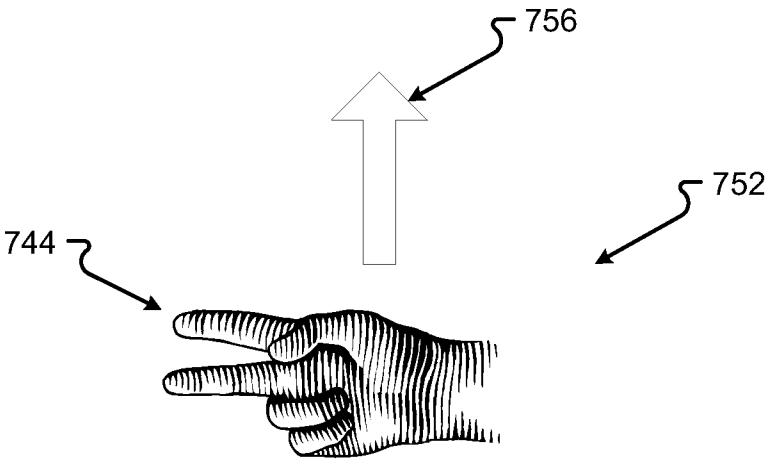


FIG. 7J

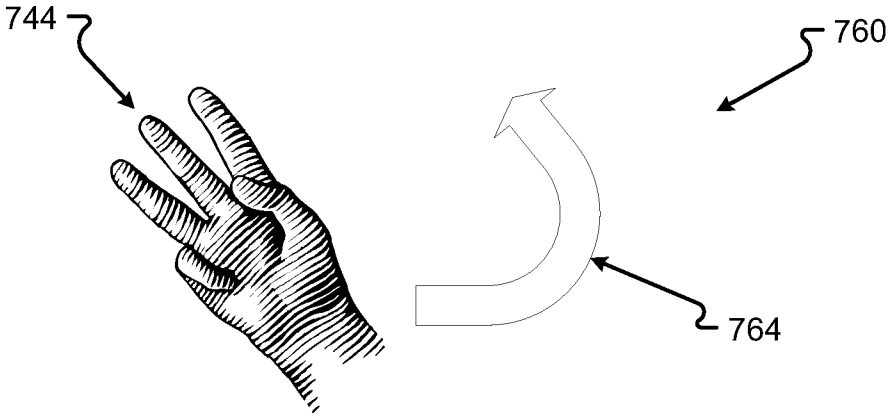


FIG. 7K

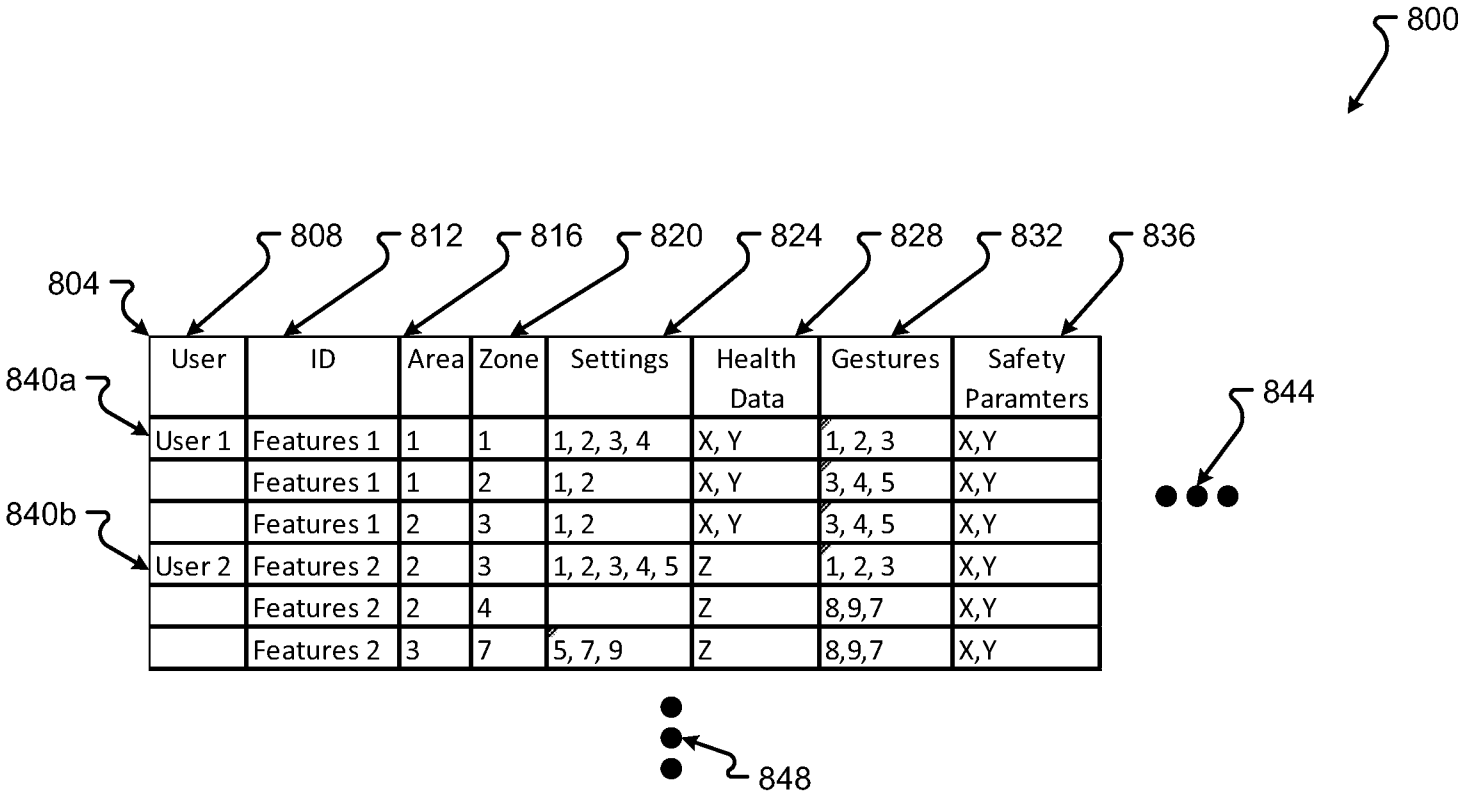

800
804
808
812
816
820
824
828
832
836
840a
840b
844
848
User
ID
Area
Zone
Settings
Health Data
Gestures
Safety Paramters
User 1
Features 1
1
1
1, 2, 3, 4
X, Y
1, 2, 3
X,Y
Features 1
1
2
1, 2
X, Y
3, 4, 5
X,Y
Features 1
2
3
1, 2
X, Y
3, 4, 5
X,Y
User 2
Features 2
2
3
1, 2, 3, 4, 5
Z
1, 2, 3
X,Y
Features 2
2
4
Z
8,9,7
X,Y
Features 2
3
7
5, 7, 9
Z
8,9,7
X,Y

FIG. 8

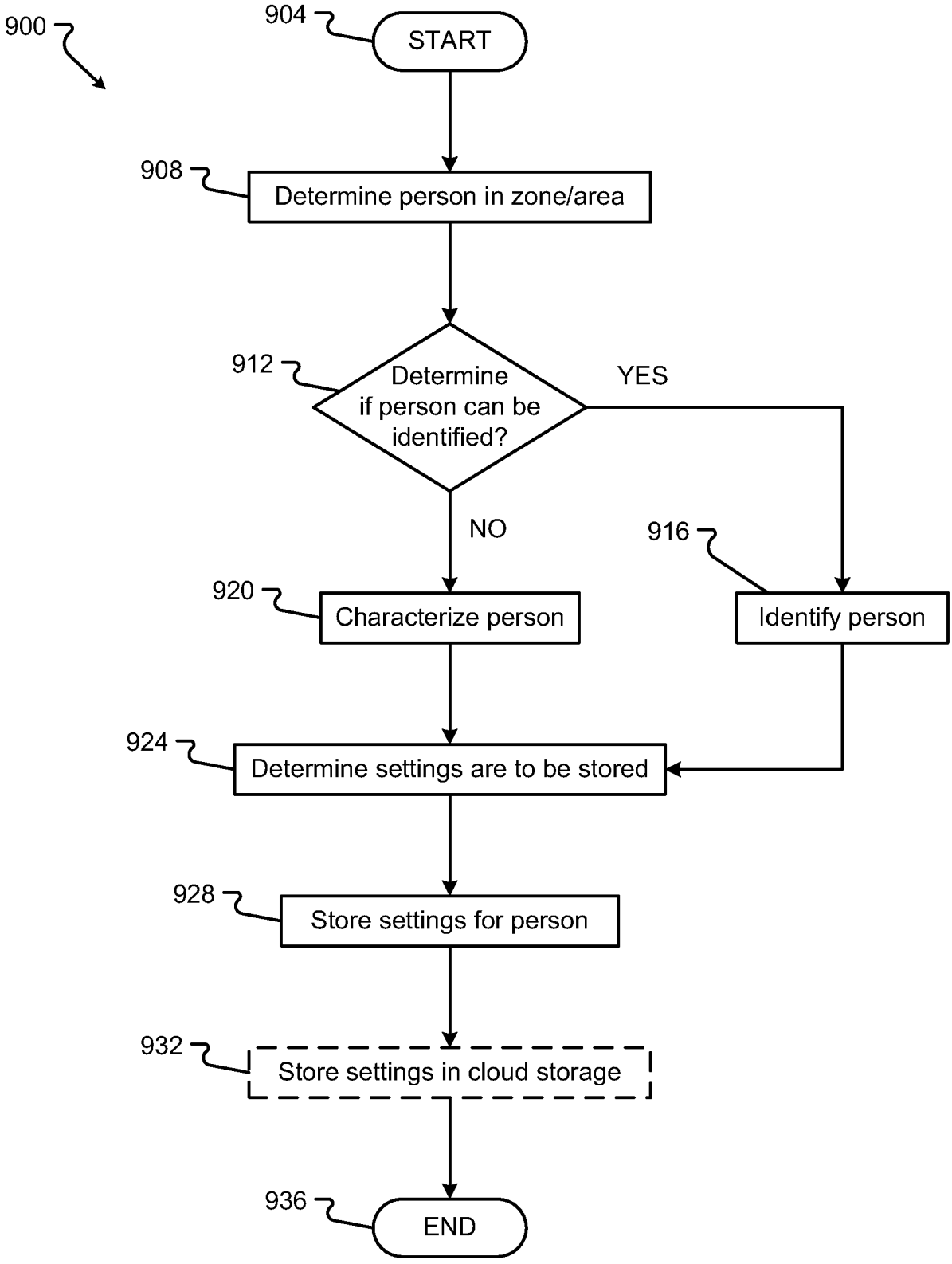

900
904
START
908
Determine person in zone/area
912
Determine if person can be identified?
YES
NO
916
920
Characterize person
Identify person
924
Determine settings are to be stored
928
Store settings for person
932
Store settings in cloud storage
936
END

Fig. 9

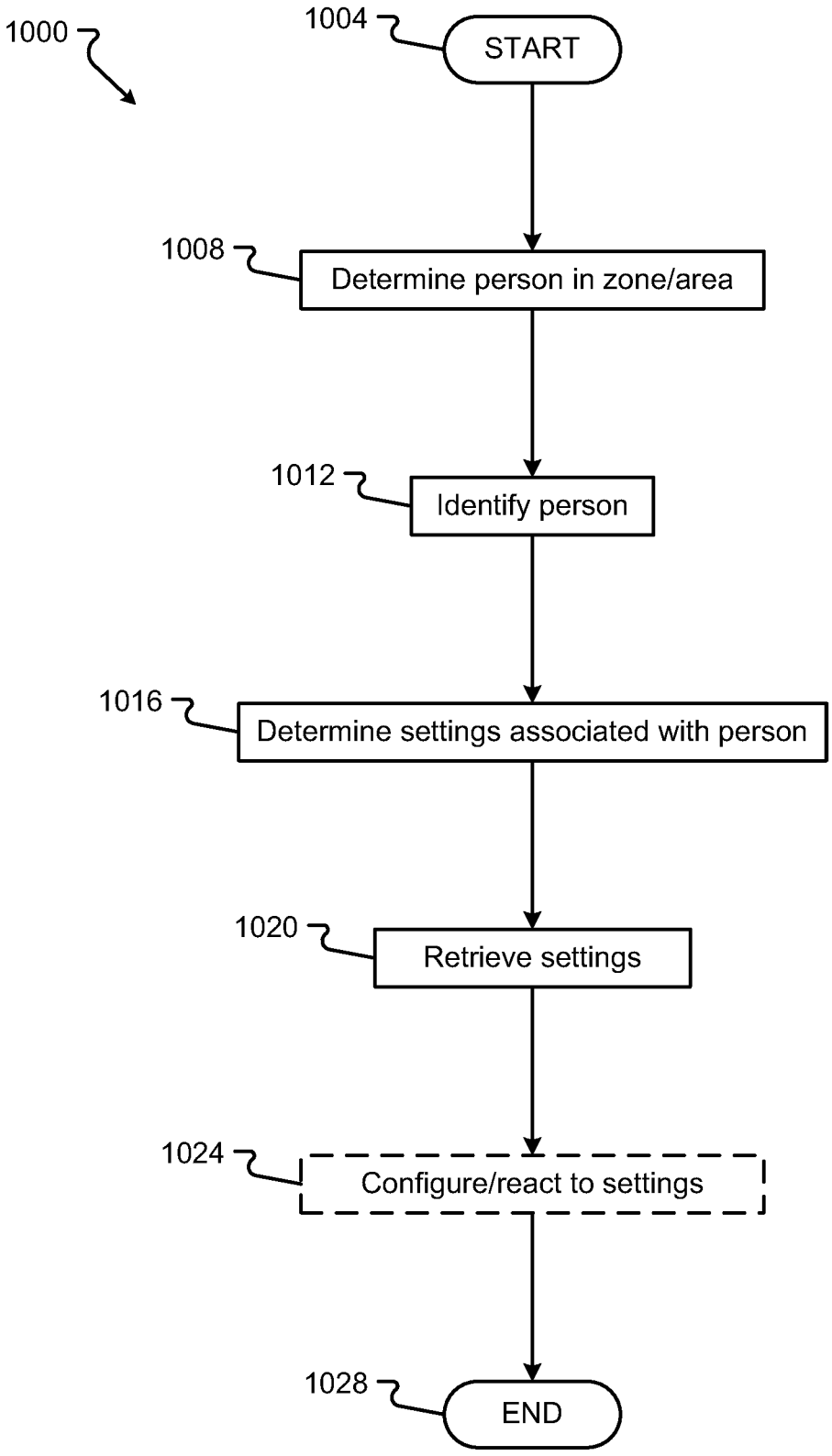

1000
1004
START
1008
Determine person in zone/area
1012
Identify person
1016
Determine settings associated with person
1020
Retrieve settings
1024
Configure/react to settings
1028
END

Fig. 10

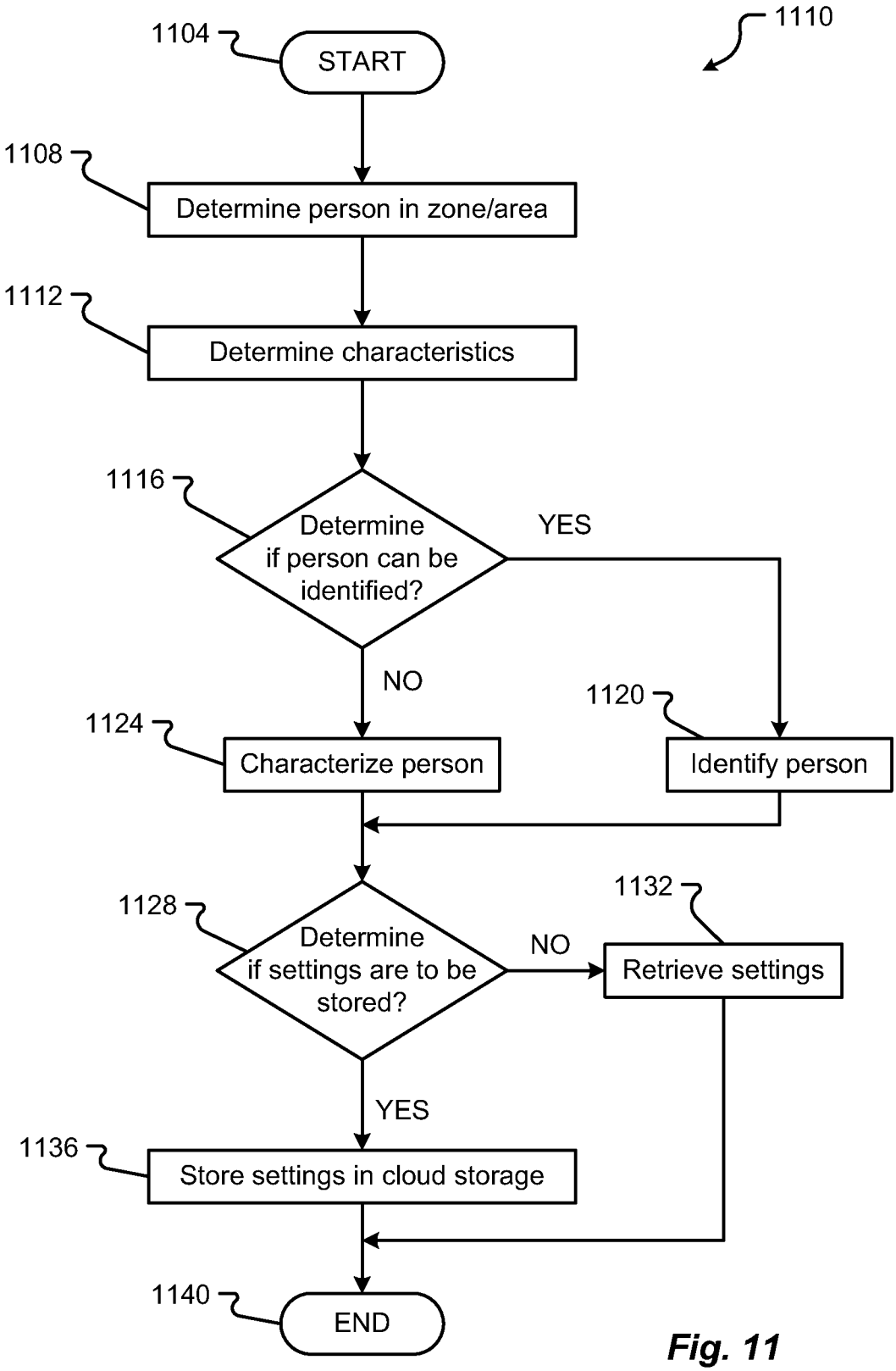

1110
1104
START
1108
Determine person in zone/area
1112
Determine characteristics
1116
Determine if person can be identified?
YES
NO
1120
Identify person
1124
Characterize person
1128
Determine if settings are to be stored?
NO
1132
Retrieve settings
YES
1136
Store settings in cloud storage
1140
END

Fig. 11

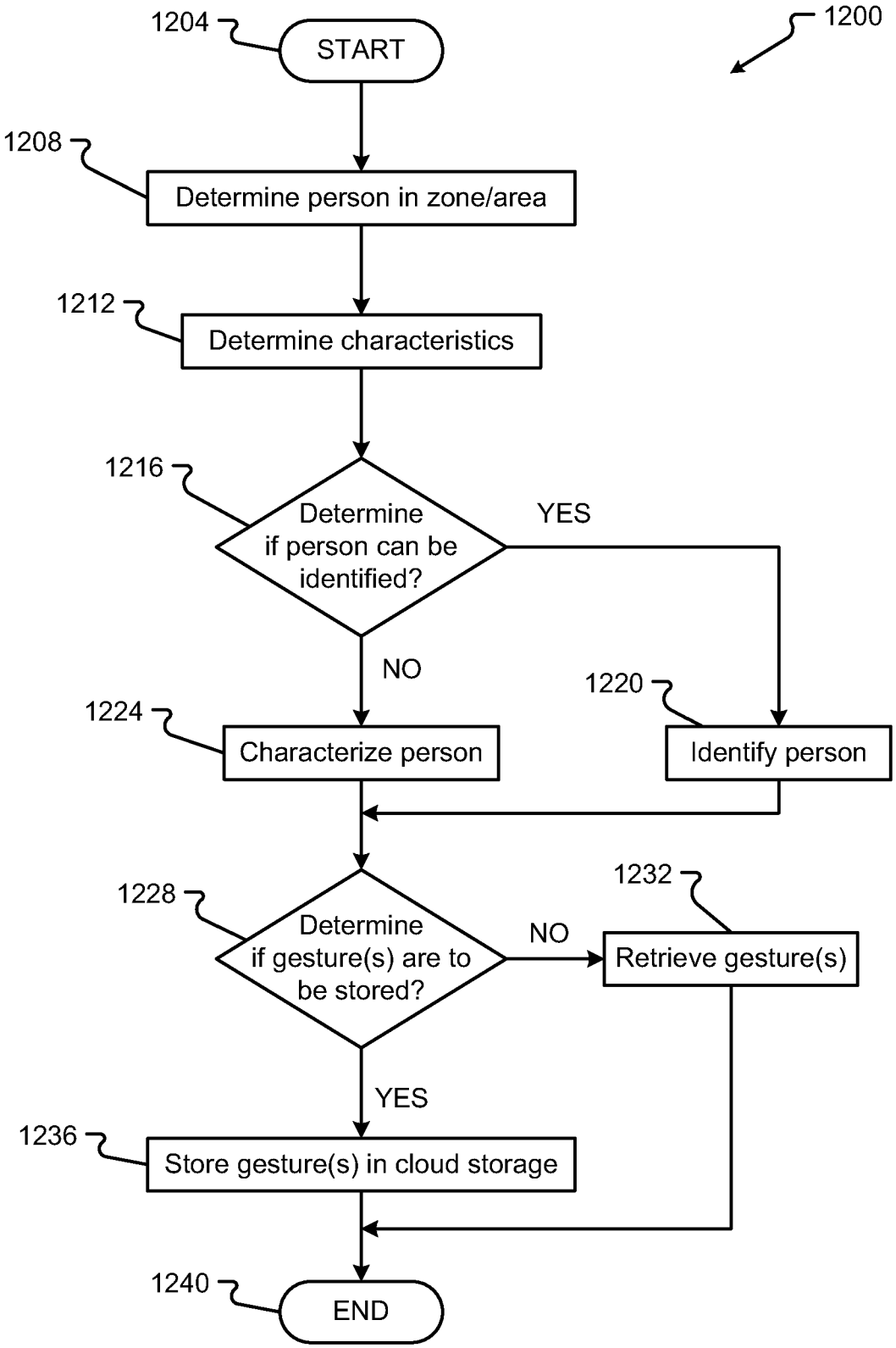

1200
1204
START
1208
Determine person in zone/area
1212
Determine characteristics
1216
Determine if person can be identified?
YES
NO
1220
Identify person
1224
Characterize person
1228
Determine if gesture(s) are to be stored?
NO
1232
Retrieve gesture(s)
YES
1236
Store gesture(s) in cloud storage
1240
END

Fig. 12

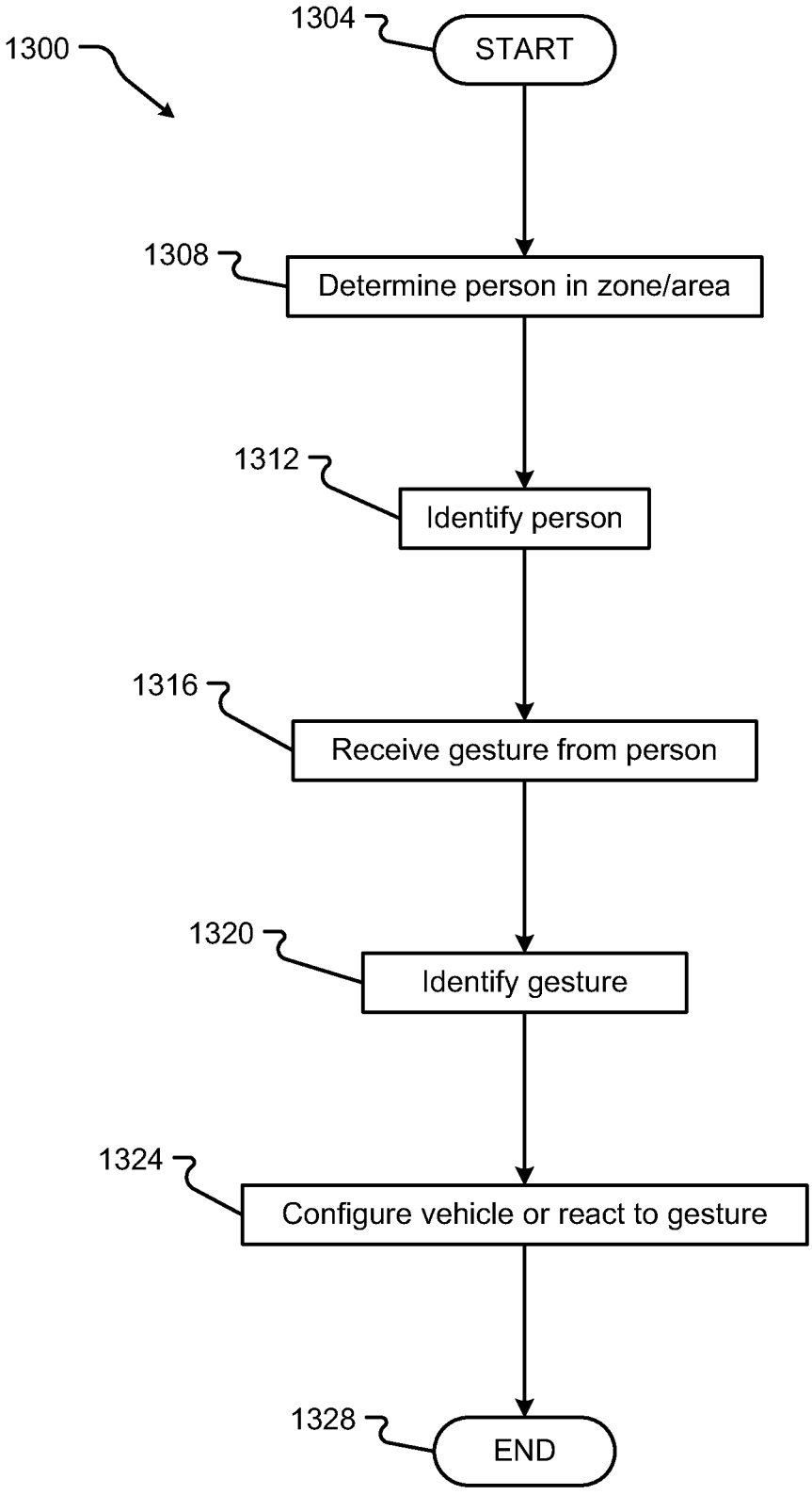

1300
1304
START
1308
Determine person in zone/area
1312
Identify person
1316
Receive gesture from person
1320
Identify gesture
1324
Configure vehicle or react to gesture
1328
END

Fig. 13

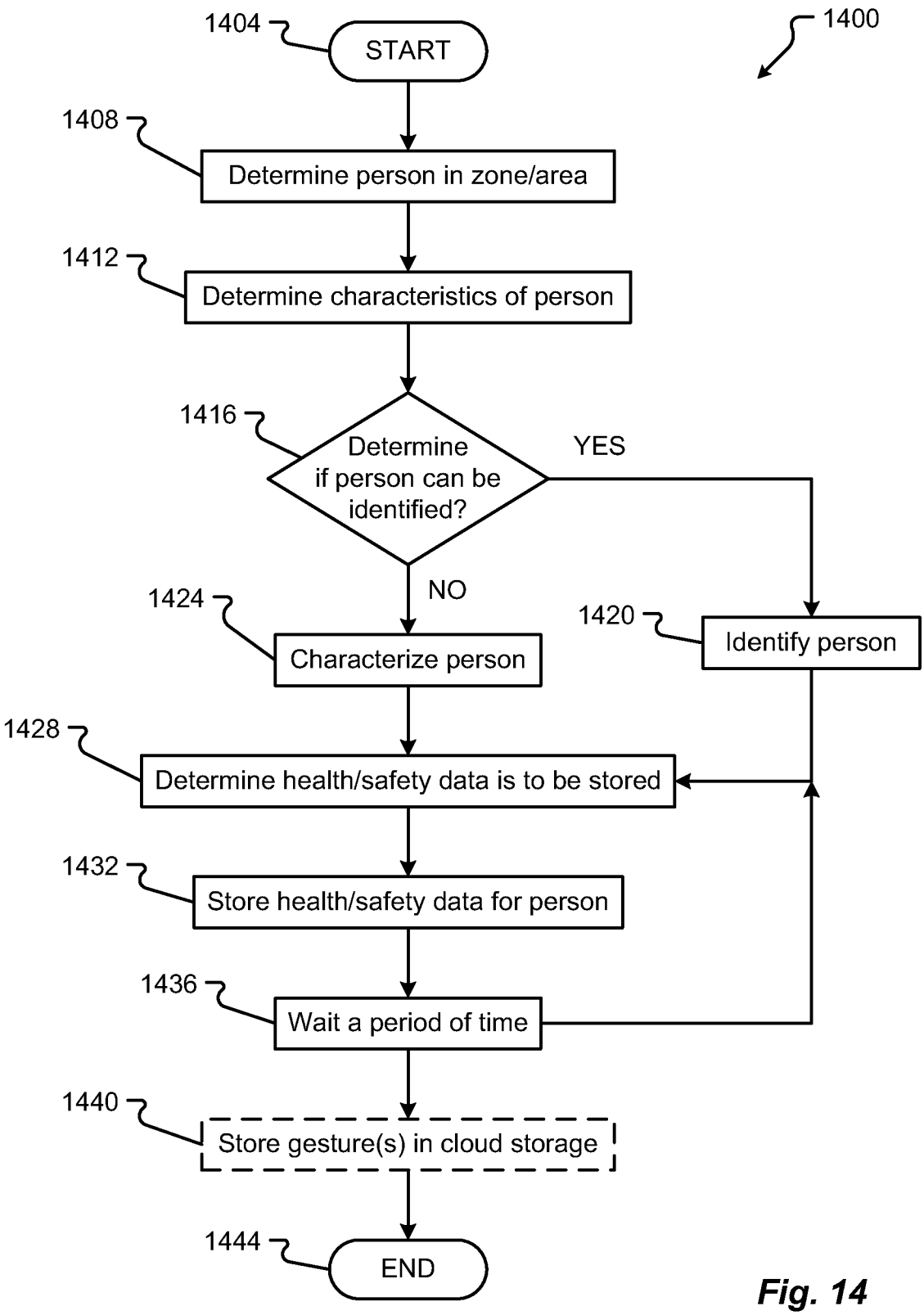

1400
1404
START
1408
Determine person in zone/area
1412
Determine characteristics of person
1416
Determine if person can be identified?
YES
NO
1420
Identify person
1424
Characterize person
1428
Determine health/safety data is to be stored
1432
Store health/safety data for person
1436
Wait a period of time
1440
Store gesture(s) in cloud storage
1444
END

Fig. 14

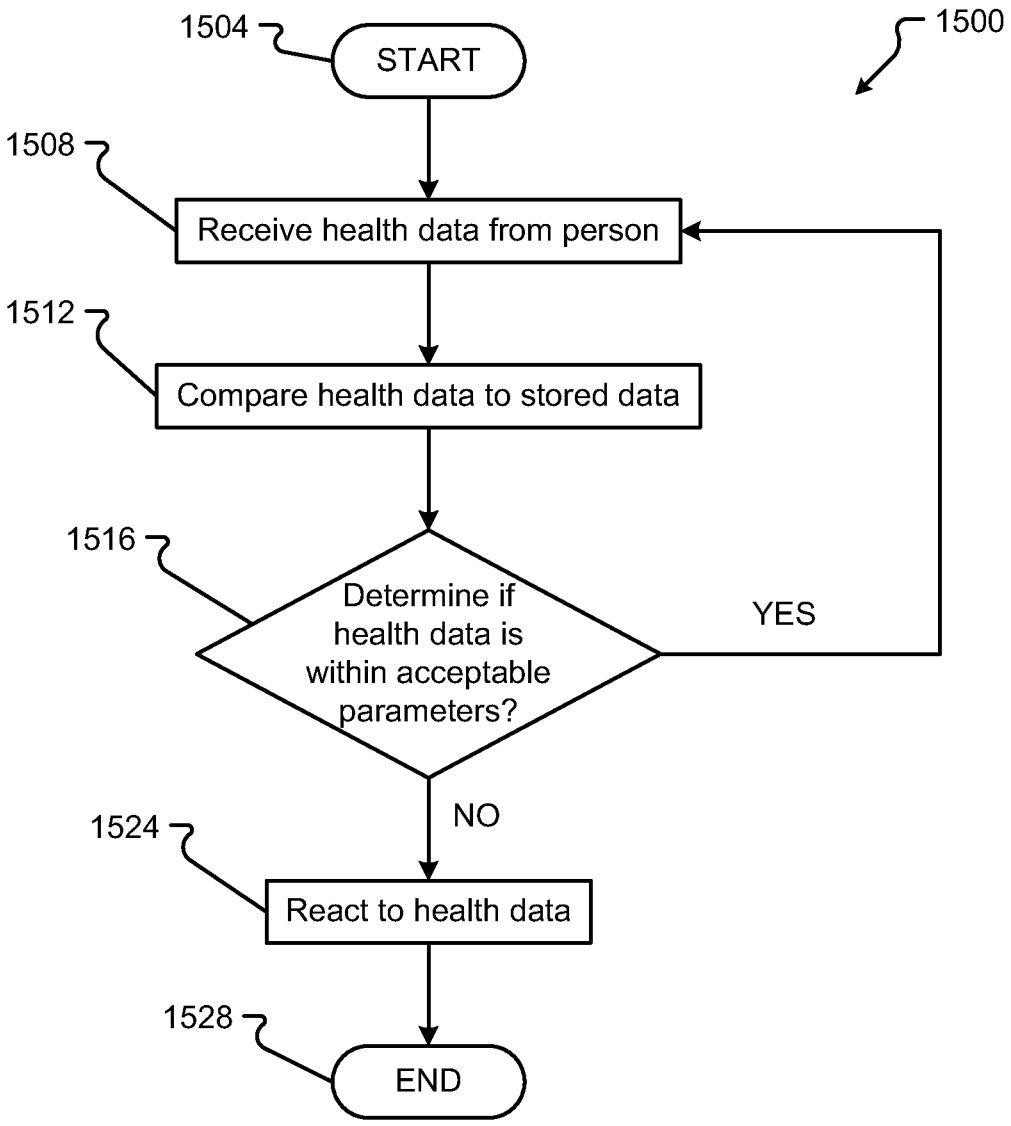

1504
START
1500
1508
Receive health data from person
1512
Compare health data to stored data
1516
Determine if health data is within acceptable parameters?
YES
NO
1524
React to health data
1528
END

Fig. 15

SCORE Placeholder Sheet for IFW Content

Application Number: 13679204 Document Date: 11/16/2012

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

- Drawings – Other than Black and White Line Drawings

Since this was an electronic submission, there is no physical artifact folder, no artifact folder is recorded in PALM, and no paper documents or physical media exist. The TIFF images in the IFW record were created from the original documents that are stored in SCORE.

To access the documents in the SCORE database, refer to instructions developed by SIRA.

At the time of document entry (noted above):

- Examiners may access SCORE content via the eDAN interface.
- Other USPTO employees can bookmark the current SCORE URL (http://es/ScoreAccessWeb/).
- External customers may access SCORE content via the Public and Private PAIR interfaces.

Form Revision Date: February 8, 2006

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www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/679,204	11/16/2012	2835	0.00	6583-318	20	3

CONFIRMATION NO. 3693

22442
Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202

FILING RECEIPT

OC000000058071330

Date Mailed: 12/17/2012

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Christopher P. Ricci, Saratoga, CA;

Applicant(s)

Flextronics AP, LLC, Milpitas, CA

Assignment For Published Patent Application

FLEXTRONICS AP, LLC, Milpitas, CA

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/560,509 11/16/2011
and claims benefit of 61/637,164 04/23/2012
and claims benefit of 61/646,747 05/14/2012
and claims benefit of 61/653,275 05/30/2012
and claims benefit of 61/653,264 05/30/2012
and claims benefit of 61/653,563 05/31/2012
and claims benefit of 61/663,335 06/22/2012
and claims benefit of 61/672,483 07/17/2012
and claims benefit of 61/714,016 10/15/2012

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 12/10/2012

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/679,204**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

Preliminary Class

361

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/679,204	11/16/2012	Christopher P. Ricci	6583-318

CONFIRMATION NO. 3693

22442
Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202

FORMALITIES LETTER

OC000000058071331

Date Mailed: 12/17/2012

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
  *Applicant must submit $**390** to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).*

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The substitute specification must be submitted with markings and be accompanied by a clean version (without markings) as set forth in 37 CFR 1.125(c) and a statement that the substitute specification contains no new matter (see 37 CFR 1.125(b)). The specification, claims, and/or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
  - The application papers (including any electronically submitted papers) are not in compliance with 37 CFR 1.52 because pages 40 contain text that is unreadable or of insufficient clarity.
    Application papers (including any electronically submitted papers) must be presented in a form having sufficient clarity and contrast between the background of the paper and the writing thereon to permit the Office to electronically reproduce the papers by use of digital imaging and optical character recognition. See 37 CFR 1.52(a)(1)(v).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

The applicant needs to satisfy supplemental fees problems indicated below.

The required item(s) identified below must be timely submitted to avoid abandonment:

- A surcharge (for late submission of the basic filing fee, search fee, examination fee or inventor's oath or declaration) as set forth in 37 CFR 1.16(f) of $ **130** for a non-small entity, must be submitted.

SUMMARY OF FEES DUE:

Total fee(s) required within **TWO MONTHS** from the date of this Notice is $ **1390** for a non-small entity
- $ **390** Statutory basic filing fee.
- $ **130** Surcharge.
- The application search fee has not been paid. Applicant must submit $ **620** to complete the search fee.
- The application examination fee has not been paid. Applicant must submit $ **250** to complete the examination fee for a non-small entity.

Items Required To Avoid Processing Delays:

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
  All
  Applicant may submit the inventor's oath or declaration at any time before the Notice of Allowance and Fee(s) Due, PTOL-85, is mailed.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

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P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

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/tpetros/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 13/679,204

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	390
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	620
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	250
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*			OR	x 62 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*				x 250 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1260

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

PTO/AIA/14 (08-12)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-318
	Application Number	13/679,204
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Christopher	P.	Ricci	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Saratoga	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:

Address 1	20650 4th Street, Unit 2		
Address 2			
City	Saratoga	State/Province	CA
Postal Code	95070	Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	~~22442~~ 111285		
Email Address	~~srlaw@sheridanross.com~~ flexpatents@sheridanross.com	Add Email	Remove Email

Application Information:

Title of the Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES		
Attorney Docket Number	6583-318	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	17	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-318
	Application Number	
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES	

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	**Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	~~22442~~ 111285		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61560509	2011-11-16
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61637164	2012-04-23
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61646747	2012-05-14
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61653275	2012-05-30
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61653264	2012-05-30
Prior Application Status	Pending		Remove

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-318
	Application Number	
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES	

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61653563	2012-05-31
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61663335	2012-06-22
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61672483	2012-07-17
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61714016	2012-10-15
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61715699	2012-10-18

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Priority Claimed
			○ Yes ◉ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-318
	Application Number	
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES	

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

◉ Assignee	○ Legal Representative under 35 U.S.C. 117
○ Person to whom the inventor is obligated to assign.	○ Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Assignee is an Organization check here. ☒

Organization Name	Flextronics AP, LLC

Mailing Address Information:

Address 1	847 Gibraltar Drive, Building 5		
Address 2			
City	Milpitas	**State/Province**	CA
Country	US	Postal Code	95035
Phone Number		Fax Number	

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-318
	Application Number	
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES	

Email Address	

Additional Applicant Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications

Signature	/Douglas W. Swartz/			Date (YYYY-MM-DD)	2013-02-19
First Name	Douglas W.	Last Name	Swartz	Registration Number	37739

Additional Signature may be generated within this form by selecting the Add button.

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

As the below named inventor, I hereby declare that:

This declaration is directed to:

☐ The attached application, or

■ United States application or PCT international application number 13/679,204 filed on November 16, 2012.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Christopher P. Ricci Date (Optional) :

Signature:

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	14994720
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	22442
Filer:	Douglas W. Swartz/Amy Duarte
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-318
Receipt Date:	19-FEB-2013
Filing Date:	16-NOV-2012
Time Stamp:	17:33:46
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1390
RAM confirmation Number	7402
Deposit Account	191970
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2013-02-19_PrelimAmend_and_Response.pdf	179290 a8a55b6663d70b40e9bfbbb1e8972d3a84b77af5	yes	3
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Applicant Response to Pre-Exam Formalities Notice		1	1	
	Specification		2	2	
	Applicant Arguments/Remarks Made in an Amendment		3	3	
Warnings:					
Information:					
2	Specification	Substitute_Specification_Marked-up.pdf	279424 01537ae882604aa177ca454909fe8fd5d014e0a3	no	47
Warnings:					
Information:					
3	Specification	Substitute_Specification_Clean.pdf	241401 32ab5be66bc8c6325da383814fb75522adf45a13	no	47
Warnings:					
Information:					
4	Oath or Declaration filed	6583-318_Executed_Declaration.pdf	139241 cc8554cd04b5a6e1dfe385ee53adabd3bdf31ea0	no	1
Warnings:					
Information:					
5	Application Data Sheet	2013-02-19_ADS_6583-318.pdf	103253 2b43d985582817576b625f0a05ad5a613b23aefa	no	5
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
6	Fee Worksheet (SB06)	fee-info.pdf	37043 beee9eb989b80fb2dfd7f15f2aecfb62de90a074	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	979652		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Electronic Patent Application Fee Transmittal

Application Number:	13679204
Filing Date:	16-Nov-2012
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Filer:	Douglas W. Swartz/Amy Duarte
Attorney Docket Number:	6583-318

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility application filing	1011	1	390	390
Utility Search Fee	1111	1	620	620
Utility Examination Fee	1311	1	250	250
Pages:				
Claims:				
Miscellaneous-Filing:				
Late filing fee for oath or declaration	1051	1	130	130
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	1390

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of: RICCI, Christopher P. Serial No.: 13/679,204 Filed: November 16, 2012 Atty. File No.: 6583-318 Entitled: "FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES"	Group Art Unit: 2835 Confirmation No.: 3693 Examiner: Not Yet Assigned ***Submitted Via EFS-Web***

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT AND RESPONSE TO NOTICE TO FILE MISSING PARTS

Dear Sir/Madam:

Prior to the initial review of the above-identified patent application by the Examiner, please enter the following Preliminary Amendment and Response to Notice to File Missing Parts of Nonprovisional Application mailed December 17, 2012. Also submitted herewith via EFS-Web is an executed Declaration by the inventor and the amount of $1,390.00, which constitutes the statutory basic filing fee, search fee, examination fee, and surcharge. Although Applicant does not believe that any other fees are due based upon the filing of paper, please charge any such fees to Deposit Account 19-1970.

Please amend the above-identified patent application as follows:

Amendments to the Specification begin on page **2** of this paper.

Remarks begin on page **3** of this paper.

ABSTRACT

Methods and systems for a complete vehicle ecosystem are provided. Specifically, systems that when taken alone, or together, provide an individual or group of individuals with an intuitive and comfortable vehicular environment. The present disclosure includes a system to recognize the drivers and/or passengers within the automobile. Based on the recognition, the vehicle may change a configuration of the automobile to match predetermined preferences for the driver and/or passenger.

Marked-Up Specification

FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] The present application claims the benefits of and priority, under 35 U.S.C. § 119(e), to U.S. Provisional Application Serial Nos. 61/560,509, filed on November ~~26~~16, 2011, entitled "Complete Vehicle Ecosystem;" 61/637,164, filed on April 23, 2012, entitled "Complete Vehicle Ecosystem;" 61/646,747, filed on May 14, 2012, entitled "Branding of Electrically Propelled Vehicles Via the Generation of Specific Operating Sounds;" 61/653,275, filed on May 30, 2012, entitled "Vehicle Application Store for Console;" 61/653,264, filed on May 30, 2012, entitled "Control of Device Features Based on Vehicle State;" 61/653,563, filed on May 31, 2012, entitled "Complete Vehicle Ecosystem;" 61/663,335, filed on June 22, 2012, entitled "Complete Vehicle Ecosystem;" 61/672,483, filed on July 17, 2012, entitled "Vehicle Climate Control;" ~~and~~ 61/714,016, filed on October 15, 2012, entitled "Vehicle Middleware;" and 61/715,699, filed October 18, 2012, entitled "Vehicle Middleware." The entire disclosures of the applications listed above are hereby incorporated by reference, in their entirety, for all that they teach and for all purposes.

[0002] This application is also related to U.S. Patent Application Nos. 13/420,236, filed on March 14, 2012, entitled, "Configurable Vehicle Console;" 13/420,240, filed on March 14, 2012, entitled "Removable, Configurable Vehicle Console;" 13/462,593, filed on May 2, 2012[[;]], entitled "Configurable Dash Display;" 13/462,596, filed on May 2, 2012, entitled "Configurable Heads-Up Dash Display;" ~~__/___,___~~,13/679,459, filed on November 16, 2012, entitled "~~Implementation of Conquest Functionality in Automotive Consule~~Vehicle Comprising Multi-Operating System" (Attorney Docket No. 6583-228); 13/679,234, filed on November 16, 2012, entitled "Gesture Recognition for On-Board Display" (Attorney Docket No. 6583-229); ~~__/___,___~~,13/679,412, filed on November 16, 2012, entitled "~~Car~~Vehicle Application Store for Console" (Attorney Docket No. 6583-230); ~~__/___,___~~,13/679,857, filed on November 16, 2012, entitled "Sharing Applications/Media Between Car and Phone (Hydroid)" (Attorney Docket No. 6583-231); ~~__/___,___~~,13/679,878, filed on November 16, 2012, entitled "In-Cloud Connection for Car Multimedia" (Attorney Docket No. 6583-232); ~~__/___,___~~,13/679,875, filed on November 16, 2012, entitled "Music Streaming" (Attorney Docket No. 6583-233); ~~__/___,___~~,13/679,676, filed on November 16, 2012, entitled ~~"Activate/Deactivate Features of~~

~~Console/Car Based on Location (State Law Compliance)~~ "Control of Device Features Based on Vehicle State" (Attorney Docket No. 6583-234); ~~__/___,___~~,13/678,673, filed on November 16, 2012, entitled "Insurance Tracking" (Attorney Docket No. 6583-235); ~~__/___,___~~,13/678,691, filed on November 16, 2012, entitled "Law Breaking/Behavior Sensor" (Attorney Docket No. 6583-236); ~~__/___,___~~,13/678,699, filed on November 16, 2012, entitled "Etiquette Suggestion" (Attorney Docket No. 6583-237); ~~__/___,___~~,13/678,710, filed on November 16, 2012, entitled "Parking Space Finder Based on Parking Meter Data" (Attorney Docket No. 6583-238); ~~__/___,___~~,13/678,722, filed on November 16, 2012, entitled "Parking Meter Expired Alert" (Attorney Docket No. 6583-239); ~~__/___,___~~,13/678,726, filed on November 16, 2012, entitled "Object Sensing (Pedestrian Avoidance/Accident Avoidance)" [["]] (Attorney Docket No. 6583-240); ~~__/___,___~~,13/678,735, filed on November 16, 2012, entitled "Proximity Warning Relative to Other Cars" (Attorney Docket No. 6583-241); ~~__/___,___~~,13/678,745, filed on November 16, 2012, entitled "Street Side Sensors" (Attorney Docket No. 6583-242); ~~__/___,___~~,13/678,753, filed on November 16, 2012, entitled "Car Location" (Attorney Docket No. 6583-~~263~~234); ~~__/___,___~~,13/679,441, filed on November 16, 2012, entitled "Universal Bus in the Car" (Attorney Docket No. 6583-244); ~~__/___,___~~,13/679,864, filed on November 16, 2012, entitled "Mobile Hot Spot/Router/Application Share Site or Network" (Attorney Docket No. 6583-245); ~~__/___,___~~,13/679,815, filed on November 16, 2012, entitled "Universal Console Chassis for the Car" (Attorney Docket No. 6583-246); ~~__/___,___~~,13/679,476, filed on November 16, 2012, entitled "Vehicle Middleware" (Attorney Docket No. 6583-247); ~~__/___,___~~,13/679,306, filed on November 16, 2012, entitled "~~Real Time~~Method and System for Vehicle Data Collection Regarding Traffic" (Attorney Docket No. 6583-248); ~~__/___,___~~,13/679,369, filed on November 16, 2012, entitled "~~Map Updating~~Method and System for Vehicle Data Collection" (Attorney Docket No. 6583-249); ~~__/___,___~~,13/679,680, filed on November 16, 2012, entitled "Communications Based on Vehicle Diagnostics and Indications ~~Call Mechanic~~" (Attorney Docket No. 6583-250); ~~__/___,___~~,13/679,443, filed on November 16, 2012, entitled "~~Felon Identifier~~Method and System for Maintaining and Reporting Vehicle Occupant Information" (Attorney Docket No. 6583-251); ~~__/___,___~~,13/678,762, filed on November 16, 2012, entitled "Behavioral Tracking and Vehicle Applications" (Attorney Docket No. 6583-252); 13/679,292, filed November 16, 2012, entitled "Branding of Electrically Propelled Vehicles Via the Generation of Specific Operating Output" (Attorney Docket No. 6583-258); 13/679,400, filed

November 16, 2012, entitled "Vehicle Climate Control" (Attorney Docket No. 6583-313); __/___,___, filed on November 16, 2012, entitled "Improvements to Controller Area Network Bus" (Attorney Docket No. 6583-314); ~~__/___,___,~~13/678,773, filed on November 16, 2012, entitled "Location Information Exchange Between Vehicle and Device" (Attorney Docket No. 6583-315); ~~__/___,___,~~13/679,887, filed on November 16, 2012, entitled "In Car Communication Between Devices" (Attorney Docket No. 6583-316); ~~__/___,___,~~13/679,842, filed on November 16, 2012, entitled "Configurable Hardware Unit for Car Systems" (Attorney Docket No. 6583-317); ~~__/___,___, filed on November 16, 2012, entitled "Feature Recognition for Configuring a Vehicle Console and Associated Devices" (Attorney Docket No. 6583-318);~~ ~~__/___,___,~~13/679,350, filed on November 16, 2012, entitled "Configurable Vehicle Console" (Attorney Docket No. 6583-412); ~~__/___,___,~~13/679,358, filed on November 16, 2012, entitled "Configurable Dash Display" (Attorney Docket No. 6583-413); ~~__/___,___,~~13/679,363, filed on November 16, 2012, entitled "Configurable Heads-Up Dash Display" (Attorney Docket No. 6583-414); and ~~__/___,___,~~13/679,368, filed on November 16, 2012, entitled "Removable, Configurable Vehicle Console" (Attorney Docket No. 6583-415). The entire disclosures of the applications listed above are hereby incorporated by reference, in their entirety, for all that they teach and for all purposes.

BACKGROUND

[0003] Whether using private, commercial, or public transport, the movement of people and/or cargo has become a major industry. In today's interconnected world daily travel is essential to engaging in commerce. Commuting to and from work can account for a large portion of a traveler's day. As a result, vehicle manufacturers have begun to focus on making this commute, and other journeys, more enjoyable and easier.

[0004] Currently, vehicle manufacturers attempt to entice travelers to use a specific conveyance based on any number of features. Most of these features focus on vehicle safety or efficiency. From the addition of safety-restraints, air-bags, and warning systems to more efficient engines, motors, and designs, the vehicle industry has worked to appease the supposed needs of the traveler. Recently, however, vehicle manufactures have shifted their focus to user and passenger comfort as a primary concern. Making an individual more comfortable while traveling instills confidence and pleasure in using a given vehicle and increases an individual's preference for a given manufacturer and/or vehicle type.

[0005] One way to instill comfort in a vehicle is to create an environment within the vehicle similar to that of an individual's home. Integrating features in a vehicle that are associated with comfort found in an individual's home can ease a traveler's transition from home to vehicle. Several manufacturers have added comfort features in vehicles such as the following: leather seats, adaptive and/or personal climate control systems, music and media players, ergonomic controls, Internet connectivity, etc. However, because these manufacturers have added features to a conveyance, they have built comfort around a vehicle and failed to build a vehicle around comfort. Thus, the vehicle as an ecosystem has not been fully considered.

SUMMARY

[0006] There is a need for a vehicle ecosystem that can integrate both physical and mental comforts while seamlessly operating with current electronic devices to result in a totally intuitive and immersive user experience. These and other needs are addressed by the various aspects, embodiments, and/or configurations of the present disclosure. Also, while the disclosure is presented in terms of exemplary embodiments, it should be appreciated that individual aspects of the disclosure can be separately claimed.

[0007] The present disclosure can provide a number of advantages depending on the particular aspect, embodiment, and/or configuration. Currently, the vehicle industry is dominated by conveyances offering a separate comfort experience from a home, work, or other aspect of a traveler's life. Unfortunately, current vehicles include a series of separate devices that work together while an individual or individuals are associated with the vehicle. Technology areas and devices such as user interfaces, applications, tracking capabilities, hardware, and/or location-based communications, could be combined together, or used separately, to form a complete vehicle ecosystem. This ecosystem can provide a connected and intuitive user experience for any traveler.

[0008] A series of devices associated with a vehicle along with other devices can form a complete and familiar user experience. In particular, the devices, applications, interfaces, hardware, and software may combine to form a user-friendly environment while traveling or otherwise moving from one location to another and/or when a vehicle is at rest. Moreover, aspects of the present disclosure may provide communication between the vehicle and a user at any given time. Specifically, communication between a vehicle and another device may also relay information to an individual and/or group of individuals. This communication between a

vehicle and at least one other device may include, but is not limited to, communication between a vehicle and: 1) at least one mobile device, 2) at least one other vehicle, 3) another system/group of devices, 4) a non-mobile device, and 5) combinations thereof. These and other advantages will be apparent from the disclosure.

[0009] The present disclosure describes a method executed by a vehicle system. The vehicle system can automatically determine a person is within a vehicle; automatically identify the person; determine if there is a setting to be stored for the person; and store the setting.

[0010] The term "ecosystem" or "vehicle ecosystem," as used herein, refers to a community of person(s) in conjunction with the vehicle or other device components of their environment (for example, climate control, safety features, mobile devices, multimedia sources etc.), interacting as a system.

[0011] The term "environment" or "vehicle environment," as used herein, refers to the surroundings or conditions in which a person operates a vehicle.

[0012] The term "sensor," as used herein, refers to a converter or instrument that measures a physical quantity or quality and converts the measurement into a signal which can be read, observed, stored, and/or understood by an observer or by another instrument.

[0013] The term "stimulus," as used herein, refers to some event or something external that influences an activity.

[0014] The term "automotive navigation system" is a satellite navigation system designed for use in automobiles. It typically uses a GPS navigation device to acquire position data to locate the user on a road in the unit's map database. Using the road database, the unit can give directions to other locations along roads also in its database. Dead reckoning using distance data from sensors attached to the drivetrain, a gyroscope and an accelerometer can be used for greater reliability, as GPS signal loss and/or multipath can occur due to urban canyons or tunnels.

[0015] The term "bus" and variations thereof, as used herein, refers to a subsystem that transfers information and/or data between various components. A bus generally refers to the collection communication hardware interface, interconnects, bus architecture, and/or protocol defining the communication scheme for a communication system and/or communication network. A bus may also be specifically refer to a part of a communication hardware that interfaces the communication hardware with the interconnects that connect to other components of the corresponding communication network. The bus may be for a wired network, such as a

physical bus, or wireless network, such as part of an antenna or hardware that couples the communication hardware with the antenna. A bus architecture supports a defined format in which information and/or data is arranged when sent and received through a communication network. A protocol may define the format and rules of communication of a bus architecture.

[0016] The terms "communication device," "smartphone," and "mobile device," and variations thereof, as used herein, are used interchangeably and include any type of device capable of communicating with one or more of another device and/or across a communications network, via a communications protocol, and the like. Exemplary communication devices may include but are not limited to smartphones, handheld computers, laptops, netbooks, notebook computers, subnotebooks, tablet computers, scanners, portable gaming devices, phones, pagers, GPS modules, portable music players, and other Internet-enabled and/or network-connected devices.

[0017] The terms "head unit," "dash," "dashboard," and variations thereof, as used herein, are used interchangeably and include any panel and/or area of a vehicle disposed adjacent to an operator, user, and/or passenger. Typical dashboards may include but are not limited to one or more control panel, instrument housing, head unit, indicator, gauge, meter, light, audio equipment, computer, screen, display, HUD unit, and graphical user interface.

[0018] The term "electronic address" refers to any contactable address, including a telephone number, instant message handle, e-mail address, Universal Resource Locator ("URL"), Universal Resource Identifier ("URI"), Address of Record ("AOR"), electronic alias in a database, like addresses, and combinations thereof.

[0019] The term "communication system" or "communication network" and variations thereof, as used herein, refers to a collection of communication components capable of one or more of transmission, relay, interconnect, control, or otherwise manipulate information or data from at least one transmitter to at least one receiver. As such, the communication may include a range of systems supporting point-to-point to broadcasting of the information or data. A communication system may refer to the collection individual communication hardware as well as the interconnects associated with and connecting the individual communication hardware. Communication hardware may refer to dedicated communication hardware or may refer a processor coupled with a communication means (*i.e.* an antenna) and running software capable of using the communication means to send a signal within the communication system. Interconnect refers some type of wired or wireless communication link that connects various

components, such as communication hardware, within a communication system. A communication network may refer to a specific setup of a communication system with the collection of individual communication hardware and interconnects having some definable network topography. A communication network may include wired and/or wireless network having a pre-set to an ad hoc network structure.

[0020] The phrases "at least one", "one or more", and "and/or" are open-ended expressions that are both conjunctive and disjunctive in operation. For example, each of the expressions "at least one of A, B and C", "at least one of A, B, or C", "one or more of A, B, and C", "one or more of A, B, or C" and "A, B, and/or C" means A alone, B alone, C alone, A and B together, A and C together, B and C together, or A, B and C together.

[0021] The term "a" or "an" entity," as used herein, refers to one or more of that entity. As such, the terms "a" (or "an"), "one or more" and "at least one" can be used interchangeably herein. It is also to be noted that the terms "comprising", "including", and "having" can be used interchangeably.

[0022] The term "automatic" and variations thereof, as used herein, refers to any process or operation done without material human input when the process or operation is performed. However, a process or operation can be automatic, even though performance of the process or operation uses material or immaterial human input, if the input is received before performance of the process or operation. Human input is deemed to be material if such input influences how the process or operation will be performed. Human input that consents to the performance of the process or operation is not deemed to be "material".

[0023] The term "computer-readable medium," as used herein, refers to any tangible storage and/or transmission medium that participate in providing instructions to a processor for execution. Such a medium may take many forms, including but not limited to, non-volatile media, volatile media, and transmission media. Non-volatile media includes, for example, NVRAM, or magnetic or optical disks. Volatile media includes dynamic memory, such as main memory. Common forms of computer-readable media include, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, or any other magnetic medium, magneto-optical medium, a CD-ROM, any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, a RAM, a PROM, and EPROM, a FLASH-EPROM, a solid state medium like a memory card, any other memory chip or cartridge, a carrier wave as described hereinafter, or

any other medium from which a computer can read. A digital file attachment to e-mail or other self-contained information archive or set of archives is considered a distribution medium equivalent to a tangible storage medium. When the computer-readable media is configured as a database, it is to be understood that the database may be any type of database, such as relational, hierarchical, object-oriented, and/or the like. Accordingly, the disclosure is considered to include a tangible storage medium or distribution medium and prior art-recognized equivalents and successor media, in which the software implementations of the present disclosure are stored.

[0024] The term "desktop," as used herein, refers to a metaphor used to portray systems. A desktop is generally considered a "surface" that typically includes pictures, called icons, widgets, folders, etc. that can activate show applications, windows, cabinets, files, folders, documents, and other graphical items. The icons are generally selectable to initiate a task through user interface interaction to allow a user to execute applications or conduct other operations.

[0025] The term "display," as used herein, refers to a portion of a screen used to display the output of a computer to a user.

[0026] The term "displayed image," as used herein, refers to an image produced on the display. A typical displayed image is a window or desktop. The displayed image may occupy all or a portion of the display.

[0027] The term "display orientation," as used herein, refers to the way in which a rectangular display is oriented by a user for viewing. The two most common types of display orientation are portrait and landscape. In landscape mode, the display is oriented such that the width of the display is greater than the height of the display (such as a 4:3 ratio, which is 4 units wide and 3 units tall, or a 16:9 ratio, which is 16 units wide and 9 units tall). Stated differently, the longer dimension of the display is oriented substantially horizontal in landscape mode while the shorter dimension of the display is oriented substantially vertical. In the portrait mode, by contrast, the display is oriented such that the width of the display is less than the height of the display. Stated differently, the shorter dimension of the display is oriented substantially horizontal in the portrait mode while the longer dimension of the display is oriented substantially vertical. The multi-screen display can have one composite display that encompasses all the screens. The composite display can have different display characteristics based on the various orientations of the device.

[0028] The term "gesture," as used herein, refers to a user action that expresses an intended idea, action, meaning, result, and/or outcome. The user action can include manipulating a device

(e.g., opening or closing a device, changing a device orientation, moving a trackball or wheel, etc.), movement of a body part in relation to the device, movement of an implement or tool in relation to the device, audio inputs, etc. A gesture may be made on a device (such as on the screen) or with the device to interact with the device.

[0029] The term "module," as used herein, refers to any known or later developed hardware, software, firmware, artificial intelligence, fuzzy logic, or combination of hardware and software that is capable of performing the functionality associated with that element.

[0030] The term "gesture recognition" or "gesture capture," as used herein, refers to a sense or otherwise a detection of an instance and/or type of user gesture. The gesture capture can occur in one or more areas of the screen, A gesture region can be on the display, where it may be referred to as a touch sensitive display or off the display where it may be referred to as a gesture capture area.

[0031] A "multi-screen application," as used herein, refers to an application that is capable of producing one or more windows that may simultaneously occupy multiple screens. A multi-screen application commonly can operate in single-screen mode in which one or more windows of the application are displayed only on one screen or in multi-screen mode in which one or more windows are displayed simultaneously on multiple screens.

[0032] A "single-screen application," as used herein, refers to an application that is capable of producing one or more windows that may occupy only a single screen at a time.

[0033] The term "screen," "touch screen," or "touchscreen," as used herein, refers to a physical structure that enables the user to interact with the computer by touching areas on the screen and provides information to a user through a display. The touch screen may sense user contact in a number of different ways, such as by a change in an electrical parameter (e.g., resistance or capacitance), acoustic wave variations, infrared radiation proximity detection, light variation detection, and the like. In a resistive touch screen, for example, normally separated conductive and resistive metallic layers in the screen pass an electrical current. When a user touches the screen, the two layers make contact in the contacted location, whereby a change in electrical field is noted and the coordinates of the contacted location calculated. In a capacitive touch screen, a capacitive layer stores electrical charge, which is discharged to the user upon contact with the touch screen, causing a decrease in the charge of the capacitive layer. The decrease is measured, and the contacted location coordinates determined. In a surface acoustic wave touch

screen, an acoustic wave is transmitted through the screen, and the acoustic wave is disturbed by user contact. A receiving transducer detects the user contact instance and determines the contacted location coordinates.

[0034] The term "window" refers to a, typically rectangular, displayed image on at least part of a display that contains or provides content different from the rest of the screen. The window may obscure the desktop.

[0035] The terms "determine", "calculate" and "compute," and variations thereof, as used herein, are used interchangeably and include any type of methodology, process, mathematical operation or technique.

[0036] It shall be understood that the term "means" as used herein shall be given its broadest possible interpretation in accordance with 35 U.S.C., Section 112, Paragraph 6. Accordingly, a claim incorporating the term "means" shall cover all structures, materials, or acts set forth herein, and all of the equivalents thereof. Further, the structures, materials or acts and the equivalents thereof shall include all those described in the summary of the invention, brief description of the drawings, detailed description, abstract, and claims themselves.

[0037] The term "vehicle" as used herein includes any conveyance, or model of a conveyance, where the conveyance was originally designed for the purpose of moving one or more tangible objects, such as people, animals, cargo, and the like. The term "vehicle" does not require that a conveyance moves or is capable of movement. Typical vehicles may include but are in no way limited to cars, trucks, motorcycles, busses, automobiles, trains, railed conveyances, boats, ships, marine conveyances, submarine conveyances, airplanes, space craft, flying machines, human-powered conveyances, and the like.

[0038] The preceding is a simplified summary of the disclosure to provide an understanding of some aspects of the disclosure. This summary is neither an extensive nor exhaustive overview of the disclosure and its various aspects, embodiments, and/or configurations. It is intended neither to identify key or critical elements of the disclosure nor to delineate the scope of the disclosure but to present selected concepts of the disclosure in a simplified form as an introduction to the more detailed description presented below. As will be appreciated, other aspects, embodiments, and/or configurations of the disclosure are possible utilizing, alone or in combination, one or more of the features set forth above or described in detail below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0039] Fig. 1 depicts an embodiment of a vehicle operating environment;

[0040] Fig. 2 is a block diagram of an embodiment of a vehicle system;

[0041] Fig. 3 is a block diagram of an embodiment of a vehicle interior environment separated into areas and/or zones;

[0042] Fig. 4 depicts an embodiment of a sensor configuration for a vehicle;

[0043] Fig. 5 is a block diagram of an embodiment of a vehicle control system;

[0044] Fig. 6 another block diagram of an embodiment of a vehicle control system;

[0045] Fig. 7A is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0046] Fig. 7B is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0047] Fig. 7C is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0048] Fig. 7D is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0049] Fig. 7E is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0050] Fig. 7F is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0051] Fig. 7G is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0052] Fig. 7H is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0053] Fig. 7I is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0054] Fig. 7J is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0055] Fig. 7K is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0056] Fig. 8 is a diagram of an embodiment of a data structure for storing information about a user of a vehicle;

[0057] Fig. 9 is a flow diagram of a method for storing setting associated with a user;

[0058] Fig. 10 is a flow diagram of a method for establishing settings associated with a user;

[0059] Fig. 11 is a flow diagram of a method for storing setting associated with a user;

[0060] Fig. 12 is a flow diagram of a method for storing gestures associated with a user;

[0061] Fig. 13 is a flow diagram of a method for reacting to a gesture performed by a user;

[0062] Fig. 14 is a flow diagram of a method for storing health data associated with a user;

[0063] Fig. 15 is a flow diagram of a method for reacting to a gesture performed by a user.

[0064] In the appended figures, similar components and/or features may have the same reference label. Further, various components of the same type may be distinguished by following the reference label by a letter that distinguishes among the similar components. If only the first reference label is used in the specification, the description is applicable to any one of the similar components having the same first reference label irrespective of the second reference label.

DETAILED DESCRIPTION

[0065] Presented herein are embodiments of a complete vehicle ecosystem. The ecosystem can comprise single devices or a compilation of devices. This device, or these devices, may be capable of communicating with other devices and/or to an individual or group of individuals. Further, this device, or these devices, can receive user input in unique ways. The overall design and functionality of each device provides for an enhanced user experience making the device more useful and more efficient. As described herein, the device(s) may be electrical, mechanical, electro-mechanical, software-based, and/or combinations thereof.

[0066] A vehicle environment 100 that may contain a vehicle ecosystem is shown in Fig. 1. The vehicle environment 100 can contain areas associated with a vehicle or conveyance 104. The vehicle 104 is shown as a police car but can be any type of conveyance. The environment 100 can include at least three zones. A first zone 108 may be inside a vehicle 104. The zone 108 includes any interior space, trunk space, engine compartment, or other associated space within or associated with the vehicle 104. The interior environment 108 can be defined by one or more techniques, for example, geo-fencing.

[0067] A second zone 112 may be delineated by line 120. The zone 112 is created by a range of one or more sensors associated with the vehicle 104. Thus, the area 112 is exemplary of the range of those sensors and what can be detected by those sensors associated with the vehicle 104.

The rest of the environment includes all space beyond the range of the sensors and is represented by 116. Thus, the environment 100 may have an area 116 that includes all areas beyond the sensor range 112. The area 116 may include future locations of travel that the vehicle 104 may proceed to in the future.

[0068] An embodiment of a vehicle system 200 is shown in Fig. 2. The vehicle system 200 may consist of hardware and/or software that conduct various operations for or with the vehicle 104. The operations can include, but are not limited to providing information to the user, receiving input from the user, and controlling the functions or operation of the vehicle 104, etc. The vehicle system 200 can include a vehicle control system 204. The vehicle control system 204 can be any type of computing system operable to conduct the operations as described herein.

[0069] The vehicle control system 204 may interact with a memory or storage system 208 that stores system data. System data 208 may be any type of data needed for the vehicle control system 204 to control effectively the vehicle 104. An example of some of the data that may be stored by the vehicle control system 204 may be as described in conjunction with Fig. 8. The system data 208 can represent any type of database or other storage system. Thus, the system data 208 can be a flat file data system, an object-oriented data system, or some other data system that may interface with the vehicle control system 204.

[0070] The vehicle control system 204 may communicate with a device or user interface 212. The user interface 212 may be as described in conjunction with Fig. 5. The user interface 212 may be operable to receive user input either through touch input, on one or more user interface buttons, or through a graphical user interface that may include a gesture capture region, as described in conjunction with Fig. 5. Further, the symbol 212 can represent a device that is located or associated with the vehicle 104. The device 212 can be a mobile device, including, but not limited to, a mobile telephone, a mobile computer, or other type of computing system or device that is either permanently located in or temporarily associated with the automobile 104. Thus, the vehicle control system 204 can interface with the device 212 and leverage the devices computing capability to provide one or more of the features or functions as described herein.

[0071] The device or user interface 212 can receive input or provide information to a user 216. The user 216 may thus interact with the vehicle control system 204 through the interface or device 212. Further, the device 212 may include or have access to device data 220. The device data 220 can be any type of data that is used in conjunction with the device 212, including, but

not limited to, multimedia data, preferences data, bioinformatics, data associated with the user 216, or other types of data. The data may be stored in a device data 220 as a storage system similar to that described in conjunction with system data 208.

[0072] The vehicle control system 204 may also communicate with or through a communication network 224. The communication network 224 can represent any type of wireless or wired communication system that may be included within the vehicle 104 or operable to communicate outside the vehicle 104. Thus, the communication network 224 can include a local area communication capability and a wide area communication capability. For example, the communication network 224 can include a Bluetooth wireless system, an 802.11G or 802.11N wireless system, a CAN bus, an Ethernet network within the vehicle 104, or other types of communication networks that may function with or be associated with the vehicle 104. Further, the communication network 224 can also include wide area communication capabilities, including one or more of, but not limited to, a cellular communication capability, satellite telephone communication capability, a wireless wide area network communication capability, or other types of communication capabilities that allow for the vehicle control system 204 to communicate outside the vehicle 104.

[0073] The vehicle control system 204 may communicate through the communication network 224 to a server 228 that may be located in a facility that is not within physical proximity to the vehicle 104. Thus, the server 224 may represent a cloud computing system or cloud storage that allows the vehicle control system 204 to either gain access to further computing capabilities or to storage in a location outside of the vehicle 104. The server 228 can include a computer processor and memory and be similar to any computing system as understood to one skilled in the art.

[0074] Further, the server 228 may be associated with stored data 232. The stored data 232 may be stored in any system or by any method, as described in conjunction with system data 208 and/or device data 220. The stored data 232 can include information that may be associated with one or more users 216 or associated with one or more vehicles 104. The stored data 232, being stored in a cloud or in a distant facility, may be exchanged among vehicles 104 or may be used by a user 216 in different locations or with different vehicles 104.

[0075] The vehicle control system 204 may also communicate with one or more sensors 236/242, which are either associated with the vehicle 104 or communicate with the vehicle 104.

Vehicle sensors 242 may include one or more sensors for providing information to the vehicle control system 204 that determine or provide information about the environment 100 in which the vehicle 104 is operating. Embodiments of these sensors may be as described in conjunction with Fig. 4. Non-vehicle sensor 236 can be any type of sensor that isn't currently associated with the vehicle 104. For example, non-vehicle sensor 236 can be sensors in a traffic system operated by a third party that provides data to the vehicle control system 204. Further, the non-vehicle sensor 236 can be other types of sensors which provide information about the distant environment 116 or other information about the vehicle 104 or the environment 100. These non-vehicle sensors 236 may be operated by third parties but provide information to the vehicle control system 204. Examples of information that may be used by the vehicle control system 204 may include weather tracking data, user health tracking data, vehicle maintenance data , or other types of data, which may provide environmental or other data to the vehicle control system 204.

[0076] An arrangement or configuration for sensors within a vehicle 104 is as shown in Fig. 3. The sensor arrangement 300 can include one or more areas 308 within the vehicle. An area can be a larger part of the environment inside or outside of the vehicle 104. Thus, area one 308A may include the area within the trunk space or engine space of the vehicle 104 and/or the front passenger compartment. Area three 308B may include a portion of the interior space 108 of the vehicle 104. The area N, 308N may include the trunk space or rear compartment area, when included within the vehicle 104. The interior space 108 may also be divided into areas. Thus, one area may be associated with the front passenger's and driver's seats, a second area may be associated with the middle passengers' seats, and a third area may be associated with a rear passenger's seat. Each area 308 may include one or more sensors that are positioned or operate to provide environmental information about that area 308.

[0077] Each area 308 may be further separated into one or more zones 312 within the area 308. For example, area 1 308A may be separated into zone A, 312a, and zone B, 312a. Each zone 312 may be associated with a particular portion of the interior occupied by a passenger. For example, zone A, 312a may be associated with a driver. Zone B, 312b, may be associated with a front passenger. Each zone 312 may include one or more sensors that are positioned or configured to collect information about the environment or ecosystem associated with that zone or person.

[0078] A passenger area 308b may include more than two zones as described in conjunction with area 308a. For example, area 308b may include three zones, 312c, 312d, and 312e. These three separate zones 312c, 312d, and 312e may be associated with three passenger seats typically found in the rear passenger area of an automobile 104. An area 308N and may include a single zone 312N as there may be no separate passenger areas but may include be a single trunk area within the vehicle 104. The number of zones 312 is unlimited within the areas as the areas are also unlimited inside the vehicle 104. Further, it should be noted that there may be one or areas 308 or zones 312 that may be located outside the vehicle 104 that may have a specific set of sensors associated therewith.

[0079] A set of sensors or vehicle components 400 associated with the vehicle 404 may be as shown in Fig. 4. The vehicle 104 includes, among many other components common to vehicles, wheels 407, a power source 409 (such as an engine, motor, or energy storage system (e.g., battery or capacitive energy storage system)), a manual or automatic transmission 412, a manual or automatic transmission gear controller 416, a power controller 420 (such as a throttle), a vehicle control system 204, the display device 212, a braking system 436, a steering wheel 440, a power source activation/deactivation switch 444 (e.g., an ignition), an occupant seating system 448, a wireless signal receiver 453 to receive wireless signals from signal sources such as roadside beacons and other electronic roadside devices, and a satellite positioning system receiver 457 (e.g., a Global Positioning System ("GPS") (US), GLONASS (Russia), Galileo positioning system (EU), Compass navigation system (China), and Regional Navigational Satellite System (India) receiver).

[0080] The vehicle 104 includes a number of sensors in wireless or wired communication with the vehicle control system 204 and/or display device 212 to collect sensed information regarding the vehicle state, configuration, and/or operation. Exemplary sensors include wheel state sensor 460 to sense one or more of vehicle speed, acceleration, deceleration, wheel rotation, wheel speed (e.g., wheel revolutions-per-minute), wheel slip, and the like, a power source energy output sensor 464 to sense a power output of the power source 409 by measuring one or more of current engine speed (e.g., revolutions-per-minute), energy input and/or output (e.g., voltage, current, fuel consumption, and torque) (e.g., turbine speed sensor, input speed sensor, crankshaft position sensor, manifold absolute pressure sensor, mass flow sensor, and the like), and the like, a switch state sensor 468 to determine a current activation or deactivation state of the power

source activation/deactivation switch 444, a transmission setting sensor 470 to determine a current setting of the transmission (e.g., gear selection or setting), a gear controller sensor 472 to determine a current setting of the gear controller 416, a power controller sensor 474 to determine a current setting of the power controller 420, a brake sensor 476 to determine a current state (braking or non-braking) of the braking system 436, a seating system sensor 478 to determine a seat setting and current weight of seated occupant, if any) in a selected seat of the seating system 448, exterior and interior sound receivers 490 and 492 (e.g., a microphone and other type of acoustic-to-electric transducer or sensor) to receive and convert sound waves into an equivalent analog or digital signal. Examples of other sensors (not shown) that may be employed include safety system state sensors to determine a current state of a vehicular safety system (e.g., air bag setting (deployed or undeployed) and/or seat belt setting (engaged or not engaged)), light setting sensor (e.g., current headlight, emergency light, brake light, parking light, fog light, interior or passenger compartment light, and/or tail light state (on or off)), brake control (e.g., pedal) setting sensor, accelerator pedal setting or angle sensor, clutch pedal setting sensor, emergency brake pedal setting sensor, door setting (e.g., open, closed, locked or unlocked) sensor, engine temperature sensor, passenger compartment or cabin temperature sensor, window setting (open or closed) sensor, one or more cameras or other imaging sensors (which commonly convert an optical image into an electronic signal but may include other devices for detection objects such as an electromagnetic radiation emitter/receiver that emits electromagnetic radiation and receives electromagnetic waves reflected by the object) to sense objects, such as other vehicles and pedestrians and optionally determine the distance, trajectory and speed of such objects, in the vicinity or path of the vehicle, odometer reading sensor, trip mileage reading sensor, wind speed sensor, radar transmitter/receiver output, brake wear sensor, steering/torque sensor, oxygen sensor, ambient lighting sensor, vision system sensor, ranging sensor, parking sensor, heating, venting, and air conditioning (HVAC) sensor, water sensor, air-fuel ratio meter, blind spot monitor, hall effect sensor, microphone, radio frequency (RF) sensor, infrared (IR) sensor, vehicle control system sensors, wireless network sensor (e.g., Wi-Fi and/or Bluetooth sensor), cellular data sensor, and other sensors known to those of skill in the vehicle art.

[0081] In the depicted vehicle embodiment, the various sensors are in communication with the display device 212 and vehicle control system 204 via signal carrier network 480. As noted, the signal carrier network 480 can be a network of signal conductors, a wireless network (e.g., a

radio frequency, microwave, or infrared communication system using a communications protocol, such as Wi-Fi), or a combination thereof.

[0082] In one implementation, the control system 424 receives and reads sensor signals, such as wheel and engine speed signals, as a digital input comprising, for example, a pulse width modulated (PWM) signal. The processor 304 can be configured, for example, to read each of the signals into a port configured as a counter or configured to generate an interrupt on receipt of a pulse, such that the processor 304 can determine, for example, the engine speed in revolutions per minute (RPM) and the speed of the vehicle in miles per hour (MPH). One skilled in the art will recognize that the two signals can be received from existing sensors in a vehicle comprising a tachometer and a speedometer, respectively. Alternatively, the current engine speed and vehicle speed can be received in a communication packet as numeric values from a conventional dashboard subsystem comprising a tachometer and a speedometer. The transmission speed sensor signal can be similarly received as a digital input comprising a signal coupled to a counter or interrupt signal of the processor 304, or received as a value in a communication packet on the network or port interface 352 from an existing subsystem of the vehicle. The ignition sensor signal can be configured as a digital input, wherein a HIGH value represents that the ignition is on and a LOW value represents that the ignition is OFF. Three bits of the port interface 352 can be configured as a digital input to receive the gear shift position signal, representing eight possible gear shift positions. Alternatively, the gear shift position signal can be received in a communication packet as a numeric value on the port interface 352. The throttle position signal can be received as an analog input value, typically in the range 0-5 volts. Alternatively, the throttle position signal can be received in a communication packet as a numeric value on the port interface 352. The output of other sensors can be processed in a similar fashion.

[0083] Other sensors may be included and position in the interior space 108 of the vehicle 104. Generally, these interior sensors obtain data about the health of the driver and/or passenger(s), data about the safety of the driver and/or passenger(s), and/or data about the comfort of the driver and/or passenger(s). The health data sensors can include sensors in the steering wheel that can measure various health telemetry for the person (*e.g., heart rate, temperature, blood pressure, blood presence, blood composition, etc.*). Sensors in the seats may also provide for health telemetry (*e.g., presence of liquid, weight, weight shifts, etc.*). Infrared sensors could

detect a person's temperature; optical sensors can determine a person's position and whether the person has become unconscious. Other health sensors are possible and included herein.

[0084] Safety sensors can measure whether the person is acting safely. Optical sensors can determine a person's position and focus. If the person stops looking at the road ahead, the optical sensor can detect the lack of focus. Sensors in the seats may detect if a person is leaning forward or may be injured by a seat belt in a collision. Other sensors can detect that the driver has at least one hand on a steering wheel. Other safety sensors are possible and contemplated as if included herein.

[0085] Comfort sensors can collect information about a person's comfort. Temperature sensors may detect a temperature of the interior cabin. Moisture sensors can determine a relative humidity. Audio sensors can detect loud sounds or other distractions. Audio sensors may also receive input from a person through voice data. Other comfort sensors are possible and contemplated as if included herein.

[0086] An embodiment of a vehicle control system 204 and its associated components 204 may be as shown in Fig. 5. In general, the device 212 includes a front screen 212 with a touch sensitive display 568. The front screen 212 may be disabled and/or enabled by a suitable command. Moreover, the front screen 212 can be touch sensitive and can include different operative areas. For example, a first operative area, within the touch sensitive screen 212, may comprise a touch sensitive display 568. In general, the touch sensitive display 568 may comprise a full color, touch sensitive display. A second area within each touch sensitive screen 568 may comprise a gesture capture region 572. The gesture capture region 572 may comprise one or more areas or regions that is outside of the touch sensitive display 568 area or screen area 212, and that is capable of receiving input, for example in the form of gestures provided by a user. However, the one or more gesture capture regions 572 do not include pixels that can perform a display function or capability.

[0087] It is further anticipated that a third region of the touch sensitive screen 568 may comprise one or more configurable areas. The configurable area is capable of receiving input and has display or limited display capabilities. As can be appreciated, the configurable area may occupy any part of the touch sensitive screen 568 not allocated to a gesture capture region 572 or touch sensitive display 568. In embodiments, the configurable area may present different input options to the user. For example, the configurable area may display buttons or other relatable

items. Moreover, the identity of displayed buttons, or whether any buttons are displayed at all within the configurable area of the touch sensitive screen 568 may be determined from the context in which the device 212 is used and/or operated. In an exemplary embodiment, the touch sensitive screen 568 comprises liquid crystal display devices extending across at least the region of the touch sensitive screen 568 that is capable of providing visual output to a user, and a resistive and/or capacitive input matrix over the regions of the touch sensitive screen 568 that are capable of receiving input from the user.

[0088] One or more display controllers 516 may be provided for controlling the operation of the touch sensitive screen 568, including input (touch sensing) and output (display) functions. In the exemplary embodiment illustrated in Fig. 5, a touch screen controller 516 is provided for the touch screen 568. In accordance with some embodiments, the functions of a touch screen controller 516 may be incorporated into other components, such as a processor 504.

[0089] The processor 504 may comprise a general purpose programmable processor or controller for executing application programming or instructions. In accordance with at least some embodiments, the processor 504 may include multiple processor cores, and/or implement multiple virtual processors. In accordance with still other embodiments, the processor 504 may include multiple physical processors. As a particular example, the processor 504 may comprise a specially configured application specific integrated circuit (ASIC) or other integrated circuit, a digital signal processor, a controller, a hardwired electronic or logic circuit, a programmable logic device or gate array, a special purpose computer, or the like. The processor 504 generally functions to run programming code or instructions implementing various functions of the device 212.

[0090] A device 212 may also include memory 508 for use in connection with the execution of application programming or instructions by the processor 504, and for the temporary or long term storage of program instructions and/or data. As examples, the memory 508 may comprise RAM, DRAM, SDRAM, or other solid state memory. Alternatively or in addition, data storage 512 may be provided. Like the memory 508, the data storage 512 may comprise a solid state memory device or devices. Alternatively or in addition, the data storage 512 may comprise a hard disk drive or other random access memory.

[0091] In support of communications functions or capabilities, the device 212 can include a cellular telephony module 528. As examples, the cellular telephony module 528 can comprise a

GSM, CDMA, FDMA and/or analog cellular telephony transceiver capable of supporting voice, multimedia and/or data transfers over a cellular network. Alternatively or in addition, the device 212 can include an additional or other wireless communications module 532. As examples, the other wireless communications module 532 can comprise a Wi-Fi, BLUETOOTH TM, WiMax, infrared, or other wireless communications link. The cellular telephony module 528 and the other wireless communications module 532 can each be associated with a shared or a dedicated antenna 524.

[0092] A port interface 552 may be included. The port interface 552 may include proprietary or universal ports to support the interconnection of the device 212 to other devices or components, such as a dock, which may include additional or different capabilities from those integral to the device 212. In addition to supporting an exchange of communication signals between the device 212 and another device or component, the docking port (not shown) and/or port interface 552 can support the supply of power to or from the device 212. The port interface 552 also comprises an intelligent element that comprises a docking module for controlling communications or other interactions between the device 212 and a connected device or component.

[0093] An input/output module 548 and associated ports may be included to support communications over wired networks or links, for example with other communication devices, server devices, and/or peripheral devices. Examples of an input/output module 548 include an Ethernet port, a Universal Serial Bus (USB) port, Institute of Electrical and Electronics Engineers (IEEE) 1594, or other interface.

[0094] An audio input/output interface/device(s) 544 can be included to provide analog audio to an interconnected speaker or other device, and to receive analog audio input from a connected microphone or other device. As an example, the audio input/output interface/device(s) 544 may comprise an associated amplifier and analog to digital converter. Alternatively or in addition, the device 212 can include an integrated audio input/output device 556 and/or an audio jack for interconnecting an external speaker or microphone. For example, an integrated speaker and an integrated microphone can be provided, to support near talk or speaker phone operations.

[0095] Hardware buttons 280 can be included for example for use in connection with certain control operations. Examples include a master power switch, volume control, etc., as described in conjunction with Fig. 2. One or more image capture interfaces/devices, such as a camera, can

be included for capturing still and/or video images. Alternatively or in addition, an image capture interface/device can include a scanner or code reader. An image capture interface/device can include or be associated with additional elements, such as a flash or other light source.

[0096] The device 212 can also include a global positioning system (GPS) receiver 536. In accordance with embodiments of the present invention, the GPS receiver 536 may further comprise a GPS module that is capable of providing absolute location information to other components of the device 212. Other sensors 242 may also be included. For example, an accelerometer(s)/gyroscope(s) may also be included. For example, in connection with the display of information to a user and/or other functions, a signal from the accelerometer/gyroscope can be used to determine an orientation and/or format in which to display that information to the user. In some embodiments, the accelerometer/gyroscope may comprise at least one accelerometer and at least one gyroscope.

[0097] Embodiments of the present invention can also include one or more magnetic sensing feature. The magnetic sensing feature can be configured to provide a signal indicating the position of the device relative to a vehicle-mounted position. This information can be provided as an input, for example to a user interface application, to determine an operating mode, characteristics of the touch sensitive display 568 and/or other device 212 operations. As examples, a magnetic sensing feature can comprise one or more of Hall-effect sensors, a multiple position switch, an optical switch, a Wheatstone bridge, a potentiometer, or other arrangement capable of providing a signal indicating of multiple relative positions the touch screens are in. Alternatively, the magnetic sensing feature may comprise one or more metallic elements used by other sensors associated with the console and/or vehicle to determine whether the device 212 is in a vehicle-mounted position. These metallic elements may include but are not limited to rare-earth magnets, electromagnets, ferrite and/or ferrite alloys, and/or other material capable of being detected by a range of sensors.

[0098] Communications between various components of the device 212 can be carried by one or more buses 520. In addition, power can be supplied to the components of the device 212 from a power source and/or power control module 560. The power control module 560 can, for example, include a battery, an AC to DC converter, power control logic, and/or ports for interconnecting the device 212 to an external source of power.

[0099] An embodiment of one or more software modules that may be associated with the vehicle control system 204 may be as shown in Fig. 6. The memory 508 may store and the processor 504 may execute one or more software components. These components can include at least one operating system (OS) 616, an application manager 662, a console desktop 666, and/or one or more applications 664a and/or 664b from an application store 660. The OS 616 can include a framework 620, one or more frame buffers 648, one or more drivers 612, and/or a kernel 618. The OS 616 can be any software, consisting of programs and data, which manages computer hardware resources and provides common services for the execution of various applications 664. The OS 616 can be any operating system and, at least in some embodiments, dedicated to mobile devices, including, but not limited to, Linux, ANDROID TM, iPhone OS (IOS TM), WINDOWS PHONE 7 TM, etc. The OS 616 is operable to provide functionality to the device 212 by executing one or more operations, as described herein.

[00100] The applications 664 can be any higher level software that executes particular console functionality for the user. Applications 664 can include programs such as vehicle control applications, email clients, web browsers, texting applications, games, media players, office suites, etc. The applications 664 can be stored in an application store 660, which may represent any memory or data storage, and the management software associated therewith, for storing the applications 664. Once executed, the applications 664 may be run in a different area of memory 608.

[00101] The framework 620 may be any software or data that allows the multiple tasks running on the device to interact. In embodiments, at least portions of the framework 620 and the discrete components described hereinafter may be considered part of the OS 616 or an application 664. However, these portions will be described as part of the framework 620, but those components are not so limited. The framework 620 can include, but is not limited to, a Surface Cache module 628, a Window Management module 632, an Input Management module 636, an Application Model Manager 642, a Display Controller 644, one or more frame buffers 648, and/or an event buffer 666.

[00102] The Surface Cache module 628 includes any memory or storage and the software associated therewith to store or cache one or more images of applications, windows, and/or console screens. A series of active and/or non-active windows (or other display objects, such as, a desktop display) can be associated with each display. An active window (or other display

object) is currently displayed. A non-active window (or other display objects) was opened and, at some time, displayed but are now not displayed. To enhance the user experience, before a window transitions from an active state to an inactive state, a "screen shot" of a last generated image of the window (or other display object) can be stored. The Surface Cache module 628 may be operable to store a bitmap of the last active image of a window (or other display object) not currently displayed. Thus, the Surface Cache module 628 stores the images of non-active windows (or other display objects) in a data store.

[0100] In embodiments, the Window Management module 632 is operable to manage the windows (or other display objects) that are active or not active on each of the displays. The Window Management module 632, based on information from the OS 616, or other components, determines when a window (or other display object) is visible or not active. The Window Management module 632 may then put a non-visible window (or other display object) in a "not active state" and, in conjunction with the Task Management module 640 suspends the application's operation. Further, the Window Management module 632 may assign a display identifier to the window (or other display object) or manage one or more other items of data associated with the window (or other display object). The Window Management module 632 may also provide the stored information to the application 664, or other components interacting with or associated with the window (or other display object). The Window Management module 632 can also associate an input task with a window based on window focus and display coordinates within the motion space.

[0101] The Input Management module 636 is operable to manage events that occur with the device. An event is any input into the window environment, for example, a user interface interactions with a user. The Input Management module 636 receives the events and logically stores the events in an event buffer 656. Events can include such user interface interactions as a "down event," which occurs when the screen 204 receives a touch signal from a user, a "move event," which occurs when the screen 204 determines that a user's finger is moving across a screen(s), an "up event", which occurs when the device 212 determines that the user has stopped touching the screen 568 etc. These events are received, stored, and forwarded to other modules by the Input Management module 636. The Input Management module 636 may also map screen inputs to a motion space which is the culmination of all physical and virtual display available on the device.

[0102] The frame buffer 648 is a logical structure(s) used to render the user interface. The frame buffer 648 can be created and destroyed by the OS kernel 618. However, the Display Controller 644 can write the image data, for the visible windows, into the frame buffer 648. A frame buffer 648 can be associated with one screen or multiple screens. The association of a frame buffer 648 with a screen can be controlled dynamically by interaction with the OS kernel 618. A composite display may be created by associating multiple screens with a single frame buffer 648. Graphical data used to render an application's window user interface may then be written to the single frame buffer 648, for the composite display, which is output to the multiple screens 204. The Display Controller 644 can direct an application's user interface to a portion of the frame buffer 648 that is mapped to a particular display 208, thus, displaying the user interface on only one screen 212. The Display Controller 644 can extend the control over user interfaces to multiple applications, controlling the user interfaces for as many displays as are associated with a frame buffer 648 or a portion thereof. This approach compensates for the physical screen 212 and any other console screens that are in use by the software component above the Display Controller 644.

[0103] The Application Manager 662 is an application that provides a presentation layer for the window environment. Thus, the Application Manager 662 provides the graphical model for rendering. Likewise, the Desktop 666 provides the presentation layer for the Application Store 660. Thus, the desktop provides a graphical model of a surface having selectable application icons for the Applications 664 in the Application Store 660 that can be provided to the Window Management Module 632 for rendering.

[0104] Further, the framework can include an Application Model Manager (AMM) 642. The Application Manager 662 may interface with the AMM 642. In embodiments, the AMM 642 receives state change information from the device 212 regarding the state of applications (which are running or suspended). The AMM 642 can associate bit map images from the Surface Cache Module 628 to the applications that are alive (running or suspended). Further, the AMM 642 may provide a list of executing applications to the Application Manager 662.

[0105] One or more gestures used to interface with the vehicle control system 204 may be as described in conjunction with figures 7A through 7K. Figs. 7A through 7H depict various graphical representations of gesture inputs that may be recognized by the screen(s) 212. The gestures may be performed not only by a user's body part, such as a digit, but also by other

devices, such as a stylus, that may be sensed by the contact sensing portion(s) of a screen 212. In general, gestures are interpreted differently, based on where the gestures are performed (either directly on the display 568 or in the gesture capture region 572). For example, gestures in the display 568 may be directed to a desktop or application, and gestures in the gesture capture region 572 may be interpreted as for the system.

[0106] With reference to Figs. 7A-7H, a first type of gesture, a touch gesture 720, is substantially stationary on the screen 212 for a selected length of time. A circle 728 represents a touch or other contact type received at particular location of a contact sensing portion of the screen. The circle 728 may include a border 732, the thickness of which indicates a length of time that the contact is held substantially stationary at the contact location. For instance, a tap 720 (or short press) has a thinner border 732a than the border 732b for a long press 724 (or for a normal press). The long press 724 may involve a contact that remains substantially stationary on the screen for longer time period than that of a tap 720. As will be appreciated, differently defined gestures may be registered depending upon the length of time that the touch remains stationary prior to contact cessation or movement on the screen.

[0107] With reference to Fig. 7C, a drag gesture 700 on the screen 212 is an initial contact (represented by circle 728) with contact movement 736 in a selected direction. The initial contact 728 may remain stationary on the screen 212 for a certain amount of time represented by the border 732. The drag gesture typically requires the user to contact an icon, window, or other displayed image at a first location followed by movement of the contact in a drag direction to a new second location desired for the selected displayed image. The contact movement need not be in a straight line but have any path of movement so long as the contact is substantially continuous from the first to the second locations.

[0108] With reference to Fig. 7D, a flick gesture 704 on the screen 212 is an initial contact (represented by circle 728) with truncated contact movement 736 (relative to a drag gesture) in a selected direction. In embodiments, a flick has a higher exit velocity for the last movement in the gesture compared to the drag gesture. The flick gesture can, for instance, be a finger snap following initial contact. Compared to a drag gesture, a flick gesture generally does not require continual contact with the screen 212 from the first location of a displayed image to a predetermined second location. The contacted displayed image is moved by the flick gesture in the direction of the flick gesture to the predetermined second location. Although both gestures

commonly can move a displayed image from a first location to a second location, the temporal duration and distance of travel of the contact on the screen is generally less for a flick than for a drag gesture.

[0109] With reference to Fig. 7E, a pinch gesture 708 on the screen 212 is depicted. The pinch gesture 708 may be initiated by a first contact 728 to the screen 212 by, for example, a first digit and a second contact 728b to the screen 212 by, for example, a second digit. The first and second contacts 728a,b may be detected by a common contact sensing portion of a common screen 212, by different contact sensing portions of a common screen 212, or by different contact sensing portions of different screens 212. The first contact 728a is held for a first amount of time, as represented by the border 732a, and the second contact 728b is held for a second amount of time, as represented by the border 732b. The first and second amounts of time are generally substantially the same, and the first and second contacts 728a,b generally occur substantially simultaneously. The first and second contacts 728a,b generally also include corresponding first and second contact movements 736a,b, respectively. The first and second contact movements 736 a,b are generally in opposing directions. Stated another way, the first contact movement 736a is towards the second contact 736b, and the second contact movement 736b is towards the first contact 736a. More simply stated, the pinch gesture 708 may be accomplished by a user's digits touching the screen 212 in a pinching motion.

[0110] With reference to Fig. 7F, a spread gesture 710 on the screen 212 is depicted. The spread gesture 710 may be initiated by a first contact 728a to the screen 212 by, for example, a first digit and a second contact 728b to the screen 212 by, for example, a second digit. The first and second contacts 728a,b may be detected by a common contact sensing portion of a common screen 212, by different contact sensing portions of a common screen 212, or by different contact sensing portions of different screens 212. The first contact 728a is held for a first amount of time, as represented by the border 732a, and the second contact 728b is held for a second amount of time, as represented by the border 732b. The first and second amounts of time are generally substantially the same, and the first and second contacts 728a,b generally occur substantially simultaneously. The first and second contacts 728a,b generally also include corresponding first and second contact movements 736a,b, respectively. The first and second contact movements 736a,b are generally in a common direction. Stated another way, the first and second contact movements 736a,b are away from the first and second contacts 728a,b. More simply stated, the

spread gesture 710 may be accomplished by a user's digits touching the screen 212 in a spreading motion.

[0111] The above gestures may be combined in any manner, such as those shown by Figs. 7G and 7H, to produce a determined functional result. For example, in Fig. 7G a tap gesture 720 is combined with a drag or flick gesture 712 in a direction away from the tap gesture 720. In Fig. 7H, a tap gesture 720 is combined with a drag or flick gesture 712 in a direction towards the tap gesture 720.

[0112] The functional result of receiving a gesture can vary depending on a number of factors, including a state of the vehicle 104, display 568, or screen 212, a context associated with the gesture, or sensed location of the gesture. The state of the vehicle commonly refers to one or more of a configuration of the vehicle 104, a display orientation, and user and other inputs received by the vehicle 104. Context commonly refers to one or more of the particular application(s) selected by the gesture and the portion(s) of the application currently executing, whether the application is a single- or multi-screen application, and whether the application is a multi-screen application displaying one or more windows. Sensed location of the gesture commonly refers to whether the sensed set(s) of gesture location coordinates are on a touch sensitive display 568 or a gesture capture region 572, whether the sensed set(s) of gesture location coordinates are associated with a common or different display or screen 212, and/or what portion of the gesture capture region contains the sensed set(s) of gesture location coordinates.

[0113] A tap, when received by an a touch sensitive display 568, can be used, for instance, to select an icon to initiate or terminate execution of a corresponding application, to maximize or minimize a window, to reorder windows in a stack, and to provide user input such as by keyboard display or other displayed image. A drag, when received by a touch sensitive display 568, can be used, for instance, to relocate an icon or window to a desired location within a display, to reorder a stack on a display, or to span both displays (such that the selected window occupies a portion of each display simultaneously). A flick, when received by a touch sensitive display 568 or a gesture capture region 572, can be used to relocate a window from a first display to a second display or to span both displays (such that the selected window occupies a portion of each display simultaneously). Unlike the drag gesture, however, the flick gesture is generally

not used to move the displayed image to a specific user-selected location but to a default location that is not configurable by the user.

[0114] The pinch gesture, when received by a touch sensitive display 568 or a gesture capture region 572, can be used to minimize or otherwise increase the displayed area or size of a window (typically when received entirely by a common display), to switch windows displayed at the top of the stack on each display to the top of the stack of the other display (typically when received by different displays or screens), or to display an application manager (a "pop-up window" that displays the windows in the stack). The spread gesture, when received by a touch sensitive display 568 or a gesture capture region 572, can be used to maximize or otherwise decrease the displayed area or size of a window, to switch windows displayed at the top of the stack on each display to the top of the stack of the other display (typically when received by different displays or screens), or to display an application manager (typically when received by an off-screen gesture capture region on the same or different screens).

[0115] The combined gestures of Fig. 7G, when received by a common display capture region in a common display or screen 212, can be used to hold a first window location constant for a display receiving the gesture while reordering a second window location to include a window in the display receiving the gesture. The combined gestures of Fig. 7H, when received by different display capture regions in a common display or screen 212 or in different displays or screens, can be used to hold a first window location for a display receiving the tap part of the gesture while reordering a second window location to include a window in the display receiving the flick or drag gesture. Although specific gestures and gesture capture regions in the preceding examples have been associated with corresponding sets of functional results, it is to be appreciated that these associations can be redefined in any manner to produce differing associations between gestures and/or gesture capture regions and/or functional results.

[0116] Gestures that may be completed in three-dimensional space and not on a touch sensitive screen 568 or gesture capture region 572 may be as shown in Figs. 7I through 7K. The gestures may be completed in an area where a sensor 242, such as an optical sensor, infrared sensor, or other type of sensor, may detect the gesture. For example, the gesture 740 in Fig. 7I, a person may open their hand 764 and move their hand in a back and forth direction 748 as a gesture 740 to complete some function with the vehicle 104. For example gesture 764 may change the station of the radio in the vehicle 104. The sensors 242 may both determine the configuration of

the hand and the vector of the movement. The vector and hand configuration can be interpreted to mean certain things to the vehicle control system 204 and produce different results.

[0117] In another example of a gesture 752 in Fig. 7J, a user may configure their hand 764 to extend two fingers and move the hand in an up and down operation 756. This gesture 752 may control the volume of the radio or some other function. Again, the sensors 242 may determine how the person has configured their hand gesture, and the vector of the movement. In another example of a gesture 760 shown in Fig. 7K, a user may extend their middle three fingers at an angle 45° from straight vertical and circle the hand in a counter-clockwise motion 764. This gesture 760 may cause the automobile to change the heat or do some other function. As can be understood by one skilled in the art, the configurations of the hand and the types of movement are variable. Thus, the user may configure the hand 764 in any way imaginable and may also move that hand 764 in any direction with any vector in three-dimensional space.

[0118] The gestures 740, 752, 760, as shown in Fig. 7I through 7K, may occur in a predetermined volume of space within the vehicle 104. For example, a sensor 242 may be configured to identify such gestures 740, 752, 760 between the front passenger's and front driver's seats over a console area within the passenger compartment of the automobile 104. The gestures 740, 752, 760 may be made within area 1 304a between zones A 312a and B 312b. However, there may be other areas 308 where a user may use certain gestures, where sensors 242 may be able to determine a certain function is desired. Gestures that may be similar but used in different areas within the vehicle 104 may cause different functions to be performed. For example, the gesture 740 in Fig. 7I, if used in zone E 312e, may change the heat provided in zone E 312e, but may change the station of a radio if used in zone A312a. Further, the gestures may be made with other body parts or, for example, different expressions of a persons' face may be used to control functions in the vehicle 104. Also, the user may use two hands in some circumstances or do other types of physical movements that can cause different reactions in the vehicle 104.

[0119] An embodiment of a data structure 800 to store different settings is shown in Fig. 8. The data structure 800 may include one or more of data files or data objects 804. Thus, the data structure 800 may represent different types of data bases or data storage, for example, object-oriented data bases, flat file data structures, relational database, or other types of data storage arrangements. The data file 804 may include several portions 808-836 representing different

types of data. Each of these types of data may be associated with a user, as shown in portion 808.

[0120] There may be one or more user records 840 and associated data stored within the data file 804. The user can be any person that uses or rides within the vehicle or conveyance 104. The user may be identified in portion 812. For the vehicle 104, the user may include a set of one or more features that may identify the user. These features may be the physical characteristics of the person that may be identified by facial recognition or some other type of system. In other embodiments, the user may provide a unique code to the vehicle control system 204 or provide some other type of data that allows the vehicle control system 204 to identify the user. The features or characteristics of the user are then stored in portion 812.

[0121] Each user identified in portion 808 may have a different set of settings for each area 308 and/or each zone 312 within the vehicle 104. Thus, each set of setting may also be associated with a predetermined zone 312 or area 308. The zone 312 is stored in portion 820 and the area 308 is stored in portion 816.

[0122] One or more settings may be stored in portion 824. These settings 824 may be the configurations of different functions within the vehicle 104 that are specified by or for that user. For example, the settings 824 may be the position of a seat, the position of a steering wheel, a heating/cooling setting, a radio setting, a cruise control setting, or some other type of setting associated with the vehicle 104. Further, in vehicles adapted to have a configurable console or a configurable dash or heads-up display, the settings 824 may also provide for how that heads-up display, dash, or console are configured for this particular user. Each setting 824 may be associated with a different area 308 or zone 312. Thus, there may be more settings 824 for when the user is the driver and in zone A, 312A, of area 1, 308A. However, there may be similar settings 824 among the different zones 312 or areas 308 as shown in portion 824. For example, the heating or radio settings for the user may be similar in every zone 312.

[0123] The sensors 242 within the vehicle 104 may be able to either obtain or track health data in portion 828. Health data 828 may include any type of physical characteristic associated with the user. For example, a heart rate, a blood pressure, a temperature, or other types of heath data may be obtained and stored in portion 828. The user may have this health data tracked over a period of time to allow for statistical analysis of the user's health while operating the vehicle

104. In this way if some function of the user's health deviates from a norm, the vehicle 104 may be able to determine there is a problem with the person and react to that data.

[0124] One or more gestures may be stored in portion 832. Thus, the gestures used and described in conjunction Fig. 7A through 7K may be configurable. These gestures may be determined or created by the user and stored in portion 832. A user may have different gestures for each zone 312 or area 308 within the vehicle. The gestures that do certain things while driving may do other things while in a different area 308 of the vehicle 104. Thus, the user may use a first set of gestures while driving and a second set while a passenger. Further, one or more users may share gestures as shown in portion 832. Each driver may have a common set of gestures that they use in zone A, 312a. Each of these gestures may be determined or captured and then stored with their average characteristics (*e.g.,* vector, position of gesture, etc.) in portion 832.

[0125] One or more sets of safety parameters may be stored in portion 836. Safety parameters 836 may be common operating characteristics for this driver/passenger or for all drivers/passengers that if deviated from may determine there is a problem with the driver/passenger or the vehicle 104. For example, a certain route may be taken repeatedly and an average speed or mean speed may be determined. If the mean speed deviates by some number of standard deviations, a problem with the vehicle 104 or the user may be determined. In another example, the health characteristics or driving experience of the user may be determined. If the user drives in a certain position where their head occupies a certain portion of three-dimensional space within the vehicle 104, the vehicle control system 204 may determine that the safety parameter includes the users face or head being within this certain portion of the vehicle interior space. If the user's head deviates from that interior space for some amount of time, the vehicle control system 204 can determine that something is wrong with the driver and change the function or operation of the vehicle 104 to assist the driver. This may happen, for example, when a user falls asleep at the wheel. If the user's head droops and does no longer occupy a certain three dimensional space, the vehicle control system 204 can determine that the driver has fallen asleep and may take control of the operation of the vehicle 204 and steer the vehicle 204 to the side of the road. In other examples, if the user's reaction time is too slow or some other safety parameter is not nominal, the vehicle control system 204 may determine that the user is

inebriated or having some other medical problem. The vehicle control system 204 may then assume control of the vehicle to ensure that the driver is safe.

[0126] An embodiment of a method 900 for storing settings for a user associated with vehicle 104 is shown in Fig. 9. While a general order for the steps of the method 900 is shown in Fig. 9. Generally, the method 900 starts with a start operation 904 and ends with an end operation 936. The method 900 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 9. The method 900 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 900 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-8.

[0127] A person may enter the vehicle space 108. One or more sensors 242 may then identify that a person is sitting within the vehicle 104, in step 908. For example, sensors 242, in a seat, may determine that some new amount of weight has been registered. The amount of weight may fall within predetermined parameters, *e.g.*, over a threshold. This weight may then be determined to be a person by one or more optical or other sensors. The vehicle control system 204 may then determine that a person is in a certain zone 312 or area 308. For example the sensors may send signals to the input management module 636 that an event has occurred. This information may be sent to the task management module 640 to determine the zone 312 and area 308 where the event occurred. Further, the task management module 640 may then identify the person, in step 912.

[0128] The vehicle control system 204 can receive the information from the sensors 242 and use that information to search the database 800 that may be stored within the system data 208. The sensor data may be compared to ID characteristics 812 to determine if the person has already been identified. The vehicle control system 204 may also send the characteristic data from the sensors to the communication network 224 to a server 228 to compare the sensor data to stored data 232 that may be stored in a cloud system. The person's features can be compared to stored features 812 to determine if the person in the vehicle 104 can be identified.

[0129] If the person has been identified previously and their characteristics stored in portion 812, the method 900 proceeds YES to step 916 where that person may be identified. In identifying a person, the information associated with that person 840 may be retrieved and

provided to the vehicle control system 204 for further action. If a person cannot be identified by finding their sensor characteristics in portion 812, the method 900 proceeds NO to step 920. In step 920, the vehicle control system 204, using an application 660, may create a new record in table 800 for the user. This new record may store a user identifier and their characteristics 812. It may also store the area 308 and zone 312 in data portions 816 and 820. The new record may then be capable of receiving new settings data for this particular user. In this way, the vehicle 104 can automatically identify or characterize a person so that settings may be established for the person in the vehicle 104.

[0130] The input management module 636 may then determine if settings are to be stored, in step 924. Settings might be any configuration of the vehicle 104 that may be associated with the user. The determination may be made after receiving a user input from the user. For example, the user may make a selection on a touch sensitive display 568 indicating that settings currently made are to be stored. In other situations, a period of time may elapse after the user has made a configuration. After determining that the user is finished making changes to the settings, based on the length of the period of time since the setting was established, the task management module 640 can save the setting. Thus, the vehicle control system 204 can make settings automatically based on reaching a steady state for settings for user.

[0131] The vehicle control system 204 may then store the settings for the person, in step 928. The task management module 640 can make a new entry for the user 808 in data structure 804. The new entry may be either a new user or a new settings listed in 824. The settings may be stored based on the area 308 and zone 312. As explained previously, the settings can be any kind of configuration of the vehicle 104 that may be associated with the user in that area 308 and the zone 312.

[0132] The settings may also be stored in cloud storage, in step 932. Thus the vehicle control system 204 can send the new settings to the server 228 to be stored in storage 232. In this way, these new settings may be ported to other vehicles for the user. Further, the settings in storage system 232 may be retrieved if local storage does not include the settings in storage system 208.

[0133] An embodiment of a method 1000 to configure the vehicle 104 based on stored settings is shown in Fig. 10. While a general order for the steps of the method 1000 is shown in Fig. 10. Generally, the method 1000 starts with a start operation 1004 and ends with an end operation 1028. The method 1000 can include more or fewer steps or can arrange the order of the steps

differently than those shown in Fig. 10. The method 1000 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1000 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-9.

[0134] The input management module of the vehicle control system 204 can determine if a person is in a zone 312 or area 308, in step 1008. This determination may be made by receiving data from one or more sensors 242. The vehicle 104 can use facial recognition, weight sensors, heat sensors, or other sensors to determine i a person is occupying a certain zone 312.

[0135] Using the information from the sensors 242, the vehicle control system 204 can identify the person, in step 1012. The vehicle control system 204 can obtain characteristics for the user currently occupying the zone 312 and compare those characteristics to the identifying features in portion 812 of data structure 804. Thus, the settings in portion 824 may be retrieved by identifying the correct zone312, area 308, and characteristics for the user.

[0136] The vehicle control system 204 can first determine if there are settings associated with the identified person for that zone 312 and/or area 308, in step 1016. After identifying the user by matching characteristics with the features in portion 812, the vehicle control system 204 can determine if there are settings for the user for the area 816 and zone 820 the user currently occupies. If there are settings, then the task management module 640 can make the determination that there are settings in portion 824, and the vehicle control system 204 may then read and retrieve those settings, in step 1020. The settings may be then used to configure or react to the presence of the user, in step 1024. Thus, these settings may be obtained to change the configuration of the vehicle 104, for example, how the position of the seats or mirrors are set, how the dash, console, or heads up display is configured, how the heat or cooling is configured, how the radio is configured, or how other different configurations are made.

[0137] Embodiment of a method 1100 for storing settings in cloud storage is shown in Fig. 11. While a general order for the steps of the method 1100 is shown in Fig. 11. Generally, the method 1100 starts with a start operation 1104 and ends with an end operation 1140. The method 1100 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 11. The method 1100 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable

medium. Hereinafter, the method 1100 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-10.

[0138] The vehicle control system 204, such as the input management module 636, can determine if a person is in a zone 312 or area 308, in step 1108. As explained previously, the vehicle control system 204 can receive vehicle sensor data from vehicle sensors 242 that show a person has occupied a zone 312 or an area 308 of the vehicle 104. Using the vehicle sensor data, the vehicle control system 204 can determine characteristics of the person, in step 1112. These characteristics are compared to the features in portion 812 of the data structure 804. From this comparison, the vehicle control system 204 can determine if the person is identified within the data structure 804, instep 1116. If there is a comparison and the person can be identified, the method 1100 proceeds YES to step 1120. However, if the person cannot be identified, the method 1100 proceeds NO, to step 1124.

[0139] In step 1120, the person is identified in portion 808 by the successful comparison of the characteristics and the features,. It should be noted that there may be a degree of variability between the characteristics and the features in portion 812. Thus the comparison may not be an exact comparison but may be use methods known in the art to make a statistically significant comparison between the characteristics received from the sensors 242 and the features stored in portion 812. In step 1124, the characteristics received from sensors 242 are used to characterize the person. In this way, the received characteristics may be used as an ID in portion 812 for a new entry for a new user in portion 808.

[0140] The user may make one or more settings for the vehicle 104. The vehicle control system 204, specifically the task management module 640, may determine if the settings are to be stored, in step 1128. If the settings are to be stored, the method 1100 proceeds YES to step 1136. If the settings are not to be stored or if there are no settings to be stored, the method 1100 proceeds NO to step 1132. In step 1132, the vehicle control system 204 can retrieve the settings in the portion 824 of the data structure 804. Retrieval of the settings may be as described in conjunction with Fig. 10. If settings are to be stored, the vehicle control system 204 can send those settings to server 228 to be stored in data storage 232, in step 1136. Data storage 232 acts as cloud storage that can be used to retrieve information on the settings from other vehicles or

from other sources. Thus, the cloud storage 232 allows for permanent and more robust storage of user preferences for the settings of the vehicle 104.

[0141] An embodiment of a method 1200 for storing gestures associated with the user is shown in Fig. 12. While a general order for the steps of the method 1200 is shown in Fig. 12. Generally, the method 1200 starts with a start operation 1204 and ends with an end operation 1240. The method 1200 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 12. The method 1200 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1200 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-11.

[0142] Vehicle control system 204 may receive sensor data from sensors 242 to determine a person is occupying a zone 312 in an area 308 of the vehicle 104, in step 1208. The sensor data may provide characteristics for the person, in step 1212. The vehicle control system 204 may then use the characteristics to determine if the person can be identified, in step 1216. The vehicle control system 204 may compare the characteristics to the features in portion 812 for the people having been recognized and having data associated therewith. If a comparison is made between the characteristics and the features in portion 812, the person can be identified, and the method 1200 proceeds YES to step 1220. If there is no comparison, the method 1200 may proceed NO to step 1224. In step 1220, the person may be identified by the vehicle control system 204. Thus, the person's features and associated data record 840 may be determined and the user identified in portion 808. If the person is not identified, the vehicle control system 204 can characterize the person by establishing a new record in data structure 804 using the characteristics, received from the sensors 242, for the features in portion 812.

[0143] Thereinafter, the vehicle control system 204 may determine if gestures are to be stored and associated with the user. The vehicle control system 204 may receive user input on a touch sensitive display 568 or some other type of gesture capture region 572 which acknowledges that the user wishes to store one or more gestures. Thus, the user may create their own gestures such as those described in conjunction with figures 7A through 7K. These gestures may then be characterized and stored in data structure 804. If there are gestures to be stored, the method 1200 proceeds YES to step 1236. If gestures are not to be stored the method 1200 may proceed NO to

step 1232. In step 1232, the vehicle control system 204 can retrieve current gestures from portion 832, which are associated with user 840. These gestures may be used then to configure how the vehicle 104 will react if a gesture is received. If gestures are to be stored, the vehicle control system 204 may store characteristics as received from sensor 242 or from one more user interface inputs. These characteristics may then be used to create the stored gestures 832, in data structure 804. The characteristics may include what the gesture looks like or appears and also what affect the gesture should have. This information may then be used to change the configuration or operation of the vehicle 104 based on the gesture if it is received at a later time.

[0144] An embodiment of a method 1300 for receiving a gesture and configuring the vehicle 104 based on the gesture may be as provided in Fig. 13. While a general order for the steps of the method 1300 is shown in Fig. 13. Generally, the method 1300 starts with a start operation 1304 and ends with an end operation 1328. The method 1300 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 13. The method 1300 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1300 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-12.

[0145] A vehicle control system 204 can receive sensor data from vehicle sensors 242. The vehicle sensor data can be used by the vehicle control system 204 to determine that a person is in a zone 312 or area 308, in step 1308. The vehicle sensor data may then be used to compare against feature characteristics 812 to identify a person, in step 1312. The vehicle control system 204 thereinafter may receive a gesture, in step 1316. The gesture may be perceived by vehicle sensors 242 or received in a gesture capture, region 572. The gesture may be as described in conjunction with Fig. 7A through 7K. Upon receiving the gesture, the vehicle control system 204 can compare the gesture to gesture characteristics in portion 832, in step 1320. The comparison may be made so that a statistically significant ~~coorelation~~ correlation between the sensor data or gesture data and the gesture characteristic 832 is made. Upon identifying the gesture, the task management module 640 or the vehicle control system 204 can configure the vehicle 104 and/or react to the gesture, in step 1324. The configuration or reaction to the gesture may be as prescribed in the gesture characteristic 832.

[0146] An embodiment of a method 1400 for storing health data may be as shown in Fig. 14. While a general order for the steps of the method 1400 is shown in Fig. 14. Generally, the method 1400 starts with a start operation 1404 and ends with an end operation 1444. The method 1400 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 14. The method 1400 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1400 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-13.

[0147] Vehicle control system 204 can receive sensor data from sensors 242. The sensor data may be used to determine that a person is in a zone 312 or area 308, in step 1408. The sensor data may then be used to determine characteristics of the person, in step 1412. From the characteristics, the vehicle control system 204 can determine if a person may be identified in data structure 804. If the person is identified in step 1416, the method 1400 proceeds YES to step 1416. If the person cannot be identified, the method 1400 proceeds NO to step 1420. A person may be identified by matching the characteristics of a person from the sensor data to the features shown in portion 812. If these comparisons are statistically significant, the person may be identified in portion 808, in step 1416. However, if the person is not identified in portion 808, the vehicle control system 204 can characterize the person using the vehicle sensor data, in step 1420. In this way, the vehicle control system 204 can create a new record for a new user in data structure 804.

[0148] Thereinafter, the vehicle control system 204 may receive health and/or safety data from the vehicle sensors 242, in step 1424. The vehicle control system 204 can determine if the health or safety data is to be stored, in step 1428. The determination is made as to whether or not there is sufficient health data or safety parameters, in portion 828 and 836, to provide a reasonable baseline data pattern for the user 840. If there is data to be received and stored, the vehicle control system 204 can store the data for the person in portions 828 and 836 of the data structure 804, in step 1432. The vehicle control system 204 may then wait a period of time, in step 1436. The period of time may be any amount of time from seconds to minutes to days. Thereinafter, the vehicle control system 204 can receive new data from vehicle sensors 242, in step 1428. Thus, the vehicle control system 204 can receive data periodically and update or continue to

refine the health data and safety parameters in data structure 804. Thereinafter, the vehicle control system 204 may optionally store the health and safety data in cloud storage 232 by sending it through the communication network 224 to the server 228, in step 1440.

[0149] An embodiment of a method 1500 for monitoring the health of a user may be as shown in Fig. 15. While a general order for the steps of the method 1500 is shown in Fig. 15. Generally, the method 1500 starts with a start operation 1504 and ends with an end operation 1524. The method 1500 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 15. The method 1500 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1500 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-14.

[0150] The vehicle control system 204 can receive health data from sensors 242. The health data may be received in step 1508. The vehicle control system 204 may then compare the received health data to stored health parameters in portion 828 or portion 836, in step 1512. The comparison may check if there is statistically significant separation or disagreement between the received health data and the stored health data. Thus, the vehicle control system 204 can make a health comparison of the user based on a baseline of health data previously stored. A statistically significant comparison may include determining if there are any parameters more than three statistical deviations from the average or norm, any parameter that is increasing or decreasing over a period of eight different measurements, a measurement that is more than two statistic deviations from the norm more than three measurements consecutively, or other types of statistical comparisons.

[0151] If the vehicle control system 204 determines that measured health parameter does deviate from the norm, the vehicle control system 204 can determine whether the health data is within acceptable limits, step 1516. If the health data is within acceptable limits, the method 1500 proceeds YES back to receiving new health data, in step 1508. In this way, the health data is periodically or continually monitored to ensure that the driver is in a healthy state and able to operate the vehicle. If the health data is not within acceptable parameters, the method 1500 may proceed NO to step 1520 where the vehicle control system 204 may react to the change in the health data. The reaction may include any measure to provide for the safety of the user, such as

stopping the vehicle, beginning to drive the vehicle, driving the vehicle to a new location, such as a hospital, waking the driver with an alarm or other noise, or performing some other function that may help maintain the health or safety of the user.

[0152] The health data received may be a reaction from the driver. For example, the driver may call for help or ask the vehicle for assistance. For example, the driver or passenger may say that they are having a medical emergency and ask the car to perform some function to help. The function to help may include driving the person to a hospital or stopping the car and calling for emergency assistance.

[0153] Furthermore, while the exemplary aspects, embodiments, and/or configurations illustrated herein show the various components of the system collocated, certain components of the system can be located remotely, at distant portions of a distributed network, such as a LAN and/or the Internet, or within a dedicated system. Thus, it should be appreciated, that the components of the system can be combined in to one or more devices, such as a tablet-like device, or collocated on a particular node of a distributed network, such as an analog and/or digital telecommunications network, a packet-switch network, or a circuit-switched network. It will be appreciated from the preceding description, and for reasons of computational efficiency, that the components of the system can be arranged at any location within a distributed network of components without affecting the operation of the system. For example, the various components can be located in a switch such as a PBX and media server, gateway, in one or more communications devices, at one or more users' premises, or some combination thereof. Similarly, one or more functional portions of the system could be distributed between a telecommunications device(s) and an associated computing device.

[0154] Furthermore, it should be appreciated that the various links connecting the elements can be wired or wireless links, or any combination thereof, or any other known or later developed element(s) that is capable of supplying and/or communicating data to and from the connected elements. These wired or wireless links can also be secure links and may be capable of communicating encrypted information. Transmission media used as links, for example, can be any suitable carrier for electrical signals, including coaxial cables, copper wire and fiber optics, and may take the form of acoustic or light waves, such as those generated during radio-wave and infra-red data communications.

[0155] Also, while the flowcharts have been discussed and illustrated in relation to a particular sequence of events, it should be appreciated that changes, additions, and omissions to this sequence can occur without materially affecting the operation of the disclosed embodiments, configuration, and aspects.

[0156] In yet another embodiment, the systems and methods of this disclosure can be implemented in conjunction with a special purpose computer, a programmed microprocessor or microcontroller and peripheral integrated circuit element(s), an ASIC or other integrated circuit, a digital signal processor, a hard-wired electronic or logic circuit such as discrete element circuit, a programmable logic device or gate array such as PLD, PLA, FPGA, PAL, special purpose computer, any comparable means, or the like. In general, any device(s) or means capable of implementing the methodology illustrated herein can be used to implement the various aspects of this disclosure. Exemplary hardware that can be used for the disclosed embodiments, configurations and aspects includes computers, handheld devices, telephones (e.g., cellular, Internet enabled, digital, analog, hybrids, and others), and other hardware known in the art. Some of these devices include processors (e.g., a single or multiple microprocessors), memory, nonvolatile storage, input devices, and output devices. Furthermore, alternative software implementations including, but not limited to, distributed processing or component/object distributed processing, parallel processing, or virtual machine processing can also be constructed to implement the methods described herein.

[0157] In yet another embodiment, the disclosed methods may be readily implemented in conjunction with software using object or object-oriented software development environments that provide portable source code that can be used on a variety of computer or workstation platforms. Alternatively, the disclosed system may be implemented partially or fully in hardware using standard logic circuits or VLSI design. Whether software or hardware is used to implement the systems in accordance with this disclosure is dependent on the speed and/or efficiency requirements of the system, the particular function, and the particular software or hardware systems or microprocessor or microcomputer systems being utilized.

[0158] In yet another embodiment, the disclosed methods may be partially implemented in software that can be stored on a storage medium, executed on programmed general-purpose computer with the cooperation of a controller and memory, a special purpose computer, a microprocessor, or the like. In these instances, the systems and methods of this disclosure can be

implemented as program embedded on personal computer such as an applet, JAVA® or CGI script, as a resource residing on a server or computer workstation, as a routine embedded in a dedicated measurement system, system component, or the like. The system can also be implemented by physically incorporating the system and/or method into a software and/or hardware system.

[0159] Although the present disclosure describes components and functions implemented in the aspects, embodiments, and/or configurations with reference to particular standards and protocols, the aspects, embodiments, and/or configurations are not limited to such standards and protocols. Other similar standards and protocols not mentioned herein are in existence and are considered to be included in the present disclosure. Moreover, the standards and protocols mentioned herein and other similar standards and protocols not mentioned herein are periodically superseded by faster or more effective equivalents having essentially the same functions. Such replacement standards and protocols having the same functions are considered equivalents included in the present disclosure.

[0160] The present disclosure, in various aspects, embodiments, and/or configurations, includes components, methods, processes, systems and/or apparatus substantially as depicted and described herein, including various aspects, embodiments, configurations embodiments, subcombinations, and/or subsets thereof. Those of skill in the art will understand how to make and use the disclosed aspects, embodiments, and/or configurations after understanding the present disclosure. The present disclosure, in various aspects, embodiments, and/or configurations, includes providing devices and processes in the absence of items not depicted and/or described herein or in various aspects, embodiments, and/or configurations hereof, including in the absence of such items as may have been used in previous devices or processes, e.g., for improving performance, achieving ease and\or reducing cost of implementation.

[0161] The foregoing discussion has been presented for purposes of illustration and description. The foregoing is not intended to limit the disclosure to the form or forms disclosed herein. In the foregoing Detailed Description for example, various features of the disclosure are grouped together in one or more aspects, embodiments, and/or configurations for the purpose of streamlining the disclosure. The features of the aspects, embodiments, and/or configurations of the disclosure may be combined in alternate aspects, embodiments, and/or configurations other than those discussed above. This method of disclosure is not to be interpreted as reflecting an

intention that the claims require more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive aspects lie in less than all features of a single foregoing disclosed aspect, embodiment, and/or configuration. Thus, the following claims are hereby incorporated into this Detailed Description, with each claim standing on its own as a separate preferred embodiment of the disclosure.

[0162] Moreover, though the description has included description of one or more aspects, embodiments, and/or configurations and certain variations and modifications, other variations, combinations, and modifications are within the scope of the disclosure, e.g., as may be within the skill and knowledge of those in the art, after understanding the present disclosure. It is intended to obtain rights which include alternative aspects, embodiments, and/or configurations to the extent permitted, including alternate, interchangeable and/or equivalent structures, functions, ranges or steps to those claimed, whether or not such alternate, interchangeable and/or equivalent structures, functions, ranges or steps are disclosed herein, and without intending to publicly dedicate any patentable subject matter.

[0163] The embodiments can include a method, comprising: automatically determining a person is within a vehicle; automatically identifying the person; determining if there is a setting to be stored for the person; and storing the setting. The method further comprises determining if the person can be identified; and, if the person cannot be identified, characterizing the person. Automatically determining a person is within a vehicle can comprise receiving sensor data from at least one sensor that indicates the person is within the vehicle. Also, automatically identifying the person comprises comparing the sensor data to feature data in a data structure; and determining if the sensor data is substantially similar to the feature data, wherein determining if there is a setting to be stored for the person comprises determining if the person has made a setting, and wherein determining if there is a setting to be stored for the person further comprises waiting a period of time to determine if the settings have achieved a steady state. The setting can be stored in cloud storage. The setting can be one or more of, but is not limited to, a position of a seat, a position of a mirror, a heat or cold setting, a configuration of a console, a configuration of a dash, a configuration of a heads up display, or a setting for a radio. The person in the vehicle can occupy an area or zone within the vehicle, and wherein the setting is associated with the person in the area or zone.

[0164] Embodiments can further include: a vehicle system, comprising one or more sensors and a vehicle control system. The vehicle control system can comprise a processor and a memory, wherein the processor is operable to: receive sensor data from the one or more sensors; based on the sensor data, automatically determine a person is within a vehicle; based on the sensor data, automatically identify the person; determine if the person has made a setting; and store the setting. The sensor data may be an image of the person and the processor can match the image to a stored image in a data structure. The sensor data can also be voice data from the person and the processor is operable to match the voice data to stored voice data in a data structure.

[0165] Embodiments may further include a computer readable medium having stored thereon computer-executable instructions, the computer-executable instructions comprising: instructions to receive sensor data from the one or more sensors; based on the sensor data, instructions to automatically determine a person is within a vehicle; based on the sensor data, instructions to automatically identify the person; instructions to retrieve one or more settings associated with the identified person; and instructions to automatically configure the vehicle according to the retrieved settings. Automatically determining the person is within a vehicle can comprise instructions to determine an area or zone in which the person occupies, wherein the settings retrieved are associated with the determined area or zone, wherein the settings are retrieved from a data structure, and wherein the data structure is stored in cloud storage.

ABSTRACT

Methods and systems for a complete vehicle ecosystem are provided. Specifically, systems that when taken alone, or together, provide an individual or group of individuals with an intuitive and comfortable vehicular environment. The present disclosure includes a system to recognize the drivers and/or passengers within the automobile. Based on the recognition, the vehicle may change a configuration of the automobile to match predetermined preferences for the driver and/or passenger.

AMENDMENTS TO THE SPECIFICATION:

Attached herewith is a marked-up copy of the specification and a clean copy of the specification. Applicant believes that no new matter has been introduced by these amendments. Specifically, the amendments to paragraph [0001] and [0002] corrects and updates the priority information; the amendment to paragraph [0145] corrects a typographical error; and the highlighting in paragraph [0150] has been removed.

REMARKS

In response to the Notice to File Missing Parts of Nonprovisional Application ("Notice"), Applicant provides a substitute specification showing markings and a clean version thereof. The substitute specification includes no new matter, but rather updates and corrects the priority information and corrects minor typographical errors, and is in compliance with 37 CFR 1.121(b)(3) and 1.125.

A new Application Data Sheet is submitted concurrently herewith, with changes shown by underlining and strikethrough, and it is requested that a Corrected Filing Receipt be issued.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. In the event that a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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Clean Specification

FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] The present application claims the benefits of and priority, under 35 U.S.C. § 119(e), to U.S. Provisional Application Serial Nos. 61/560,509, filed on November 16, 2011, entitled "Complete Vehicle Ecosystem;" 61/637,164, filed on April 23, 2012, entitled "Complete Vehicle Ecosystem;" 61/646,747, filed on May 14, 2012, entitled "Branding of Electrically Propelled Vehicles Via the Generation of Specific Operating Sounds;" 61/653,275, filed on May 30, 2012, entitled "Vehicle Application Store for Console;" 61/653,264, filed on May 30, 2012, entitled "Control of Device Features Based on Vehicle State;" 61/653,563, filed on May 31, 2012, entitled "Complete Vehicle Ecosystem;" 61/663,335, filed on June 22, 2012, entitled "Complete Vehicle Ecosystem;" 61/672,483, filed on July 17, 2012, entitled "Vehicle Climate Control;" 61/714,016, filed on October 15, 2012, entitled "Vehicle Middleware;" and 61/715,699, filed October 18, 2012, entitled "Vehicle Middleware." The entire disclosures of the applications listed above are hereby incorporated by reference, in their entirety, for all that they teach and for all purposes.

[0002] This application is also related to U.S. Patent Application Nos. 13/420,236, filed on March 14, 2012, entitled, "Configurable Vehicle Console;" 13/420,240, filed on March 14, 2012, entitled "Removable, Configurable Vehicle Console;" 13/462,593, filed on May 2, 2012, entitled "Configurable Dash Display;" 13/462,596, filed on May 2, 2012, entitled "Configurable Heads-Up Dash Display;" 13/679,459, filed on November 16, 2012, entitled "Vehicle Comprising Multi-Operating System" (Attorney Docket No. 6583-228); 13/679,234, filed on November 16, 2012, entitled "Gesture Recognition for On-Board Display" (Attorney Docket No. 6583-229); 13/679,412, filed on November 16, 2012, entitled "Vehicle Application Store for Console" (Attorney Docket No. 6583-230); 13/679,857, filed on November 16, 2012, entitled "Sharing Applications/Media Between Car and Phone (Hydroid)" (Attorney Docket No. 6583-231); 13/679,878, filed on November 16, 2012, entitled "In-Cloud Connection for Car Multimedia" (Attorney Docket No. 6583-232); 13/679,875, filed on November 16, 2012, entitled "Music Streaming" (Attorney Docket No. 6583-233); 13/679,676, filed on November 16, 2012, entitled "Control of Device Features Based on Vehicle State" (Attorney Docket No. 6583-234); 13/678,673, filed on November 16, 2012, entitled "Insurance Tracking" (Attorney Docket No.

6583-235); 13/678,691, filed on November 16, 2012, entitled "Law Breaking/Behavior Sensor" (Attorney Docket No. 6583-236); 13/678,699, filed on November 16, 2012, entitled "Etiquette Suggestion" (Attorney Docket No. 6583-237); 13/678,710, filed on November 16, 2012, entitled "Parking Space Finder Based on Parking Meter Data" (Attorney Docket No. 6583-238); 13/678,722, filed on November 16, 2012, entitled "Parking Meter Expired Alert" (Attorney Docket No. 6583-239); 13/678,726, filed on November 16, 2012, entitled "Object Sensing (Pedestrian Avoidance/Accident Avoidance)" (Attorney Docket No. 6583-240); 13/678,735, filed on November 16, 2012, entitled "Proximity Warning Relative to Other Cars" (Attorney Docket No. 6583-241); 13/678,745, filed on November 16, 2012, entitled "Street Side Sensors" (Attorney Docket No. 6583-242); 13/678,753, filed on November 16, 2012, entitled "Car Location" (Attorney Docket No. 6583-234); 13/679,441, filed on November 16, 2012, entitled "Universal Bus in the Car" (Attorney Docket No. 6583-244); 13/679,864, filed on November 16, 2012, entitled "Mobile Hot Spot/Router/Application Share Site or Network" (Attorney Docket No. 6583-245); 13/679,815, filed on November 16, 2012, entitled "Universal Console Chassis for the Car" (Attorney Docket No. 6583-246); 13/679,476, filed on November 16, 2012, entitled "Vehicle Middleware" (Attorney Docket No. 6583-247); 13/679,306, filed on November 16, 2012, entitled "Method and System for Vehicle Data Collection Regarding Traffic" (Attorney Docket No. 6583-248); 13/679,369, filed on November 16, 2012, entitled "Method and System for Vehicle Data Collection" (Attorney Docket No. 6583-249); 13/679,680, filed on November 16, 2012, entitled "Communications Based on Vehicle Diagnostics and Indications" (Attorney Docket No. 6583-250); 13/679,443, filed on November 16, 2012, entitled "Method and System for Maintaining and Reporting Vehicle Occupant Information" (Attorney Docket No. 6583-251); 13/678,762, filed on November 16, 2012, entitled "Behavioral Tracking and Vehicle Applications" (Attorney Docket No. 6583-252); 13/679,292, filed November 16, 2012, entitled "Branding of Electrically Propelled Vehicles Via the Generation of Specific Operating Output" (Attorney Docket No. 6583-258); 13/679,400, filed November 16, 2012, entitled "Vehicle Climate Control" (Attorney Docket No. 6583-313);__/___,___, filed on November 16, 2012, entitled "Improvements to Controller Area Network Bus" (Attorney Docket No. 6583-314); 13/678,773, filed on November 16, 2012, entitled "Location Information Exchange Between Vehicle and Device" (Attorney Docket No. 6583-315); 13/679,887, filed on November 16, 2012, entitled "In Car Communication Between Devices" (Attorney Docket No. 6583-316);

13/679,842, filed on November 16, 2012, entitled "Configurable Hardware Unit for Car Systems" (Attorney Docket No. 6583-317); 13/679,350, filed on November 16, 2012, entitled "Configurable Vehicle Console" (Attorney Docket No. 6583-412); 13/679,358, filed on November 16, 2012, entitled "Configurable Dash Display" (Attorney Docket No. 6583-413); 13/679,363, filed on November 16, 2012, entitled "Configurable Heads-Up Dash Display" (Attorney Docket No. 6583-414); and 13/679,368, filed on November 16, 2012, entitled "Removable, Configurable Vehicle Console" (Attorney Docket No. 6583-415). The entire disclosures of the applications listed above are hereby incorporated by reference, in their entirety, for all that they teach and for all purposes.

BACKGROUND

[0003] Whether using private, commercial, or public transport, the movement of people and/or cargo has become a major industry. In today's interconnected world daily travel is essential to engaging in commerce. Commuting to and from work can account for a large portion of a traveler's day. As a result, vehicle manufacturers have begun to focus on making this commute, and other journeys, more enjoyable and easier.

[0004] Currently, vehicle manufacturers attempt to entice travelers to use a specific conveyance based on any number of features. Most of these features focus on vehicle safety or efficiency. From the addition of safety-restraints, air-bags, and warning systems to more efficient engines, motors, and designs, the vehicle industry has worked to appease the supposed needs of the traveler. Recently, however, vehicle manufactures have shifted their focus to user and passenger comfort as a primary concern. Making an individual more comfortable while traveling instills confidence and pleasure in using a given vehicle and increases an individual's preference for a given manufacturer and/or vehicle type.

[0005] One way to instill comfort in a vehicle is to create an environment within the vehicle similar to that of an individual's home. Integrating features in a vehicle that are associated with comfort found in an individual's home can ease a traveler's transition from home to vehicle. Several manufacturers have added comfort features in vehicles such as the following: leather seats, adaptive and/or personal climate control systems, music and media players, ergonomic controls, Internet connectivity, etc. However, because these manufacturers have added features to a conveyance, they have built comfort around a vehicle and failed to build a vehicle around comfort. Thus, the vehicle as an ecosystem has not been fully considered.

SUMMARY

[0006] There is a need for a vehicle ecosystem that can integrate both physical and mental comforts while seamlessly operating with current electronic devices to result in a totally intuitive and immersive user experience. These and other needs are addressed by the various aspects, embodiments, and/or configurations of the present disclosure. Also, while the disclosure is presented in terms of exemplary embodiments, it should be appreciated that individual aspects of the disclosure can be separately claimed.

[0007] The present disclosure can provide a number of advantages depending on the particular aspect, embodiment, and/or configuration. Currently, the vehicle industry is dominated by conveyances offering a separate comfort experience from a home, work, or other aspect of a traveler's life. Unfortunately, current vehicles include a series of separate devices that work together while an individual or individuals are associated with the vehicle. Technology areas and devices such as user interfaces, applications, tracking capabilities, hardware, and/or location-based communications, could be combined together, or used separately, to form a complete vehicle ecosystem. This ecosystem can provide a connected and intuitive user experience for any traveler.

[0008] A series of devices associated with a vehicle along with other devices can form a complete and familiar user experience. In particular, the devices, applications, interfaces, hardware, and software may combine to form a user-friendly environment while traveling or otherwise moving from one location to another and/or when a vehicle is at rest. Moreover, aspects of the present disclosure may provide communication between the vehicle and a user at any given time. Specifically, communication between a vehicle and another device may also relay information to an individual and/or group of individuals. This communication between a vehicle and at least one other device may include, but is not limited to, communication between a vehicle and: 1) at least one mobile device, 2) at least one other vehicle, 3) another system/group of devices, 4) a non-mobile device, and 5) combinations thereof. These and other advantages will be apparent from the disclosure.

[0009] The present disclosure describes a method executed by a vehicle system. The vehicle system can automatically determine a person is within a vehicle; automatically identify the person; determine if there is a setting to be stored for the person; and store the setting.

[0010] The term "ecosystem" or "vehicle ecosystem," as used herein, refers to a community of person(s) in conjunction with the vehicle or other device components of their environment (for example, climate control, safety features, mobile devices, multimedia sources etc.), interacting as a system.

[0011] The term "environment" or "vehicle environment," as used herein, refers to the surroundings or conditions in which a person operates a vehicle.

[0012] The term "sensor," as used herein, refers to a converter or instrument that measures a physical quantity or quality and converts the measurement into a signal which can be read, observed, stored, and/or understood by an observer or by another instrument.

[0013] The term "stimulus," as used herein, refers to some event or something external that influences an activity.

[0014] The term "automotive navigation system" is a satellite navigation system designed for use in automobiles. It typically uses a GPS navigation device to acquire position data to locate the user on a road in the unit's map database. Using the road database, the unit can give directions to other locations along roads also in its database. Dead reckoning using distance data from sensors attached to the drivetrain, a gyroscope and an accelerometer can be used for greater reliability, as GPS signal loss and/or multipath can occur due to urban canyons or tunnels.

[0015] The term "bus" and variations thereof, as used herein, refers to a subsystem that transfers information and/or data between various components. A bus generally refers to the collection communication hardware interface, interconnects, bus architecture, and/or protocol defining the communication scheme for a communication system and/or communication network. A bus may also be specifically refer to a part of a communication hardware that interfaces the communication hardware with the interconnects that connect to other components of the corresponding communication network. The bus may be for a wired network, such as a physical bus, or wireless network, such as part of an antenna or hardware that couples the communication hardware with the antenna. A bus architecture supports a defined format in which information and/or data is arranged when sent and received through a communication network. A protocol may define the format and rules of communication of a bus architecture.

[0016] The terms "communication device," "smartphone," and "mobile device," and variations thereof, as used herein, are used interchangeably and include any type of device capable of communicating with one or more of another device and/or across a communications network, via

a communications protocol, and the like. Exemplary communication devices may include but are not limited to smartphones, handheld computers, laptops, netbooks, notebook computers, subnotebooks, tablet computers, scanners, portable gaming devices, phones, pagers, GPS modules, portable music players, and other Internet-enabled and/or network-connected devices.

[0017] The terms "head unit," "dash," "dashboard," and variations thereof, as used herein, are used interchangeably and include any panel and/or area of a vehicle disposed adjacent to an operator, user, and/or passenger. Typical dashboards may include but are not limited to one or more control panel, instrument housing, head unit, indicator, gauge, meter, light, audio equipment, computer, screen, display, HUD unit, and graphical user interface.

[0018] The term "electronic address" refers to any contactable address, including a telephone number, instant message handle, e-mail address, Universal Resource Locator ("URL"), Universal Resource Identifier ("URI"), Address of Record ("AOR"), electronic alias in a database, like addresses, and combinations thereof.

[0019] The term "communication system" or "communication network" and variations thereof, as used herein, refers to a collection of communication components capable of one or more of transmission, relay, interconnect, control, or otherwise manipulate information or data from at least one transmitter to at least one receiver. As such, the communication may include a range of systems supporting point-to-point to broadcasting of the information or data. A communication system may refer to the collection individual communication hardware as well as the interconnects associated with and connecting the individual communication hardware. Communication hardware may refer to dedicated communication hardware or may refer a processor coupled with a communication means (*i.e.* an antenna) and running software capable of using the communication means to send a signal within the communication system. Interconnect refers some type of wired or wireless communication link that connects various components, such as communication hardware, within a communication system. A communication network may refer to a specific setup of a communication system with the collection of individual communication hardware and interconnects having some definable network topography. A communication network may include wired and/or wireless network having a pre-set to an ad hoc network structure.

[0020] The phrases "at least one", "one or more", and "and/or" are open-ended expressions that are both conjunctive and disjunctive in operation. For example, each of the expressions "at

least one of A, B and C", "at least one of A, B, or C", "one or more of A, B, and C", "one or more of A, B, or C" and "A, B, and/or C" means A alone, B alone, C alone, A and B together, A and C together, B and C together, or A, B and C together.

[0021] The term "a" or "an" entity," as used herein, refers to one or more of that entity. As such, the terms "a" (or "an"), "one or more" and "at least one" can be used interchangeably herein. It is also to be noted that the terms "comprising", "including", and "having" can be used interchangeably.

[0022] The term "automatic" and variations thereof, as used herein, refers to any process or operation done without material human input when the process or operation is performed. However, a process or operation can be automatic, even though performance of the process or operation uses material or immaterial human input, if the input is received before performance of the process or operation. Human input is deemed to be material if such input influences how the process or operation will be performed. Human input that consents to the performance of the process or operation is not deemed to be "material".

[0023] The term "computer-readable medium," as used herein, refers to any tangible storage and/or transmission medium that participate in providing instructions to a processor for execution. Such a medium may take many forms, including but not limited to, non-volatile media, volatile media, and transmission media. Non-volatile media includes, for example, NVRAM, or magnetic or optical disks. Volatile media includes dynamic memory, such as main memory. Common forms of computer-readable media include, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, or any other magnetic medium, magneto-optical medium, a CD-ROM, any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, a RAM, a PROM, and EPROM, a FLASH-EPROM, a solid state medium like a memory card, any other memory chip or cartridge, a carrier wave as described hereinafter, or any other medium from which a computer can read. A digital file attachment to e-mail or other self-contained information archive or set of archives is considered a distribution medium equivalent to a tangible storage medium. When the computer-readable media is configured as a database, it is to be understood that the database may be any type of database, such as relational, hierarchical, object-oriented, and/or the like. Accordingly, the disclosure is considered to include a tangible storage medium or distribution medium and prior art-recognized equivalents and successor media, in which the software implementations of the present disclosure are stored.

[0024] The term "desktop," as used herein, refers to a metaphor used to portray systems. A desktop is generally considered a "surface" that typically includes pictures, called icons, widgets, folders, etc. that can activate show applications, windows, cabinets, files, folders, documents, and other graphical items. The icons are generally selectable to initiate a task through user interface interaction to allow a user to execute applications or conduct other operations.

[0025] The term "display," as used herein, refers to a portion of a screen used to display the output of a computer to a user.

[0026] The term "displayed image," as used herein, refers to an image produced on the display. A typical displayed image is a window or desktop. The displayed image may occupy all or a portion of the display.

[0027] The term "display orientation," as used herein, refers to the way in which a rectangular display is oriented by a user for viewing. The two most common types of display orientation are portrait and landscape. In landscape mode, the display is oriented such that the width of the display is greater than the height of the display (such as a 4:3 ratio, which is 4 units wide and 3 units tall, or a 16:9 ratio, which is 16 units wide and 9 units tall). Stated differently, the longer dimension of the display is oriented substantially horizontal in landscape mode while the shorter dimension of the display is oriented substantially vertical. In the portrait mode, by contrast, the display is oriented such that the width of the display is less than the height of the display. Stated differently, the shorter dimension of the display is oriented substantially horizontal in the portrait mode while the longer dimension of the display is oriented substantially vertical. The multi-screen display can have one composite display that encompasses all the screens. The composite display can have different display characteristics based on the various orientations of the device.

[0028] The term "gesture," as used herein, refers to a user action that expresses an intended idea, action, meaning, result, and/or outcome. The user action can include manipulating a device (e.g., opening or closing a device, changing a device orientation, moving a trackball or wheel, etc.), movement of a body part in relation to the device, movement of an implement or tool in relation to the device, audio inputs, etc. A gesture may be made on a device (such as on the screen) or with the device to interact with the device.

[0029] The term "module," as used herein, refers to any known or later developed hardware, software, firmware, artificial intelligence, fuzzy logic, or combination of hardware and software that is capable of performing the functionality associated with that element.

[0030] The term "gesture recognition" or "gesture capture," as used herein, refers to a sense or otherwise a detection of an instance and/or type of user gesture. The gesture capture can occur in one or more areas of the screen, A gesture region can be on the display, where it may be referred to as a touch sensitive display or off the display where it may be referred to as a gesture capture area.

[0031] A "multi-screen application," as used herein, refers to an application that is capable of producing one or more windows that may simultaneously occupy multiple screens. A multi-screen application commonly can operate in single-screen mode in which one or more windows of the application are displayed only on one screen or in multi-screen mode in which one or more windows are displayed simultaneously on multiple screens.

[0032] A "single-screen application," as used herein, refers to an application that is capable of producing one or more windows that may occupy only a single screen at a time.

[0033] The term "screen," "touch screen," or "touchscreen," as used herein, refers to a physical structure that enables the user to interact with the computer by touching areas on the screen and provides information to a user through a display. The touch screen may sense user contact in a number of different ways, such as by a change in an electrical parameter (e.g., resistance or capacitance), acoustic wave variations, infrared radiation proximity detection, light variation detection, and the like. In a resistive touch screen, for example, normally separated conductive and resistive metallic layers in the screen pass an electrical current. When a user touches the screen, the two layers make contact in the contacted location, whereby a change in electrical field is noted and the coordinates of the contacted location calculated. In a capacitive touch screen, a capacitive layer stores electrical charge, which is discharged to the user upon contact with the touch screen, causing a decrease in the charge of the capacitive layer. The decrease is measured, and the contacted location coordinates determined. In a surface acoustic wave touch screen, an acoustic wave is transmitted through the screen, and the acoustic wave is disturbed by user contact. A receiving transducer detects the user contact instance and determines the contacted location coordinates.

[0034] The term "window" refers to a, typically rectangular, displayed image on at least part of a display that contains or provides content different from the rest of the screen. The window may obscure the desktop.

[0035] The terms "determine", "calculate" and "compute," and variations thereof, as used herein, are used interchangeably and include any type of methodology, process, mathematical operation or technique.

[0036] It shall be understood that the term "means" as used herein shall be given its broadest possible interpretation in accordance with 35 U.S.C., Section 112, Paragraph 6. Accordingly, a claim incorporating the term "means" shall cover all structures, materials, or acts set forth herein, and all of the equivalents thereof. Further, the structures, materials or acts and the equivalents thereof shall include all those described in the summary of the invention, brief description of the drawings, detailed description, abstract, and claims themselves.

[0037] The term "vehicle" as used herein includes any conveyance, or model of a conveyance, where the conveyance was originally designed for the purpose of moving one or more tangible objects, such as people, animals, cargo, and the like. The term "vehicle" does not require that a conveyance moves or is capable of movement. Typical vehicles may include but are in no way limited to cars, trucks, motorcycles, busses, automobiles, trains, railed conveyances, boats, ships, marine conveyances, submarine conveyances, airplanes, space craft, flying machines, human-powered conveyances, and the like.

[0038] The preceding is a simplified summary of the disclosure to provide an understanding of some aspects of the disclosure. This summary is neither an extensive nor exhaustive overview of the disclosure and its various aspects, embodiments, and/or configurations. It is intended neither to identify key or critical elements of the disclosure nor to delineate the scope of the disclosure but to present selected concepts of the disclosure in a simplified form as an introduction to the more detailed description presented below. As will be appreciated, other aspects, embodiments, and/or configurations of the disclosure are possible utilizing, alone or in combination, one or more of the features set forth above or described in detail below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0039] Fig. 1 depicts an embodiment of a vehicle operating environment;

[0040] Fig. 2 is a block diagram of an embodiment of a vehicle system;

[0041] Fig. 3 is a block diagram of an embodiment of a vehicle interior environment separated into areas and/or zones;

[0042] Fig. 4 depicts an embodiment of a sensor configuration for a vehicle;

[0043] Fig. 5 is a block diagram of an embodiment of a vehicle control system;

[0044] Fig. 6 another block diagram of an embodiment of a vehicle control system;

[0045] Fig. 7A is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0046] Fig. 7B is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0047] Fig. 7C is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0048] Fig. 7D is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0049] Fig. 7E is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0050] Fig. 7F is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0051] Fig. 7G is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0052] Fig. 7H is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0053] Fig. 7I is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0054] Fig. 7J is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0055] Fig. 7K is a graphical representation of an embodiment of a gesture that a user may perform to provide input to a vehicle control system;

[0056] Fig. 8 is a diagram of an embodiment of a data structure for storing information about a user of a vehicle;

[0057] Fig. 9 is a flow diagram of a method for storing setting associated with a user;

[0058] Fig. 10 is a flow diagram of a method for establishing settings associated with a user;

[0059] Fig. 11 is a flow diagram of a method for storing setting associated with a user;

[0060] Fig. 12 is a flow diagram of a method for storing gestures associated with a user;

[0061] Fig. 13 is a flow diagram of a method for reacting to a gesture performed by a user;

[0062] Fig. 14 is a flow diagram of a method for storing health data associated with a user;

[0063] Fig. 15 is a flow diagram of a method for reacting to a gesture performed by a user.

[0064] In the appended figures, similar components and/or features may have the same reference label. Further, various components of the same type may be distinguished by following the reference label by a letter that distinguishes among the similar components. If only the first reference label is used in the specification, the description is applicable to any one of the similar components having the same first reference label irrespective of the second reference label.

DETAILED DESCRIPTION

[0065] Presented herein are embodiments of a complete vehicle ecosystem. The ecosystem can comprise single devices or a compilation of devices. This device, or these devices, may be capable of communicating with other devices and/or to an individual or group of individuals. Further, this device, or these devices, can receive user input in unique ways. The overall design and functionality of each device provides for an enhanced user experience making the device more useful and more efficient. As described herein, the device(s) may be electrical, mechanical, electro-mechanical, software-based, and/or combinations thereof.

[0066] A vehicle environment 100 that may contain a vehicle ecosystem is shown in Fig. 1. The vehicle environment 100 can contain areas associated with a vehicle or conveyance 104. The vehicle 104 is shown as a police car but can be any type of conveyance. The environment 100 can include at least three zones. A first zone 108 may be inside a vehicle 104. The zone 108 includes any interior space, trunk space, engine compartment, or other associated space within or associated with the vehicle 104. The interior environment 108 can be defined by one or more techniques, for example, geo-fencing.

[0067] A second zone 112 may be delineated by line 120. The zone 112 is created by a range of one or more sensors associated with the vehicle 104. Thus, the area 112 is exemplary of the range of those sensors and what can be detected by those sensors associated with the vehicle 104. The rest of the environment includes all space beyond the range of the sensors and is represented by 116. Thus, the environment 100 may have an area 116 that includes all areas beyond the sensor range 112. The area 116 may include future locations of travel that the vehicle 104 may proceed to in the future.

[0068] An embodiment of a vehicle system 200 is shown in Fig. 2. The vehicle system 200 may consist of hardware and/or software that conduct various operations for or with the vehicle

104. The operations can include, but are not limited to providing information to the user, receiving input from the user, and controlling the functions or operation of the vehicle 104, etc. The vehicle system 200 can include a vehicle control system 204. The vehicle control system 204 can be any type of computing system operable to conduct the operations as described herein.

[0069] The vehicle control system 204 may interact with a memory or storage system 208 that stores system data. System data 208 may be any type of data needed for the vehicle control system 204 to control effectively the vehicle 104. An example of some of the data that may be stored by the vehicle control system 204 may be as described in conjunction with Fig. 8. The system data 208 can represent any type of database or other storage system. Thus, the system data 208 can be a flat file data system, an object-oriented data system, or some other data system that may interface with the vehicle control system 204.

[0070] The vehicle control system 204 may communicate with a device or user interface 212. The user interface 212 may be as described in conjunction with Fig. 5. The user interface 212 may be operable to receive user input either through touch input, on one or more user interface buttons, or through a graphical user interface that may include a gesture capture region, as described in conjunction with Fig. 5. Further, the symbol 212 can represent a device that is located or associated with the vehicle 104. The device 212 can be a mobile device, including, but not limited to, a mobile telephone, a mobile computer, or other type of computing system or device that is either permanently located in or temporarily associated with the automobile 104. Thus, the vehicle control system 204 can interface with the device 212 and leverage the devices computing capability to provide one or more of the features or functions as described herein.

[0071] The device or user interface 212 can receive input or provide information to a user 216. The user 216 may thus interact with the vehicle control system 204 through the interface or device 212. Further, the device 212 may include or have access to device data 220. The device data 220 can be any type of data that is used in conjunction with the device 212, including, but not limited to, multimedia data, preferences data, bioinformatics, data associated with the user 216, or other types of data. The data may be stored in a device data 220 as a storage system similar to that described in conjunction with system data 208.

[0072] The vehicle control system 204 may also communicate with or through a communication network 224. The communication network 224 can represent any type of wireless or wired communication system that may be included within the vehicle 104 or operable

to communicate outside the vehicle 104. Thus, the communication network 224 can include a local area communication capability and a wide area communication capability. For example, the communication network 224 can include a Bluetooth wireless system, an 802.11G or 802.11N wireless system, a CAN bus, an Ethernet network within the vehicle 104, or other types of communication networks that may function with or be associated with the vehicle 104. Further, the communication network 224 can also include wide area communication capabilities, including one or more of, but not limited to, a cellular communication capability, satellite telephone communication capability, a wireless wide area network communication capability, or other types of communication capabilities that allow for the vehicle control system 204 to communicate outside the vehicle 104.

[0073] The vehicle control system 204 may communicate through the communication network 224 to a server 228 that may be located in a facility that is not within physical proximity to the vehicle 104. Thus, the server 224 may represent a cloud computing system or cloud storage that allows the vehicle control system 204 to either gain access to further computing capabilities or to storage in a location outside of the vehicle 104. The server 228 can include a computer processor and memory and be similar to any computing system as understood to one skilled in the art.

[0074] Further, the server 228 may be associated with stored data 232. The stored data 232 may be stored in any system or by any method, as described in conjunction with system data 208 and/or device data 220. The stored data 232 can include information that may be associated with one or more users 216 or associated with one or more vehicles 104. The stored data 232, being stored in a cloud or in a distant facility, may be exchanged among vehicles 104 or may be used by a user 216 in different locations or with different vehicles 104.

[0075] The vehicle control system 204 may also communicate with one or more sensors 236/242, which are either associated with the vehicle 104 or communicate with the vehicle 104. Vehicle sensors 242 may include one or more sensors for providing information to the vehicle control system 204 that determine or provide information about the environment 100 in which the vehicle 104 is operating. Embodiments of these sensors may be as described in conjunction with Fig. 4. Non-vehicle sensor 236 can be any type of sensor that isn't currently associated with the vehicle 104. For example, non-vehicle sensor 236 can be sensors in a traffic system operated by a third party that provides data to the vehicle control system 204. Further, the non-

vehicle sensor 236 can be other types of sensors which provide information about the distant environment 116 or other information about the vehicle 104 or the environment 100. These non-vehicle sensors 236 may be operated by third parties but provide information to the vehicle control system 204. Examples of information that may be used by the vehicle control system 204 may include weather tracking data, user health tracking data, vehicle maintenance data , or other types of data, which may provide environmental or other data to the vehicle control system 204.

[0076] An arrangement or configuration for sensors within a vehicle 104 is as shown in Fig. 3. The sensor arrangement 300 can include one or more areas 308 within the vehicle. An area can be a larger part of the environment inside or outside of the vehicle 104. Thus, area one 308A may include the area within the trunk space or engine space of the vehicle 104 and/or the front passenger compartment. Area three 308B may include a portion of the interior space 108 of the vehicle 104. The area N, 308N may include the trunk space or rear compartment area, when included within the vehicle 104. The interior space 108 may also be divided into areas. Thus, one area may be associated with the front passenger's and driver's seats, a second area may be associated with the middle passengers' seats, and a third area may be associated with a rear passenger's seat. Each area 308 may include one or more sensors that are positioned or operate to provide environmental information about that area 308.

[0077] Each area 308 may be further separated into one or more zones 312 within the area 308. For example, area 1 308A may be separated into zone A, 312a, and zone B, 312a. Each zone 312 may be associated with a particular portion of the interior occupied by a passenger. For example, zone A, 312a may be associated with a driver. Zone B, 312b, may be associated with a front passenger. Each zone 312 may include one or more sensors that are positioned or configured to collect information about the environment or ecosystem associated with that zone or person.

[0078] A passenger area 308b may include more than two zones as described in conjunction with area 308a. For example, area 308b may include three zones, 312c, 312d, and 312e. These three separate zones 312c, 312d, and 312e may be associated with three passenger seats typically found in the rear passenger area of an automobile 104. An area 308N and may include a single zone 312N as there may be no separate passenger areas but may include be a single trunk area within the vehicle 104. The number of zones 312 is unlimited within the areas as the areas are

also unlimited inside the vehicle 104. Further, it should be noted that there may be one or areas 308 or zones 312 that may be located outside the vehicle 104 that may have a specific set of sensors associated therewith.

[0079] A set of sensors or vehicle components 400 associated with the vehicle 404 may be as shown in Fig. 4. The vehicle 104 includes, among many other components common to vehicles, wheels 407, a power source 409 (such as an engine, motor, or energy storage system (e.g., battery or capacitive energy storage system)), a manual or automatic transmission 412, a manual or automatic transmission gear controller 416, a power controller 420 (such as a throttle), a vehicle control system 204, the display device 212, a braking system 436, a steering wheel 440, a power source activation/deactivation switch 444 (e.g., an ignition), an occupant seating system 448, a wireless signal receiver 453 to receive wireless signals from signal sources such as roadside beacons and other electronic roadside devices, and a satellite positioning system receiver 457 (e.g., a Global Positioning System ("GPS") (US), GLONASS (Russia), Galileo positioning system (EU), Compass navigation system (China), and Regional Navigational Satellite System (India) receiver).

[0080] The vehicle 104 includes a number of sensors in wireless or wired communication with the vehicle control system 204 and/or display device 212 to collect sensed information regarding the vehicle state, configuration, and/or operation. Exemplary sensors include wheel state sensor 460 to sense one or more of vehicle speed, acceleration, deceleration, wheel rotation, wheel speed (e.g., wheel revolutions-per-minute), wheel slip, and the like, a power source energy output sensor 464 to sense a power output of the power source 409 by measuring one or more of current engine speed (e.g., revolutions-per-minute), energy input and/or output (e.g., voltage, current, fuel consumption, and torque) (e.g., turbine speed sensor, input speed sensor, crankshaft position sensor, manifold absolute pressure sensor, mass flow sensor, and the like), and the like, a switch state sensor 468 to determine a current activation or deactivation state of the power source activation/deactivation switch 444, a transmission setting sensor 470 to determine a current setting of the transmission (e.g., gear selection or setting), a gear controller sensor 472 to determine a current setting of the gear controller 416, a power controller sensor 474 to determine a current setting of the power controller 420, a brake sensor 476 to determine a current state (braking or non-braking) of the braking system 436, a seating system sensor 478 to determine a seat setting and current weight of seated occupant, if any) in a selected seat of the seating system

448, exterior and interior sound receivers 490 and 492 (e.g., a microphone and other type of acoustic-to-electric transducer or sensor) to receive and convert sound waves into an equivalent analog or digital signal. Examples of other sensors (not shown) that may be employed include safety system state sensors to determine a current state of a vehicular safety system (e.g., air bag setting (deployed or undeployed) and/or seat belt setting (engaged or not engaged)), light setting sensor (e.g., current headlight, emergency light, brake light, parking light, fog light, interior or passenger compartment light, and/or tail light state (on or off)), brake control (e.g., pedal) setting sensor, accelerator pedal setting or angle sensor, clutch pedal setting sensor, emergency brake pedal setting sensor, door setting (e.g., open, closed, locked or unlocked) sensor, engine temperature sensor, passenger compartment or cabin temperature sensor, window setting (open or closed) sensor, one or more cameras or other imaging sensors (which commonly convert an optical image into an electronic signal but may include other devices for detection objects such as an electromagnetic radiation emitter/receiver that emits electromagnetic radiation and receives electromagnetic waves reflected by the object) to sense objects, such as other vehicles and pedestrians and optionally determine the distance, trajectory and speed of such objects, in the vicinity or path of the vehicle, odometer reading sensor, trip mileage reading sensor, wind speed sensor, radar transmitter/receiver output, brake wear sensor, steering/torque sensor, oxygen sensor, ambient lighting sensor, vision system sensor, ranging sensor, parking sensor, heating, venting, and air conditioning (HVAC) sensor, water sensor, air-fuel ratio meter, blind spot monitor, hall effect sensor, microphone, radio frequency (RF) sensor, infrared (IR) sensor, vehicle control system sensors, wireless network sensor (e.g., Wi-Fi and/or Bluetooth sensor), cellular data sensor, and other sensors known to those of skill in the vehicle art.

[0081] In the depicted vehicle embodiment, the various sensors are in communication with the display device 212 and vehicle control system 204 via signal carrier network 480. As noted, the signal carrier network 480 can be a network of signal conductors, a wireless network (e.g., a radio frequency, microwave, or infrared communication system using a communications protocol, such as Wi-Fi), or a combination thereof.

[0082] In one implementation, the control system 424 receives and reads sensor signals, such as wheel and engine speed signals, as a digital input comprising, for example, a pulse width modulated (PWM) signal. The processor 304 can be configured, for example, to read each of the signals into a port configured as a counter or configured to generate an interrupt on receipt of a

pulse, such that the processor 304 can determine, for example, the engine speed in revolutions per minute (RPM) and the speed of the vehicle in miles per hour (MPH). One skilled in the art will recognize that the two signals can be received from existing sensors in a vehicle comprising a tachometer and a speedometer, respectively. Alternatively, the current engine speed and vehicle speed can be received in a communication packet as numeric values from a conventional dashboard subsystem comprising a tachometer and a speedometer. The transmission speed sensor signal can be similarly received as a digital input comprising a signal coupled to a counter or interrupt signal of the processor 304, or received as a value in a communication packet on the network or port interface 352 from an existing subsystem of the vehicle. The ignition sensor signal can be configured as a digital input, wherein a HIGH value represents that the ignition is on and a LOW value represents that the ignition is OFF. Three bits of the port interface 352 can be configured as a digital input to receive the gear shift position signal, representing eight possible gear shift positions. Alternatively, the gear shift position signal can be received in a communication packet as a numeric value on the port interface 352. The throttle position signal can be received as an analog input value, typically in the range 0-5 volts. Alternatively, the throttle position signal can be received in a communication packet as a numeric value on the port interface 352. The output of other sensors can be processed in a similar fashion.

[0083] Other sensors may be included and position in the interior space 108 of the vehicle 104. Generally, these interior sensors obtain data about the health of the driver and/or passenger(s), data about the safety of the driver and/or passenger(s), and/or data about the comfort of the driver and/or passenger(s). The health data sensors can include sensors in the steering wheel that can measure various health telemetry for the person (*e.g., heart rate, temperature, blood pressure, blood presence, blood composition, etc.*). Sensors in the seats may also provide for health telemetry (*e.g., presence of liquid, weight, weight shifts, etc.*). Infrared sensors could detect a person's temperature; optical sensors can determine a person's position and whether the person has become unconscious. Other health sensors are possible and included herein.

[0084] Safety sensors can measure whether the person is acting safely. Optical sensors can determine a person's position and focus. If the person stops looking at the road ahead, the optical sensor can detect the lack of focus. Sensors in the seats may detect if a person is leaning forward or may be injured by a seat belt in a collision. Other sensors can detect that the driver

has at least one hand on a steering wheel. Other safety sensors are possible and contemplated as if included herein.

[0085] Comfort sensors can collect information about a person's comfort. Temperature sensors may detect a temperature of the interior cabin. Moisture sensors can determine a relative humidity. Audio sensors can detect loud sounds or other distractions. Audio sensors may also receive input from a person through voice data. Other comfort sensors are possible and contemplated as if included herein.

[0086] An embodiment of a vehicle control system 204 and its associated components 204 may be as shown in Fig. 5. In general, the device 212 includes a front screen 212 with a touch sensitive display 568. The front screen 212 may be disabled and/or enabled by a suitable command. Moreover, the front screen 212 can be touch sensitive and can include different operative areas. For example, a first operative area, within the touch sensitive screen 212, may comprise a touch sensitive display 568. In general, the touch sensitive display 568 may comprise a full color, touch sensitive display. A second area within each touch sensitive screen 568 may comprise a gesture capture region 572. The gesture capture region 572 may comprise one or more areas or regions that is outside of the touch sensitive display 568 area or screen area 212, and that is capable of receiving input, for example in the form of gestures provided by a user. However, the one or more gesture capture regions 572 do not include pixels that can perform a display function or capability.

[0087] It is further anticipated that a third region of the touch sensitive screen 568 may comprise one or more configurable areas. The configurable area is capable of receiving input and has display or limited display capabilities. As can be appreciated, the configurable area may occupy any part of the touch sensitive screen 568 not allocated to a gesture capture region 572 or touch sensitive display 568. In embodiments, the configurable area may present different input options to the user. For example, the configurable area may display buttons or other relatable items. Moreover, the identity of displayed buttons, or whether any buttons are displayed at all within the configurable area of the touch sensitive screen 568 may be determined from the context in which the device 212 is used and/or operated. In an exemplary embodiment, the touch sensitive screen 568 comprises liquid crystal display devices extending across at least the region of the touch sensitive screen 568 that is capable of providing visual output to a user, and a

resistive and/or capacitive input matrix over the regions of the touch sensitive screen 568 that are capable of receiving input from the user.

[0088] One or more display controllers 516 may be provided for controlling the operation of the touch sensitive screen 568, including input (touch sensing) and output (display) functions. In the exemplary embodiment illustrated in Fig. 5, a touch screen controller 516 is provided for the touch screen 568. In accordance with some embodiments, the functions of a touch screen controller 516 may be incorporated into other components, such as a processor 504.

[0089] The processor 504 may comprise a general purpose programmable processor or controller for executing application programming or instructions. In accordance with at least some embodiments, the processor 504 may include multiple processor cores, and/or implement multiple virtual processors. In accordance with still other embodiments, the processor 504 may include multiple physical processors. As a particular example, the processor 504 may comprise a specially configured application specific integrated circuit (ASIC) or other integrated circuit, a digital signal processor, a controller, a hardwired electronic or logic circuit, a programmable logic device or gate array, a special purpose computer, or the like. The processor 504 generally functions to run programming code or instructions implementing various functions of the device 212.

[0090] A device 212 may also include memory 508 for use in connection with the execution of application programming or instructions by the processor 504, and for the temporary or long term storage of program instructions and/or data. As examples, the memory 508 may comprise RAM, DRAM, SDRAM, or other solid state memory. Alternatively or in addition, data storage 512 may be provided. Like the memory 508, the data storage 512 may comprise a solid state memory device or devices. Alternatively or in addition, the data storage 512 may comprise a hard disk drive or other random access memory.

[0091] In support of communications functions or capabilities, the device 212 can include a cellular telephony module 528. As examples, the cellular telephony module 528 can comprise a GSM, CDMA, FDMA and/or analog cellular telephony transceiver capable of supporting voice, multimedia and/or data transfers over a cellular network. Alternatively or in addition, the device 212 can include an additional or other wireless communications module 532. As examples, the other wireless communications module 532 can comprise a Wi-Fi, BLUETOOTH TM, WiMax, infrared, or other wireless communications link. The cellular telephony module 528 and the

other wireless communications module 532 can each be associated with a shared or a dedicated antenna 524.

[0092] A port interface 552 may be included. The port interface 552 may include proprietary or universal ports to support the interconnection of the device 212 to other devices or components, such as a dock, which may include additional or different capabilities from those integral to the device 212. In addition to supporting an exchange of communication signals between the device 212 and another device or component, the docking port (not shown) and/or port interface 552 can support the supply of power to or from the device 212. The port interface 552 also comprises an intelligent element that comprises a docking module for controlling communications or other interactions between the device 212 and a connected device or component.

[0093] An input/output module 548 and associated ports may be included to support communications over wired networks or links, for example with other communication devices, server devices, and/or peripheral devices. Examples of an input/output module 548 include an Ethernet port, a Universal Serial Bus (USB) port, Institute of Electrical and Electronics Engineers (IEEE) 1594, or other interface.

[0094] An audio input/output interface/device(s) 544 can be included to provide analog audio to an interconnected speaker or other device, and to receive analog audio input from a connected microphone or other device. As an example, the audio input/output interface/device(s) 544 may comprise an associated amplifier and analog to digital converter. Alternatively or in addition, the device 212 can include an integrated audio input/output device 556 and/or an audio jack for interconnecting an external speaker or microphone. For example, an integrated speaker and an integrated microphone can be provided, to support near talk or speaker phone operations.

[0095] Hardware buttons 280 can be included for example for use in connection with certain control operations. Examples include a master power switch, volume control, etc., as described in conjunction with Fig. 2. One or more image capture interfaces/devices, such as a camera, can be included for capturing still and/or video images. Alternatively or in addition, an image capture interface/device can include a scanner or code reader. An image capture interface/device can include or be associated with additional elements, such as a flash or other light source.

[0096] The device 212 can also include a global positioning system (GPS) receiver 536. In accordance with embodiments of the present invention, the GPS receiver 536 may further

comprise a GPS module that is capable of providing absolute location information to other components of the device 212. Other sensors 242 may also be included. For example, an accelerometer(s)/gyroscope(s) may also be included. For example, in connection with the display of information to a user and/or other functions, a signal from the accelerometer/gyroscope can be used to determine an orientation and/or format in which to display that information to the user. In some embodiments, the accelerometer/gyroscope may comprise at least one accelerometer and at least one gyroscope.

[0097] Embodiments of the present invention can also include one or more magnetic sensing feature. The magnetic sensing feature can be configured to provide a signal indicating the position of the device relative to a vehicle-mounted position. This information can be provided as an input, for example to a user interface application, to determine an operating mode, characteristics of the touch sensitive display 568 and/or other device 212 operations. As examples, a magnetic sensing feature can comprise one or more of Hall-effect sensors, a multiple position switch, an optical switch, a Wheatstone bridge, a potentiometer, or other arrangement capable of providing a signal indicating of multiple relative positions the touch screens are in. Alternatively, the magnetic sensing feature may comprise one or more metallic elements used by other sensors associated with the console and/or vehicle to determine whether the device 212 is in a vehicle-mounted position. These metallic elements may include but are not limited to rare-earth magnets, electromagnets, ferrite and/or ferrite alloys, and/or other material capable of being detected by a range of sensors.

[0098] Communications between various components of the device 212 can be carried by one or more buses 520. In addition, power can be supplied to the components of the device 212 from a power source and/or power control module 560. The power control module 560 can, for example, include a battery, an AC to DC converter, power control logic, and/or ports for interconnecting the device 212 to an external source of power.

[0099] An embodiment of one or more software modules that may be associated with the vehicle control system 204 may be as shown in Fig. 6. The memory 508 may store and the processor 504 may execute one or more software components. These components can include at least one operating system (OS) 616, an application manager 662, a console desktop 666, and/or one or more applications 664a and/or 664b from an application store 660. The OS 616 can include a framework 620, one or more frame buffers 648, one or more drivers 612, and/or a

kernel 618. The OS 616 can be any software, consisting of programs and data, which manages computer hardware resources and provides common services for the execution of various applications 664. The OS 616 can be any operating system and, at least in some embodiments, dedicated to mobile devices, including, but not limited to, Linux, ANDROID TM, iPhone OS (IOS TM), WINDOWS PHONE 7 TM, etc. The OS 616 is operable to provide functionality to the device 212 by executing one or more operations, as described herein.

[00100] The applications 664 can be any higher level software that executes particular console functionality for the user. Applications 664 can include programs such as vehicle control applications, email clients, web browsers, texting applications, games, media players, office suites, etc. The applications 664 can be stored in an application store 660, which may represent any memory or data storage, and the management software associated therewith, for storing the applications 664. Once executed, the applications 664 may be run in a different area of memory 608.

[00101] The framework 620 may be any software or data that allows the multiple tasks running on the device to interact. In embodiments, at least portions of the framework 620 and the discrete components described hereinafter may be considered part of the OS 616 or an application 664. However, these portions will be described as part of the framework 620, but those components are not so limited. The framework 620 can include, but is not limited to, a Surface Cache module 628, a Window Management module 632, an Input Management module 636, an Application Model Manager 642, a Display Controller 644, one or more frame buffers 648, and/or an event buffer 666.

[00102] The Surface Cache module 628 includes any memory or storage and the software associated therewith to store or cache one or more images of applications, windows, and/or console screens. A series of active and/or non-active windows (or other display objects, such as, a desktop display) can be associated with each display. An active window (or other display object) is currently displayed. A non-active window (or other display objects) was opened and, at some time, displayed but are now not displayed. To enhance the user experience, before a window transitions from an active state to an inactive state, a "screen shot" of a last generated image of the window (or other display object) can be stored. The Surface Cache module 628 may be operable to store a bitmap of the last active image of a window (or other display object)

not currently displayed. Thus, the Surface Cache module 628 stores the images of non-active windows (or other display objects) in a data store.

[0100] In embodiments, the Window Management module 632 is operable to manage the windows (or other display objects) that are active or not active on each of the displays. The Window Management module 632, based on information from the OS 616, or other components, determines when a window (or other display object) is visible or not active. The Window Management module 632 may then put a non-visible window (or other display object) in a "not active state" and, in conjunction with the Task Management module 640 suspends the application's operation. Further, the Window Management module 632 may assign a display identifier to the window (or other display object) or manage one or more other items of data associated with the window (or other display object). The Window Management module 632 may also provide the stored information to the application 664, or other components interacting with or associated with the window (or other display object). The Window Management module 632 can also associate an input task with a window based on window focus and display coordinates within the motion space.

[0101] The Input Management module 636 is operable to manage events that occur with the device. An event is any input into the window environment, for example, a user interface interactions with a user. The Input Management module 636 receives the events and logically stores the events in an event buffer 656. Events can include such user interface interactions as a "down event," which occurs when the screen 204 receives a touch signal from a user, a "move event," which occurs when the screen 204 determines that a user's finger is moving across a screen(s), an "up event", which occurs when the device 212 determines that the user has stopped touching the screen 568 etc. These events are received, stored, and forwarded to other modules by the Input Management module 636. The Input Management module 636 may also map screen inputs to a motion space which is the culmination of all physical and virtual display available on the device.

[0102] The frame buffer 648 is a logical structure(s) used to render the user interface. The frame buffer 648 can be created and destroyed by the OS kernel 618. However, the Display Controller 644 can write the image data, for the visible windows, into the frame buffer 648. A frame buffer 648 can be associated with one screen or multiple screens. The association of a frame buffer 648 with a screen can be controlled dynamically by interaction with the OS kernel

618. A composite display may be created by associating multiple screens with a single frame buffer 648. Graphical data used to render an application's window user interface may then be written to the single frame buffer 648, for the composite display, which is output to the multiple screens 204. The Display Controller 644 can direct an application's user interface to a portion of the frame buffer 648 that is mapped to a particular display 208, thus, displaying the user interface on only one screen 212. The Display Controller 644 can extend the control over user interfaces to multiple applications, controlling the user interfaces for as many displays as are associated with a frame buffer 648 or a portion thereof. This approach compensates for the physical screen 212 and any other console screens that are in use by the software component above the Display Controller 644.

[0103] The Application Manager 662 is an application that provides a presentation layer for the window environment. Thus, the Application Manager 662 provides the graphical model for rendering. Likewise, the Desktop 666 provides the presentation layer for the Application Store 660. Thus, the desktop provides a graphical model of a surface having selectable application icons for the Applications 664 in the Application Store 660 that can be provided to the Window Management Module 632 for rendering.

[0104] Further, the framework can include an Application Model Manager (AMM) 642. The Application Manager 662 may interface with the AMM 642. In embodiments, the AMM 642 receives state change information from the device 212 regarding the state of applications (which are running or suspended). The AMM 642 can associate bit map images from the Surface Cache Module 628 to the applications that are alive (running or suspended). Further, the AMM 642 may provide a list of executing applications to the Application Manager 662.

[0105] One or more gestures used to interface with the vehicle control system 204 may be as described in conjunction with figures 7A through 7K. Figs. 7A through 7H depict various graphical representations of gesture inputs that may be recognized by the screen(s) 212. The gestures may be performed not only by a user's body part, such as a digit, but also by other devices, such as a stylus, that may be sensed by the contact sensing portion(s) of a screen 212. In general, gestures are interpreted differently, based on where the gestures are performed (either directly on the display 568 or in the gesture capture region 572). For example, gestures in the display 568 may be directed to a desktop or application, and gestures in the gesture capture region 572 may be interpreted as for the system.

[0106] With reference to Figs. 7A-7H, a first type of gesture, a touch gesture 720, is substantially stationary on the screen 212 for a selected length of time. A circle 728 represents a touch or other contact type received at particular location of a contact sensing portion of the screen. The circle 728 may include a border 732, the thickness of which indicates a length of time that the contact is held substantially stationary at the contact location. For instance, a tap 720 (or short press) has a thinner border 732a than the border 732b for a long press 724 (or for a normal press). The long press 724 may involve a contact that remains substantially stationary on the screen for longer time period than that of a tap 720. As will be appreciated, differently defined gestures may be registered depending upon the length of time that the touch remains stationary prior to contact cessation or movement on the screen.

[0107] With reference to Fig. 7C, a drag gesture 700 on the screen 212 is an initial contact (represented by circle 728) with contact movement 736 in a selected direction. The initial contact 728 may remain stationary on the screen 212 for a certain amount of time represented by the border 732. The drag gesture typically requires the user to contact an icon, window, or other displayed image at a first location followed by movement of the contact in a drag direction to a new second location desired for the selected displayed image. The contact movement need not be in a straight line but have any path of movement so long as the contact is substantially continuous from the first to the second locations.

[0108] With reference to Fig. 7D, a flick gesture 704 on the screen 212 is an initial contact (represented by circle 728) with truncated contact movement 736 (relative to a drag gesture) in a selected direction. In embodiments, a flick has a higher exit velocity for the last movement in the gesture compared to the drag gesture. The flick gesture can, for instance, be a finger snap following initial contact. Compared to a drag gesture, a flick gesture generally does not require continual contact with the screen 212 from the first location of a displayed image to a predetermined second location. The contacted displayed image is moved by the flick gesture in the direction of the flick gesture to the predetermined second location. Although both gestures commonly can move a displayed image from a first location to a second location, the temporal duration and distance of travel of the contact on the screen is generally less for a flick than for a drag gesture.

[0109] With reference to Fig. 7E, a pinch gesture 708 on the screen 212 is depicted. The pinch gesture 708 may be initiated by a first contact 728 to the screen 212 by, for example, a first digit

and a second contact 728b to the screen 212 by, for example, a second digit. The first and second contacts 728a,b may be detected by a common contact sensing portion of a common screen 212, by different contact sensing portions of a common screen 212, or by different contact sensing portions of different screens 212. The first contact 728a is held for a first amount of time, as represented by the border 732a, and the second contact 728b is held for a second amount of time, as represented by the border 732b. The first and second amounts of time are generally substantially the same, and the first and second contacts 728a,b generally occur substantially simultaneously. The first and second contacts 728a,b generally also include corresponding first and second contact movements 736a,b, respectively. The first and second contact movements 736 a,b are generally in opposing directions. Stated another way, the first contact movement 736a is towards the second contact 736b, and the second contact movement 736b is towards the first contact 736a. More simply stated, the pinch gesture 708 may be accomplished by a user's digits touching the screen 212 in a pinching motion.

[0110] With reference to Fig. 7F, a spread gesture 710 on the screen 212 is depicted. The spread gesture 710 may be initiated by a first contact 728a to the screen 212 by, for example, a first digit and a second contact 728b to the screen 212 by, for example, a second digit. The first and second contacts 728a,b may be detected by a common contact sensing portion of a common screen 212, by different contact sensing portions of a common screen 212, or by different contact sensing portions of different screens 212. The first contact 728a is held for a first amount of time, as represented by the border 732a, and the second contact 728b is held for a second amount of time, as represented by the border 732b. The first and second amounts of time are generally substantially the same, and the first and second contacts 728a,b generally occur substantially simultaneously. The first and second contacts 728a,b generally also include corresponding first and second contact movements 736a,b, respectively. The first and second contact movements 736a,b are generally in a common direction. Stated another way, the first and second contact movements 736a,b are away from the first and second contacts 728a,b. More simply stated, the spread gesture 710 may be accomplished by a user's digits touching the screen 212 in a spreading motion.

[0111] The above gestures may be combined in any manner, such as those shown by Figs. 7G and 7H, to produce a determined functional result. For example, in Fig. 7G a tap gesture 720 is combined with a drag or flick gesture 712 in a direction away from the tap gesture 720. In Fig.

7H, a tap gesture 720 is combined with a drag or flick gesture 712 in a direction towards the tap gesture 720.

[0112] The functional result of receiving a gesture can vary depending on a number of factors, including a state of the vehicle 104, display 568, or screen 212, a context associated with the gesture, or sensed location of the gesture. The state of the vehicle commonly refers to one or more of a configuration of the vehicle 104, a display orientation, and user and other inputs received by the vehicle 104. Context commonly refers to one or more of the particular application(s) selected by the gesture and the portion(s) of the application currently executing, whether the application is a single- or multi-screen application, and whether the application is a multi-screen application displaying one or more windows. Sensed location of the gesture commonly refers to whether the sensed set(s) of gesture location coordinates are on a touch sensitive display 568 or a gesture capture region 572, whether the sensed set(s) of gesture location coordinates are associated with a common or different display or screen 212, and/or what portion of the gesture capture region contains the sensed set(s) of gesture location coordinates.

[0113] A tap, when received by an a touch sensitive display 568, can be used, for instance, to select an icon to initiate or terminate execution of a corresponding application, to maximize or minimize a window, to reorder windows in a stack, and to provide user input such as by keyboard display or other displayed image. A drag, when received by a touch sensitive display 568, can be used, for instance, to relocate an icon or window to a desired location within a display, to reorder a stack on a display, or to span both displays (such that the selected window occupies a portion of each display simultaneously). A flick, when received by a touch sensitive display 568 or a gesture capture region 572, can be used to relocate a window from a first display to a second display or to span both displays (such that the selected window occupies a portion of each display simultaneously). Unlike the drag gesture, however, the flick gesture is generally not used to move the displayed image to a specific user-selected location but to a default location that is not configurable by the user.

[0114] The pinch gesture, when received by a touch sensitive display 568 or a gesture capture region 572, can be used to minimize or otherwise increase the displayed area or size of a window (typically when received entirely by a common display), to switch windows displayed at the top of the stack on each display to the top of the stack of the other display (typically when received

by different displays or screens), or to display an application manager (a "pop-up window" that displays the windows in the stack). The spread gesture, when received by a touch sensitive display 568 or a gesture capture region 572, can be used to maximize or otherwise decrease the displayed area or size of a window, to switch windows displayed at the top of the stack on each display to the top of the stack of the other display (typically when received by different displays or screens), or to display an application manager (typically when received by an off-screen gesture capture region on the same or different screens).

[0115] The combined gestures of Fig. 7G, when received by a common display capture region in a common display or screen 212, can be used to hold a first window location constant for a display receiving the gesture while reordering a second window location to include a window in the display receiving the gesture. The combined gestures of Fig. 7H, when received by different display capture regions in a common display or screen 212 or in different displays or screens, can be used to hold a first window location for a display receiving the tap part of the gesture while reordering a second window location to include a window in the display receiving the flick or drag gesture. Although specific gestures and gesture capture regions in the preceding examples have been associated with corresponding sets of functional results, it is to be appreciated that these associations can be redefined in any manner to produce differing associations between gestures and/or gesture capture regions and/or functional results.

[0116] Gestures that may be completed in three-dimensional space and not on a touch sensitive screen 568 or gesture capture region 572 may be as shown in Figs. 7I through 7K. The gestures may be completed in an area where a sensor 242, such as an optical sensor, infrared sensor, or other type of sensor, may detect the gesture. For example, the gesture 740 in Fig. 7I, a person may open their hand 764 and move their hand in a back and forth direction 748 as a gesture 740 to complete some function with the vehicle 104. For example gesture 764 may change the station of the radio in the vehicle 104. The sensors 242 may both determine the configuration of the hand and the vector of the movement. The vector and hand configuration can be interpreted to mean certain things to the vehicle control system 204 and produce different results.

[0117] In another example of a gesture 752 in Fig. 7J, a user may configure their hand 764 to extend two fingers and move the hand in an up and down operation 756. This gesture 752 may control the volume of the radio or some other function. Again, the sensors 242 may determine how the person has configured their hand gesture, and the vector of the movement. In another

example of a gesture 760 shown in Fig. 7K, a user may extend their middle three fingers at an angle 45° from straight vertical and circle the hand in a counter-clockwise motion 764. This gesture 760 may cause the automobile to change the heat or do some other function. As can be understood by one skilled in the art, the configurations of the hand and the types of movement are variable. Thus, the user may configure the hand 764 in any way imaginable and may also move that hand 764 in any direction with any vector in three-dimensional space.

[0118] The gestures 740, 752, 760, as shown in Fig. 7I through 7K, may occur in a predetermined volume of space within the vehicle 104. For example, a sensor 242 may be configured to identify such gestures 740, 752, 760 between the front passenger's and front driver's seats over a console area within the passenger compartment of the automobile 104. The gestures 740, 752, 760 may be made within area 1 304a between zones A 312a and B 312b. However, there may be other areas 308 where a user may use certain gestures, where sensors 242 may be able to determine a certain function is desired. Gestures that may be similar but used in different areas within the vehicle 104 may cause different functions to be performed. For example, the gesture 740 in Fig. 7I, if used in zone E 312e, may change the heat provided in zone E 312e, but may change the station of a radio if used in zone A312a. Further, the gestures may be made with other body parts or, for example, different expressions of a persons' face may be used to control functions in the vehicle 104. Also, the user may use two hands in some circumstances or do other types of physical movements that can cause different reactions in the vehicle 104.

[0119] An embodiment of a data structure 800 to store different settings is shown in Fig. 8. The data structure 800 may include one or more of data files or data objects 804. Thus, the data structure 800 may represent different types of data bases or data storage, for example, object-oriented data bases, flat file data structures, relational database, or other types of data storage arrangements. The data file 804 may include several portions 808-836 representing different types of data. Each of these types of data may be associated with a user, as shown in portion 808.

[0120] There may be one or more user records 840 and associated data stored within the data file 804. The user can be any person that uses or rides within the vehicle or conveyance 104. The user may be identified in portion 812. For the vehicle 104, the user may include a set of one or more features that may identify the user. These features may be the physical characteristics of

the person that may be identified by facial recognition or some other type of system. In other embodiments, the user may provide a unique code to the vehicle control system 204 or provide some other type of data that allows the vehicle control system 204 to identify the user. The features or characteristics of the user are then stored in portion 812.

[0121] Each user identified in portion 808 may have a different set of settings for each area 308 and/or each zone 312 within the vehicle 104. Thus, each set of setting may also be associated with a predetermined zone 312 or area 308. The zone 312 is stored in portion 820 and the area 308 is stored in portion 816.

[0122] One or more settings may be stored in portion 824. These settings 824 may be the configurations of different functions within the vehicle 104 that are specified by or for that user. For example, the settings 824 may be the position of a seat, the position of a steering wheel, a heating/cooling setting, a radio setting, a cruise control setting, or some other type of setting associated with the vehicle 104. Further, in vehicles adapted to have a configurable console or a configurable dash or heads-up display, the settings 824 may also provide for how that heads-up display, dash, or console are configured for this particular user. Each setting 824 may be associated with a different area 308 or zone 312. Thus, there may be more settings 824 for when the user is the driver and in zone A, 312A, of area 1, 308A. However, there may be similar settings 824 among the different zones 312 or areas 308 as shown in portion 824. For example, the heating or radio settings for the user may be similar in every zone 312.

[0123] The sensors 242 within the vehicle 104 may be able to either obtain or track health data in portion 828. Health data 828 may include any type of physical characteristic associated with the user. For example, a heart rate, a blood pressure, a temperature, or other types of heath data may be obtained and stored in portion 828. The user may have this health data tracked over a period of time to allow for statistical analysis of the user's health while operating the vehicle 104. In this way if some function of the user's health deviates from a norm, the vehicle 104 may be able to determine there is a problem with the person and react to that data.

[0124] One or more gestures may be stored in portion 832. Thus, the gestures used and described in conjunction Fig. 7A through 7K may be configurable. These gestures may be determined or created by the user and stored in portion 832. A user may have different gestures for each zone 312 or area 308 within the vehicle. The gestures that do certain things while driving may do other things while in a different area 308 of the vehicle 104. Thus, the user may

use a first set of gestures while driving and a second set while a passenger. Further, one or more users may share gestures as shown in portion 832. Each driver may have a common set of gestures that they use in zone A, 312a. Each of these gestures may be determined or captured and then stored with their average characteristics (*e.g.,* vector, position of gesture, etc.) in portion 832.

[0125] One or more sets of safety parameters may be stored in portion 836. Safety parameters 836 may be common operating characteristics for this driver/passenger or for all drivers/passengers that if deviated from may determine there is a problem with the driver/passenger or the vehicle 104. For example, a certain route may be taken repeatedly and an average speed or mean speed may be determined. If the mean speed deviates by some number of standard deviations, a problem with the vehicle 104 or the user may be determined. In another example, the health characteristics or driving experience of the user may be determined. If the user drives in a certain position where their head occupies a certain portion of three-dimensional space within the vehicle 104, the vehicle control system 204 may determine that the safety parameter includes the users face or head being within this certain portion of the vehicle interior space. If the user's head deviates from that interior space for some amount of time, the vehicle control system 204 can determine that something is wrong with the driver and change the function or operation of the vehicle 104 to assist the driver. This may happen, for example, when a user falls asleep at the wheel. If the user's head droops and does no longer occupy a certain three dimensional space, the vehicle control system 204 can determine that the driver has fallen asleep and may take control of the operation of the vehicle 204 and steer the vehicle 204 to the side of the road. In other examples, if the user's reaction time is too slow or some other safety parameter is not nominal, the vehicle control system 204 may determine that the user is inebriated or having some other medical problem. The vehicle control system 204 may then assume control of the vehicle to ensure that the driver is safe.

[0126] An embodiment of a method 900 for storing settings for a user associated with vehicle 104 is shown in Fig. 9. While a general order for the steps of the method 900 is shown in Fig. 9. Generally, the method 900 starts with a start operation 904 and ends with an end operation 936. The method 900 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 9. The method 900 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable

medium. Hereinafter, the method 900 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-8.

[0127] A person may enter the vehicle space 108. One or more sensors 242 may then identify that a person is sitting within the vehicle 104, in step 908. For example, sensors 242, in a seat, may determine that some new amount of weight has been registered. The amount of weight may fall within predetermined parameters, *e.g.*, over a threshold. This weight may then be determined to be a person by one or more optical or other sensors. The vehicle control system 204 may then determine that a person is in a certain zone 312 or area 308. For example the sensors may send signals to the input management module 636 that an event has occurred. This information may be sent to the task management module 640 to determine the zone 312 and area 308 where the event occurred. Further, the task management module 640 may then identify the person, in step 912.

[0128] The vehicle control system 204 can receive the information from the sensors 242 and use that information to search the database 800 that may be stored within the system data 208. The sensor data may be compared to ID characteristics 812 to determine if the person has already been identified. The vehicle control system 204 may also send the characteristic data from the sensors to the communication network 224 to a server 228 to compare the sensor data to stored data 232 that may be stored in a cloud system. The person's features can be compared to stored features 812 to determine if the person in the vehicle 104 can be identified.

[0129] If the person has been identified previously and their characteristics stored in portion 812, the method 900 proceeds YES to step 916 where that person may be identified. In identifying a person, the information associated with that person 840 may be retrieved and provided to the vehicle control system 204 for further action. If a person cannot be identified by finding their sensor characteristics in portion 812, the method 900 proceeds NO to step 920. In step 920, the vehicle control system 204, using an application 660, may create a new record in table 800 for the user. This new record may store a user identifier and their characteristics 812. It may also store the area 308 and zone 312 in data portions 816 and 820. The new record may then be capable of receiving new settings data for this particular user. In this way, the vehicle 104 can automatically identify or characterize a person so that settings may be established for the person in the vehicle 104.

[0130] The input management module 636 may then determine if settings are to be stored, in step 924. Settings might be any configuration of the vehicle 104 that may be associated with the user. The determination may be made after receiving a user input from the user. For example, the user may make a selection on a touch sensitive display 568 indicating that settings currently made are to be stored. In other situations, a period of time may elapse after the user has made a configuration. After determining that the user is finished making changes to the settings, based on the length of the period of time since the setting was established, the task management module 640 can save the setting. Thus, the vehicle control system 204 can make settings automatically based on reaching a steady state for settings for user.

[0131] The vehicle control system 204 may then store the settings for the person, in step 928. The task management module 640 can make a new entry for the user 808 in data structure 804. The new entry may be either a new user or a new settings listed in 824. The settings may be stored based on the area 308 and zone 312. As explained previously, the settings can be any kind of configuration of the vehicle 104 that may be associated with the user in that area 308 and the zone 312.

[0132] The settings may also be stored in cloud storage, in step 932. Thus the vehicle control system 204 can send the new settings to the server 228 to be stored in storage 232. In this way, these new settings may be ported to other vehicles for the user. Further, the settings in storage system 232 may be retrieved if local storage does not include the settings in storage system 208.

[0133] An embodiment of a method 1000 to configure the vehicle 104 based on stored settings is shown in Fig. 10. While a general order for the steps of the method 1000 is shown in Fig. 10. Generally, the method 1000 starts with a start operation 1004 and ends with an end operation 1028. The method 1000 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 10. The method 1000 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1000 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-9.

[0134] The input management module of the vehicle control system 204 can determine if a person is in a zone 312 or area 308, in step 1008. This determination may be made by receiving

data from one or more sensors 242. The vehicle 104 can use facial recognition, weight sensors, heat sensors, or other sensors to determine i a person is occupying a certain zone 312.

[0135] Using the information from the sensors 242, the vehicle control system 204 can identify the person, in step 1012. The vehicle control system 204 can obtain characteristics for the user currently occupying the zone 312 and compare those characteristics to the identifying features in portion 812 of data structure 804. Thus, the settings in portion 824 may be retrieved by identifying the correct zone312, area 308, and characteristics for the user.

[0136] The vehicle control system 204 can first determine if there are settings associated with the identified person for that zone 312 and/or area 308, in step 1016. After identifying the user by matching characteristics with the features in portion 812, the vehicle control system 204 can determine if there are settings for the user for the area 816 and zone 820 the user currently occupies. If there are settings, then the task management module 640 can make the determination that there are settings in portion 824, and the vehicle control system 204 may then read and retrieve those settings, in step 1020. The settings may be then used to configure or react to the presence of the user, in step 1024. Thus, these settings may be obtained to change the configuration of the vehicle 104, for example, how the position of the seats or mirrors are set, how the dash, console, or heads up display is configured, how the heat or cooling is configured, how the radio is configured, or how other different configurations are made.

[0137] Embodiment of a method 1100 for storing settings in cloud storage is shown in Fig. 11. While a general order for the steps of the method 1100 is shown in Fig. 11. Generally, the method 1100 starts with a start operation 1104 and ends with an end operation 1140. The method 1100 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 11. The method 1100 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1100 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-10.

[0138] The vehicle control system 204, such as the input management module 636, can determine if a person is in a zone 312 or area 308, in step 1108. As explained previously, the vehicle control system 204 can receive vehicle sensor data from vehicle sensors 242 that show a person has occupied a zone 312 or an area 308 of the vehicle 104. Using the vehicle sensor data,

the vehicle control system 204 can determine characteristics of the person, in step 1112. These characteristics are compared to the features in portion 812 of the data structure 804. From this comparison, the vehicle control system 204 can determine if the person is identified within the data structure 804, instep 1116. If there is a comparison and the person can be identified, the method 1100 proceeds YES to step 1120. However, if the person cannot be identified, the method 1100 proceeds NO, to step 1124.

[0139] In step 1120, the person is identified in portion 808 by the successful comparison of the characteristics and the features,. It should be noted that there may be a degree of variability between the characteristics and the features in portion 812. Thus the comparison may not be an exact comparison but may be use methods known in the art to make a statistically significant comparison between the characteristics received from the sensors 242 and the features stored in portion 812. In step 1124, the characteristics received from sensors 242 are used to characterize the person. In this way, the received characteristics may be used as an ID in portion 812 for a new entry for a new user in portion 808.

[0140] The user may make one or more settings for the vehicle 104. The vehicle control system 204, specifically the task management module 640, may determine if the settings are to be stored, in step 1128. If the settings are to be stored, the method 1100 proceeds YES to step 1136. If the settings are not to be stored or if there are no settings to be stored, the method 1100 proceeds NO to step 1132. In step 1132, the vehicle control system 204 can retrieve the settings in the portion 824 of the data structure 804. Retrieval of the settings may be as described in conjunction with Fig. 10. If settings are to be stored, the vehicle control system 204 can send those settings to server 228 to be stored in data storage 232, in step 1136. Data storage 232 acts as cloud storage that can be used to retrieve information on the settings from other vehicles or from other sources. Thus, the cloud storage 232 allows for permanent and more robust storage of user preferences for the settings of the vehicle 104.

[0141] An embodiment of a method 1200 for storing gestures associated with the user is shown in Fig. 12. While a general order for the steps of the method 1200 is shown in Fig. 12. Generally, the method 1200 starts with a start operation 1204 and ends with an end operation 1240. The method 1200 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 12. The method 1200 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer

readable medium. Hereinafter, the method 1200 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-11.

[0142] Vehicle control system 204 may receive sensor data from sensors 242 to determine a person is occupying a zone 312 in an area 308 of the vehicle 104, in step 1208. The sensor data may provide characteristics for the person, in step 1212. The vehicle control system 204 may then use the characteristics to determine if the person can be identified, in step 1216. The vehicle control system 204 may compare the characteristics to the features in portion 812 for the people having been recognized and having data associated therewith. If a comparison is made between the characteristics and the features in portion 812, the person can be identified, and the method 1200 proceeds YES to step 1220. If there is no comparison, the method 1200 may proceed NO to step 1224. In step 1220, the person may be identified by the vehicle control system 204. Thus, the person's features and associated data record 840 may be determined and the user identified in portion 808. If the person is not identified, the vehicle control system 204 can characterize the person by establishing a new record in data structure 804 using the characteristics, received from the sensors 242, for the features in portion 812.

[0143] Thereinafter, the vehicle control system 204 may determine if gestures are to be stored and associated with the user. The vehicle control system 204 may receive user input on a touch sensitive display 568 or some other type of gesture capture region 572 which acknowledges that the user wishes to store one or more gestures. Thus, the user may create their own gestures such as those described in conjunction with figures 7A through 7K. These gestures may then be characterized and stored in data structure 804. If there are gestures to be stored, the method 1200 proceeds YES to step 1236. If gestures are not to be stored the method 1200 may proceed NO to step 1232. In step 1232, the vehicle control system 204 can retrieve current gestures from portion 832, which are associated with user 840. These gestures may be used then to configure how the vehicle 104 will react if a gesture is received. If gestures are to be stored, the vehicle control system 204 may store characteristics as received from sensor 242 or from one more user interface inputs. These characteristics may then be used to create the stored gestures 832, in data structure 804. The characteristics may include what the gesture looks like or appears and also what affect the gesture should have. This information may then be used to change the configuration or operation of the vehicle 104 based on the gesture if it is received at a later time.

[0144] An embodiment of a method 1300 for receiving a gesture and configuring the vehicle 104 based on the gesture may be as provided in Fig. 13. While a general order for the steps of the method 1300 is shown in Fig. 13. Generally, the method 1300 starts with a start operation 1304 and ends with an end operation 1328. The method 1300 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 13. The method 1300 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1300 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-12.

[0145] A vehicle control system 204 can receive sensor data from vehicle sensors 242. The vehicle sensor data can be used by the vehicle control system 204 to determine that a person is in a zone 312 or area 308, in step 1308. The vehicle sensor data may then be used to compare against feature characteristics 812 to identify a person, in step 1312. The vehicle control system 204 thereinafter may receive a gesture, in step 1316. The gesture may be perceived by vehicle sensors 242 or received in a gesture capture, region 572. The gesture may be as described in conjunction with Fig. 7A through 7K. Upon receiving the gesture, the vehicle control system 204 can compare the gesture to gesture characteristics in portion 832, in step 1320. The comparison may be made so that a statistically significant correlation between the sensor data or gesture data and the gesture characteristic 832 is made. Upon identifying the gesture, the task management module 640 or the vehicle control system 204 can configure the vehicle 104 and/or react to the gesture, in step 1324. The configuration or reaction to the gesture may be as prescribed in the gesture characteristic 832.

[0146] An embodiment of a method 1400 for storing health data may be as shown in Fig. 14. While a general order for the steps of the method 1400 is shown in Fig. 14. Generally, the method 1400 starts with a start operation 1404 and ends with an end operation 1444. The method 1400 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 14. The method 1400 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer readable medium. Hereinafter, the method 1400 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-13.

[0147] Vehicle control system 204 can receive sensor data from sensors 242. The sensor data may be used to determine that a person is in a zone 312 or area 308, in step 1408. The sensor data may then be used to determine characteristics of the person, in step 1412. From the characteristics, the vehicle control system 204 can determine if a person may be identified in data structure 804. If the person is identified in step 1416, the method 1400 proceeds YES to step 1416. If the person cannot be identified, the method 1400 proceeds NO to step 1420. A person may be identified by matching the characteristics of a person from the sensor data to the features shown in portion 812. If these comparisons are statistically significant, the person may be identified in portion 808, in step 1416. However, if the person is not identified in portion 808, the vehicle control system 204 can characterize the person using the vehicle sensor data, in step 1420. In this way, the vehicle control system 204 can create a new record for a new user in data structure 804.

[0148] Thereinafter, the vehicle control system 204 may receive health and/or safety data from the vehicle sensors 242, in step 1424. The vehicle control system 204 can determine if the health or safety data is to be stored, in step 1428. The determination is made as to whether or not there is sufficient health data or safety parameters, in portion 828 and 836, to provide a reasonable baseline data pattern for the user 840. If there is data to be received and stored, the vehicle control system 204 can store the data for the person in portions 828 and 836 of the data structure 804, in step 1432. The vehicle control system 204 may then wait a period of time, in step 1436. The period of time may be any amount of time from seconds to minutes to days. Thereinafter, the vehicle control system 204 can receive new data from vehicle sensors 242, in step 1428. Thus, the vehicle control system 204 can receive data periodically and update or continue to refine the health data and safety parameters in data structure 804. Thereinafter, the vehicle control system 204 may optionally store the health and safety data in cloud storage 232 by sending it through the communication network 224 to the server 228, in step 1440.

[0149] An embodiment of a method 1500 for monitoring the health of a user may be as shown in Fig. 15. While a general order for the steps of the method 1500 is shown in Fig. 15. Generally, the method 1500 starts with a start operation 1504 and ends with an end operation 1524. The method 1500 can include more or fewer steps or can arrange the order of the steps differently than those shown in Fig. 15. The method 1500 can be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer

readable medium. Hereinafter, the method 1500 shall be explained with reference to the systems, components, modules, software, data structures, user interfaces, etc. described in conjunction with Figs. 1-14.

[0150] The vehicle control system 204 can receive health data from sensors 242. The health data may be received in step 1508. The vehicle control system 204 may then compare the received health data to stored health parameters in portion 828 or portion 836, in step 1512. The comparison may check if there is statistically significant separation or disagreement between the received health data and the stored health data. Thus, the vehicle control system 204 can make a health comparison of the user based on a baseline of health data previously stored. A statistically significant comparison may include determining if there are any parameters more than three statistical deviations from the average or norm, any parameter that is increasing or decreasing over a period of eight different measurements, a measurement that is more than two statistic deviations from the norm more than three measurements consecutively, or other types of statistical comparisons.

[0151] If the vehicle control system 204 determines that measured health parameter does deviate from the norm, the vehicle control system 204 can determine whether the health data is within acceptable limits, step 1516. If the health data is within acceptable limits, the method 1500 proceeds YES back to receiving new health data, in step 1508. In this way, the health data is periodically or continually monitored to ensure that the driver is in a healthy state and able to operate the vehicle. If the health data is not within acceptable parameters, the method 1500 may proceed NO to step 1520 where the vehicle control system 204 may react to the change in the health data. The reaction may include any measure to provide for the safety of the user, such as stopping the vehicle, beginning to drive the vehicle, driving the vehicle to a new location, such as a hospital, waking the driver with an alarm or other noise, or performing some other function that may help maintain the health or safety of the user.

[0152] The health data received may be a reaction from the driver. For example, the driver may call for help or ask the vehicle for assistance. For example, the driver or passenger may say that they are having a medical emergency and ask the car to perform some function to help. The function to help may include driving the person to a hospital or stopping the car and calling for emergency assistance.

[0153] Furthermore, while the exemplary aspects, embodiments, and/or configurations illustrated herein show the various components of the system collocated, certain components of the system can be located remotely, at distant portions of a distributed network, such as a LAN and/or the Internet, or within a dedicated system. Thus, it should be appreciated, that the components of the system can be combined in to one or more devices, such as a tablet-like device, or collocated on a particular node of a distributed network, such as an analog and/or digital telecommunications network, a packet-switch network, or a circuit-switched network. It will be appreciated from the preceding description, and for reasons of computational efficiency, that the components of the system can be arranged at any location within a distributed network of components without affecting the operation of the system. For example, the various components can be located in a switch such as a PBX and media server, gateway, in one or more communications devices, at one or more users' premises, or some combination thereof. Similarly, one or more functional portions of the system could be distributed between a telecommunications device(s) and an associated computing device.

[0154] Furthermore, it should be appreciated that the various links connecting the elements can be wired or wireless links, or any combination thereof, or any other known or later developed element(s) that is capable of supplying and/or communicating data to and from the connected elements. These wired or wireless links can also be secure links and may be capable of communicating encrypted information. Transmission media used as links, for example, can be any suitable carrier for electrical signals, including coaxial cables, copper wire and fiber optics, and may take the form of acoustic or light waves, such as those generated during radio-wave and infra-red data communications.

[0155] Also, while the flowcharts have been discussed and illustrated in relation to a particular sequence of events, it should be appreciated that changes, additions, and omissions to this sequence can occur without materially affecting the operation of the disclosed embodiments, configuration, and aspects.

[0156] In yet another embodiment, the systems and methods of this disclosure can be implemented in conjunction with a special purpose computer, a programmed microprocessor or microcontroller and peripheral integrated circuit element(s), an ASIC or other integrated circuit, a digital signal processor, a hard-wired electronic or logic circuit such as discrete element circuit, a programmable logic device or gate array such as PLD, PLA, FPGA, PAL, special purpose

computer, any comparable means, or the like. In general, any device(s) or means capable of implementing the methodology illustrated herein can be used to implement the various aspects of this disclosure. Exemplary hardware that can be used for the disclosed embodiments, configurations and aspects includes computers, handheld devices, telephones (e.g., cellular, Internet enabled, digital, analog, hybrids, and others), and other hardware known in the art. Some of these devices include processors (e.g., a single or multiple microprocessors), memory, nonvolatile storage, input devices, and output devices. Furthermore, alternative software implementations including, but not limited to, distributed processing or component/object distributed processing, parallel processing, or virtual machine processing can also be constructed to implement the methods described herein.

[0157] In yet another embodiment, the disclosed methods may be readily implemented in conjunction with software using object or object-oriented software development environments that provide portable source code that can be used on a variety of computer or workstation platforms. Alternatively, the disclosed system may be implemented partially or fully in hardware using standard logic circuits or VLSI design. Whether software or hardware is used to implement the systems in accordance with this disclosure is dependent on the speed and/or efficiency requirements of the system, the particular function, and the particular software or hardware systems or microprocessor or microcomputer systems being utilized.

[0158] In yet another embodiment, the disclosed methods may be partially implemented in software that can be stored on a storage medium, executed on programmed general-purpose computer with the cooperation of a controller and memory, a special purpose computer, a microprocessor, or the like. In these instances, the systems and methods of this disclosure can be implemented as program embedded on personal computer such as an applet, JAVA® or CGI script, as a resource residing on a server or computer workstation, as a routine embedded in a dedicated measurement system, system component, or the like. The system can also be implemented by physically incorporating the system and/or method into a software and/or hardware system.

[0159] Although the present disclosure describes components and functions implemented in the aspects, embodiments, and/or configurations with reference to particular standards and protocols, the aspects, embodiments, and/or configurations are not limited to such standards and protocols. Other similar standards and protocols not mentioned herein are in existence and are

considered to be included in the present disclosure. Moreover, the standards and protocols mentioned herein and other similar standards and protocols not mentioned herein are periodically superseded by faster or more effective equivalents having essentially the same functions. Such replacement standards and protocols having the same functions are considered equivalents included in the present disclosure.

[0160] The present disclosure, in various aspects, embodiments, and/or configurations, includes components, methods, processes, systems and/or apparatus substantially as depicted and described herein, including various aspects, embodiments, configurations embodiments, subcombinations, and/or subsets thereof. Those of skill in the art will understand how to make and use the disclosed aspects, embodiments, and/or configurations after understanding the present disclosure. The present disclosure, in various aspects, embodiments, and/or configurations, includes providing devices and processes in the absence of items not depicted and/or described herein or in various aspects, embodiments, and/or configurations hereof, including in the absence of such items as may have been used in previous devices or processes, e.g., for improving performance, achieving ease and\or reducing cost of implementation.

[0161] The foregoing discussion has been presented for purposes of illustration and description. The foregoing is not intended to limit the disclosure to the form or forms disclosed herein. In the foregoing Detailed Description for example, various features of the disclosure are grouped together in one or more aspects, embodiments, and/or configurations for the purpose of streamlining the disclosure. The features of the aspects, embodiments, and/or configurations of the disclosure may be combined in alternate aspects, embodiments, and/or configurations other than those discussed above. This method of disclosure is not to be interpreted as reflecting an intention that the claims require more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive aspects lie in less than all features of a single foregoing disclosed aspect, embodiment, and/or configuration. Thus, the following claims are hereby incorporated into this Detailed Description, with each claim standing on its own as a separate preferred embodiment of the disclosure.

[0162] Moreover, though the description has included description of one or more aspects, embodiments, and/or configurations and certain variations and modifications, other variations, combinations, and modifications are within the scope of the disclosure, e.g., as may be within the skill and knowledge of those in the art, after understanding the present disclosure. It is intended

to obtain rights which include alternative aspects, embodiments, and/or configurations to the extent permitted, including alternate, interchangeable and/or equivalent structures, functions, ranges or steps to those claimed, whether or not such alternate, interchangeable and/or equivalent structures, functions, ranges or steps are disclosed herein, and without intending to publicly dedicate any patentable subject matter.

[0163] The embodiments can include a method, comprising: automatically determining a person is within a vehicle; automatically identifying the person; determining if there is a setting to be stored for the person; and storing the setting. The method further comprises determining if the person can be identified; and, if the person cannot be identified, characterizing the person. Automatically determining a person is within a vehicle can comprise receiving sensor data from at least one sensor that indicates the person is within the vehicle. Also, automatically identifying the person comprises comparing the sensor data to feature data in a data structure; and determining if the sensor data is substantially similar to the feature data, wherein determining if there is a setting to be stored for the person comprises determining if the person has made a setting, and wherein determining if there is a setting to be stored for the person further comprises waiting a period of time to determine if the settings have achieved a steady state. The setting can be stored in cloud storage. The setting can be one or more of, but is not limited to, a position of a seat, a position of a mirror, a heat or cold setting, a configuration of a console, a configuration of a dash, a configuration of a heads up display, or a setting for a radio. The person in the vehicle can occupy an area or zone within the vehicle, and wherein the setting is associated with the person in the area or zone.

[0164] Embodiments can further include: a vehicle system, comprising one or more sensors and a vehicle control system. The vehicle control system can comprise a processor and a memory, wherein the processor is operable to: receive sensor data from the one or more sensors; based on the sensor data, automatically determine a person is within a vehicle; based on the sensor data, automatically identify the person; determine if the person has made a setting; and store the setting. The sensor data may be an image of the person and the processor can match the image to a stored image in a data structure. The sensor data can also be voice data from the person and the processor is operable to match the voice data to stored voice data in a data structure.

[0165] Embodiments may further include a computer readable medium having stored thereon computer-executable instructions, the computer-executable instructions comprising: instructions to receive sensor data from the one or more sensors; based on the sensor data, instructions to automatically determine a person is within a vehicle; based on the sensor data, instructions to automatically identify the person; instructions to retrieve one or more settings associated with the identified person; and instructions to automatically configure the vehicle according to the retrieved settings. Automatically determining the person is within a vehicle can comprise instructions to determine an area or zone in which the person occupies, wherein the settings retrieved are associated with the determined area or zone, wherein the settings are retrieved from a data structure, and wherein the data structure is stored in cloud storage.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/679,204

APPLICATION AS FILED - PART I

	(Column 1)	(Column 2)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE($)	FEE($)		RATE($)	FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	390
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	620
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	250
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*			OR	x 62 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*				x 250 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1260

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1)		(Column 2)	(Column 3)					
		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/679,204	11/16/2012	2835	1390	6583-318	20	3

CONFIRMATION NO. 3693

UPDATED FILING RECEIPT

111285
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

OC000000059505282

Date Mailed: 02/28/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Christopher P. Ricci, Saratoga, CA;

Applicant(s)

Flextronics AP, LLC, Milpitas, CA

Assignment For Published Patent Application

FLEXTRONICS AP, LLC, Milpitas, CA

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/560,509 11/16/2011
and claims benefit of 61/637,164 04/23/2012
and claims benefit of 61/646,747 05/14/2012
and claims benefit of 61/653,275 05/30/2012
and claims benefit of 61/653,264 05/30/2012
and claims benefit of 61/653,563 05/31/2012
and claims benefit of 61/663,335 06/22/2012
and claims benefit of 61/672,483 07/17/2012
and claims benefit of 61/714,016 10/15/2012
and claims benefit of 61/715,699 10/18/2012

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 12/10/2012

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/679,204**

Projected Publication Date: 06/06/2013

Non-Publication Request: No

Early Publication Request: No

Title

FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

Preliminary Class

361

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PTO/AIA/82A (07-12)

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Application Number	13/679,204
Filing Date	November 16, 2012
First Named Inventor	Christopher P. Ricci
Title	Feature Recognition for Configuring a Vehicle Console and Associated Devices
Art Unit	3667
Examiner Name	TRAMMELL, James P.
Attorney Docket Number	6583-318

SIGNATURE of Applicant or Patent Practitioner

Signature	/Tadd F. Wilson/	Date	March 27, 2013
Name	Tadd F. Wilson	Telephone	303-863-9700
Registration Number	54544		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications.

■ *Total of 2 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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I am the Applicant:

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☐ Legal Representative of a Deceased or Legally Incapacitated Inventor

☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (*e.g.*, a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document)

SIGNATURE of Applicant for Patent

Signature	Timothy L. Stewart	Date	03/26/2013
Name	Timothy L. Stewart	Telephone	408-576-7746
Title and Company	Secretary, Flextronics AP, LLC		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms for more than one signature, see below *

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EFS ID:	15370460
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Tadd Fjelp Wilson/Amy Duarte
Filer Authorized By:	Tadd Fjelp Wilson
Attorney Docket Number:	6583-318
Receipt Date:	27-MAR-2013
Filing Date:	16-NOV-2012
Time Stamp:	17:11:23
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	2013-03-27_FlexAP_GenPOA.pdf	593009 d2d721d0ecc78cc25b3d4673baae13af45fde4d7	no	2

Warnings:	
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13/679,204	11/16/2012	Christopher P. Ricci	6583-318

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POA ACCEPTANCE LETTER

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NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/27/2013.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/agizaw/

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PLUS Search Results for S/N 13679204, Searched Tue May 28 15:12:05 EDT 2013

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The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

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(54) Automatic setting of a motor vehicle performance profile

(57) An electronic motor vehicle control system (8) is described, wherein the motor vehicle (1) is provided with automotive systems comprising an engine and a user interface (3) comprising a wireless communication module (4) configured to automatically detect and/or identify personal portable wireless communication devices (5) within its communication field. The electronic motor vehicle control system (8) comprises an electronic control unit (10) for automatically setting a performance profile of the automotive systems, which is configured to store performance data defining a series of performance profiles (P_1, P_2, P_3) of the automotive systems, and to implement a control mode of the automotive systems so as to obtain one of said various, predetermined performance profiles (P_1, P_2, P_3) according to the detection and/or identification.

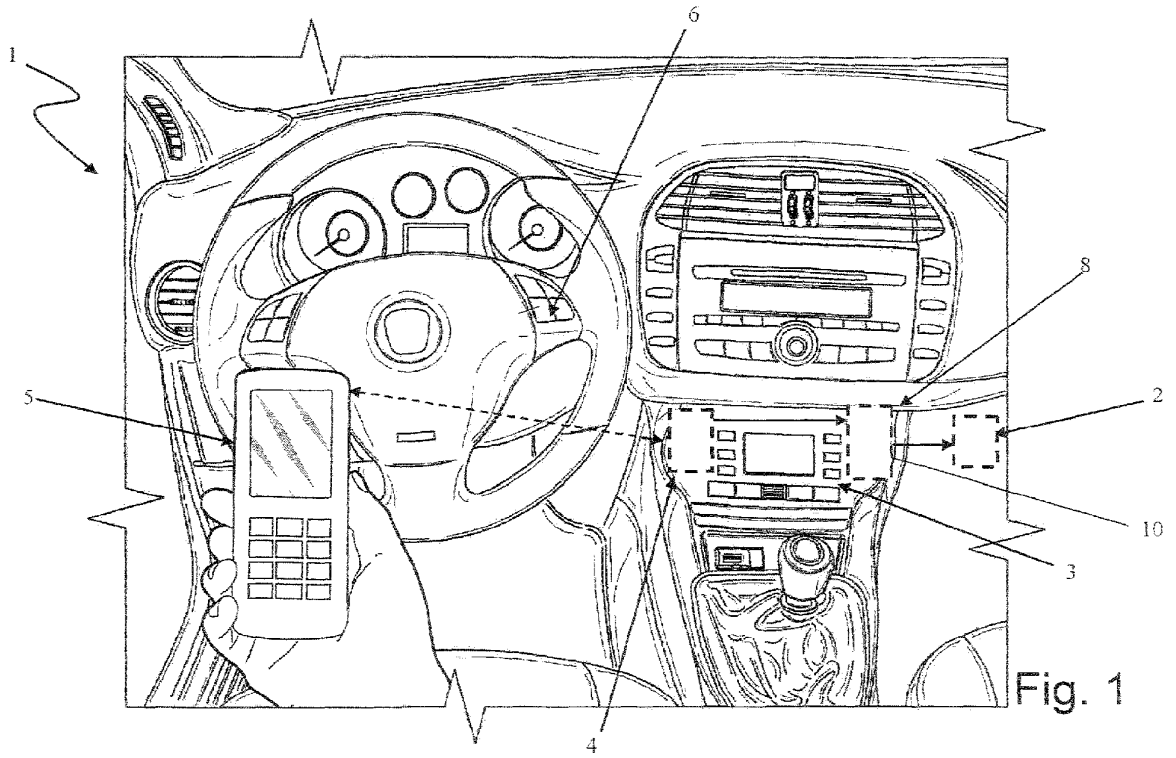


Fig. 1

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Description

[0001] The present invention relates to the automatic setting of a motor vehicle performance profile.

[0002] As known, in automotive field, the designing related to the functions performable by the driver or by the passengers aboard the motor vehicle is increasingly directed to solutions characterized by a high level of interactivity between driver, passengers, motor vehicle and outside world.

[0003] Specifically, the control that the driver and the passengers can perform on the motor vehicle functions, such as, for example, controlling the climate control system, the sound system etc., and on the interaction of the motor vehicle with the outside world, such as, for example, managing phone calls made using the mobile phone and their overlay with the music listening, managing information from the onboard computer, interacting with the onboard satellite navigator etc., is constantly increasing.

[0004] For this purpose, modern motor vehicles are provided with Human Machine Interfaces (HMI) by means of which a user, either the driver or a passenger, can interact with the onboard systems, such as for example entering a destination in the satellite navigator, an address or a phone number in a directory of a hands-free onboard system for managing mobile phone calls etc.

[0005] The Blue&Me™ infotainment system, for example, is a infotelematic onboard communication and entertainment system for vehicles, developed by the applicant, which offers Bluetooth connectivity, USB and a hands-free phone kit, which may be completely operated by means of voice controls. Specifically, the Blue&Me™ system allows the driver and the passengers to use personal devices, such as mobile phones, PDAs, music players or external hard disks, without requiring to use the controls of such devices, so as to make their use more convenient and less dangerous while driving.

[0006] For this purpose, the Blue&Me™ system is provided with a voice recognition system which allows to access most of the functions, either by means of voice controls, or by using buttons arranged on the car steering wheel. The data exchange between the personal devices and the Blue&Me™ system typically occurs by means of a Bluetooth communication system, which is structured to connect the mobile phones and PDAs to the system platform.

[0007] Furthermore, a maximum speed limiting function has been recently introduced in some medium-to-high range vehicles and some commercial vehicles in order to improve occupants' safety.

[0008] Specifically, such vehicles are provided with a speed limiting control system, generally separate from the infotelematic onboard systems, which allows the driver, by means of appropriate controls, to activate/deactivate the speed limiter and to set the desired limit speed which may not be exceeded by the vehicle as long as the speed limiter is on.

[0009] In the aforesaid vehicles, the use of the speed limiting control system is thus completely at the driver's discretion, who is free to activate and deactivate the speed limiter and set the limit speed as desired.

[0010] The aforesaid solution is particularly disadvantageous if the vehicle is used by several users and there is a need to associate a particular performance profile of the vehicle with a user, e.g. on the basis of the user's skills and driving experience, and to ensure that the performance profile associated with the user is actually implemented whenever he/she is driving the vehicle.

[0011] If, for example, a vehicle provided with a speed limiting control system of known type is used both by a driver of long driving experience and by a driver of little driving experience, the speed limiter may be activated and a driving profile which suits the least expert driver may be set, e.g. which limits the vehicle speed, but it may not be ensured that the least expert driver will actually activate and set the speed limiter when he/she is driving the vehicle.

[0012] A need is therefore felt to make a motor vehicle control system which is able to set a motor vehicle performance profile in a completely automatic manner according to the driver of the vehicle itself.

[0013] Such a need is met by the present invention as it relates to an electronic motor vehicle control system, as defined in the appended claims.

[0014] For a better understanding of the present invention, a preferred embodiment will now be described by way of non-limiting example only, and with reference to the accompanying drawings, in which:

- Figure 1 diagrammatically shows a motor vehicle passenger compartment provided with a motor vehicle control system made according to the dictates of the present invention; while
- figure 2 shows a flow chart of the operations implemented by the system for automatically setting a motor vehicle performance profile.

[0015] With reference to figure 1, numeral 1 indicates as a whole a motor vehicle (of which the passenger compartment is only shown for descriptive simplicity), which is provided with a series of automotive systems comprising: an internal combustion engine of known type (not shown), which is controlled by a corresponding electronic engine control unit 2, and a human-machine interface which, in the example shown, corresponds to a infotelematic system 3.

[0016] The internal combustion engine and the electronic engine control unit 2 are known and therefore will not be illustrated further, while the infotelematic system 3 is adapted to allow a user, either the driver or a passenger, to interact with one or more electronic onboard systems (not shown) for imparting commands for selecting some functions made available by the system themselves.

[0017] Specifically, the infotelematic system 3 is struc-

tured to allow the user to enter a destination in the satellite navigator (not shown) and/or an address or a phone number in a directory of a hands-free onboard system for managing mobile phone calls and/or carrying out similar functions.

[0018] In this case, in the example shown in figure 1, the infotelematic onboard system 3 comprises: at least one wireless communication module 4 able to actuate, within its own communication field, a wireless connection with personal, portable communication devices 5, i.e. associated with a person, specifically to the driver of the motor vehicle 1, and a plurality of buttons 6 placed, for example, on the steering wheel of the motor vehicle 1, for allowing the user to impart commands to the infotelematic system 3 and/or to select the functions of the portable communication devices 5.

[0019] Moreover, the infotelematic system 3 preferably but not necessarily comprises a voice recognition system (not shown), which similarly to the buttons 6 allows the user to control some functions of the personal, portable communication devices 5 by means of voice controls, while the wireless communication module 4 is able to establish a wireless radio-frequency connection, according to the known Bluetooth communication protocol, with a personal, portable communication device 5, which may correspond, for example, to a mobile phone (shown in figure 1), and/or to a PDA or any similar portable wireless communication device.

[0020] The wireless communication module 4 is structured to actuate a pairing operation with the portable communication device 5. During the pairing operation, the wireless communication module 4, in virtue of the known Bluetooth communication protocol architecture, receives a Bluetooth name or code from the portable communication device 5, which univocally identifies the portable communication device 5 itself.

[0021] The motor vehicle 1 further comprises an electronic control system 8, which is provided, in turn, with an electronic control unit 10, which cooperates with the wireless communication module 4 to receive a detection signal and/or the user code of the portable communication device 5 therefrom, and is adapted to process it so as to be able to determine a condition of presence and/or absence of the portable communication device 5 and/or to identify the portable communication device 5 itself.

[0022] The electronic control unit 10 is further structured to automatically set a performance profile of the automotive systems corresponding to the above-described engine and/or infotelematic system 3.

[0023] Specifically, the electronic control unit 10 is configured to store performance data defining a series of performance profiles of the engine and/or of the infotelematic system 3, and to implement a control mode of the motor itself so as to obtain one of the various, predetermined engine performance profiles according to the condition of detection and/or identification of the portable communication device 5.

[0024] The electronic control unit 10 may be further configured to store performance data defining a series of performance profiles of the infotelematic system 3, and to implement a control mode of the infotelematic system 3, so as to obtain one of the various, predetermined performance profiles of the infotelematic system 3 according to the condition of detection and/or identification of the portable communication device 5.

[0025] The flow chart depicted in figure 2 shows the various operative steps implemented by the electronic control unit 10 of the electronic control system 8 to automatically set a performance profile of an automotive system corresponding to the engine of the motor vehicle 1, according to the detection and/or the identification of a portable wireless communication device 5.

[0026] The electronic control system 8 may include an operation of configuring the electronic control unit 10 and configuring the infotelematic system 3 (block 100).

[0027] Specifically, the aforesaid step of configuring includes:

- storing at least a database DAT_1 in the electronic control unit 10, containing:

- a series of performance data or information defining a main performance profile P_1, which allows to completely exploit the motor vehicle performance, adapted, for example, to an expert driver; and a series of performance data or information defining one or more secondary performance profiles P_2, adapted to limit the performance of the motor vehicle 1 with respect to the performance associated with the main performance profile P_1 and adapted, for example, to a least expert driver; and
- a series of performance data or information defining the engine control modes, required to obtain the main P_1 and secondary P_2 performance profiles.

[0028] Specifically, each secondary performance profile P_2 may be configured so as to limit vehicle engine performance. For example, each secondary performance profile P_2 may be configured to limit the maximum speed which may be reached by the vehicle and/or the delivered power and/or the driving torque generated by the engine below a predetermined limit threshold S1. In other words, each secondary performance profile P_2 is a profile which allows one or more characteristic quantities related to engine performance to have a value either lower than or equal to the predetermined limit threshold S1.

[0029] With regard to the main performance profile P_1, it may be, for example, configured so as not to limit any performance that the vehicle engine is able to obtain, and to thus allow the driver of the vehicle to fully exploit the potentials of the engine itself. In other words, the main performance profile P_1 is a profile which allows one or more characteristic quantities of the engine related with engine performance to reach and freely exceed the predetermined limit threshold S1.

[0030] More in detail, said performance data, i.e. the information related to the engine control modes required for achieving the main P_1 and secondary P_2 performance profiles, could be for example information related to control modes for opening the injectors according to the amount of fuel which needs to be injected into the engine cylinders to obtain the performance profiles P_1 or P_2.

[0031] Preferably, but not necessarily, the performance profile that the electronic control unit 10 implements if the driver is not detected and/or not recognized when keying the motor vehicle 1 on is a performance profile which may coincide with a reduced performance profile P_3 in which the engine performance is lower than the performance of the main P_1 and secondary P_2 performance profiles.

[0032] Specifically, the reduced performance profile (P_3) is a profile which allows a characteristic quantity related with the engine performance to have a value either lower than or equal to a second threshold (S2), lower than the first, predetermined maximum threshold (S1).

[0033] For example, the reduced performance profile P_3 may be associated with an engine performance limitation corresponding to an anti-theft condition, in which the maximum speed of the motor vehicle 1 is highly reduced.

[0034] The system 8 further includes assigning performance profiles (block 110) to the drivers of the motor vehicle 1.

[0035] During this step, the electronic control unit 10 stores the following data in a database DAT_2 preferably but not necessarily contained therein:

a) Bluetooth names or identification codes C_{id}, each of which is univocally associated with a portable communication device 5;
b) a series of information related to the association between each identification code C_{id} and a corresponding performance profile P_1 or P_2; and
c) a series of information related to the reduced performance profile P_3, not associated with any driver identification code C_{id}, i.e. to a performance profile that the electronic control unit of the engine must implement if the system 8, upon the key-on, does not identify any portable communication device 5.

[0036] Specifically, step a) includes the aforesaid pairing operation between each of the portable communication devices 5 belonging to the "potential" drivers of the motor vehicle 1 and the infotelematic system 3.

[0037] During the pairing operation, the electronic control unit 10 thus receives the identification codes C_{id} from the wireless communication module 4 and stores them in the database DAT_2 in the form of a list of data related to the identifiable, portable communication devices 5, in which the users are intended to be recognized by the system 8 as the drivers adapted to have a predetermined engine performance profile.

[0038] More in detail, step a) includes that the system 8, during identification, assigns a privileged function as "system administrator" to the user/driver of one of the portable devices 4, which allows the driver associated with the portable communication device 5 itself to be able to establish and/or modify the association between each identification code C_{id} present in the list stored in the system 8 and the corresponding performance profile.

[0039] In this case, during the first pairing carried out between the portable communication device 5 and the infotelematic system 3, the system 8 assigns a privileged function as "system administrator" to the portable communication device 5 itself in a completely automatic manner, which thus allows the driver to be able to define all the performance profiles to be assigned to the identification codes C_{id} present in the list contained in the database DAT_2.

[0040] Furthermore, the step of automatically assigning the administrator function to a portable communication device 5 by the system 8 could preferably, but not necessarily, implement a step of authenticating the driver, which includes both receiving the identification code C_{id} from the portable communication device 5 by means of the wireless communication module, as noted above, and receiving a predetermined authentication code C_a stored in the database DAT_2.

[0041] The driver could conveniently be requested to provide such an authentication code C_a by the system 8 in order to ensure that the driver identified during the first pairing is actually the driver authorized to perform the system administrator function.

[0042] Additionally, the step of assigning the system administrator function to the driver could include storing a supplementary identification code C_s in the database DAT_2 of the system 8, adapted to allow the user having the privileged administrator function to be able to perform the operations associated with the function itself, in case of absence of the corresponding portable communication device 5, and/or in the case of interruption of the Bluetooth connection, and/or in the case of impossibility to complete the recognition of the corresponding portable communication device 4.

[0043] With regard to the above, it is worth mentioning that the setting of the authentication code C_a and/or the communication of the supplementary identification code C_s by the user may be performed by means of the buttons 6 and/or by means of the voice recognition system included in the infotelematic system 3.

[0044] The step b) of associating the performance profiles with the vehicle drivers includes that, after storing the list of the identification codes C_{id} of the portable communication devices 5, the driver enabled for the function of system administrator selects, e.g. by means of a configuration menu displayed by the infotelematic system 3, the various identification codes C_{id} of the portable communication devices 5 contained in the list itself and establishes an association with a main P_1 or secondary P_2 performance profile for each of them. In this case, during this step, the driver associates either a main performance

profile P_1 or a secondary performance profile P_2 with each identification code C_{id}. It is worth specifying that while the main performance profile P_1 is univocal and does not include any engine performance limitation, the secondary performance profiles P_2 may be reciprocally different and include, for example, various limitation thresholds of the maximum speed which may be reached by the vehicle.

[0045] From the above, it is worth underlining that the possibility of establishing/modifying the association between an identification code C_{id} and a performance profile is reserved to the driver with privileged function as system administrator, while the remaining drivers, indeed associated with the identification codes C_{id} which not correspond to the function as system administrator, are not enabled to perform the aforesaid operations.

[0046] Once the step of configuring and assigning the performance profiles has finished, the electronic control system 8 is able to implement the following operations for automatically setting a performance profile of the engine of the motor vehicle 1 whenever a driver inserts the engine ignition key and keys on.

[0047] Specifically, with reference to figure 2, when a driver keys on (YES option of block 120), the infotelematic system 3 performs the coupling, i.e. pairing (block 130), with the portable communication device 5 carried by the driver present in the vehicle passenger compartment 1.

[0048] It is worth mentioning that if several portable communication devices 5 are present inside the passenger compartment 1 of the vehicle, the infotelematic system 3 may be configured so as to privilege the pairing with the "driver's" portable communication device 5 and exclude the implementation of the same operation with the remaining portable communication devices 5 present aboard the vehicle itself.

[0049] Specifically, during this step, the wireless communication module 4 carries out a Bluetooth communication with the portable communication device 5 and communicates the corresponding identification code C_{id} to the electronic control unit 10.

[0050] The electronic control unit 10 compares the identification code C_{id} with the identification codes C_{id} present in the list stored in the database DAT_2 and, if the read identification code C_{id} corresponds to one of the stored identification codes (YES option of block 140), the electronic unit 10 of the system 8 selects the performance profile P_1 or P_2 associated with the identification code C_{id} (block 150) from the basis of the database DAT_2, and sends a control signal containing the information related to the selected performance profile to the electronic engine control unit 2.

[0051] On the basis of the information contained in the control signal, the electronic engine control unit 2 implements the engine control mode which allows to obtain the selected performance profile P_1 or P_2 associated with the driver (block 160).

[0052] If the driver is not provided with a portable communication device 5 recognizable by the system 8 (NO option of block 140), and/or if the Bluetooth communication for the recognition is not correctly completed and consequently the identification procedure is not successful (NO option of block 170), e.g. either because the read identification code C_{id} does not correspond to any code stored in the database DAT_2, or because the driver having the function as system administrator has inserted an incorrect supplementary identification code C_s, the electronic control unit 10 of the system 8 selects the performance profile not associated with any identification code, i.e. corresponding to the reduced performance profile P_3, from the database DAT_2. On the basis of the information contained in the control signal, the electronic control unit of the engine 2 implements the engine control mode which allows to obtain the selected, reduced performance profile (block 180).

[0053] Instead, if the driver having the function as system administrator is not provided with the portable communication device 5, but has inserted the correct supplementary identification code C_s (YES option of block 170), then the electronic control unit 10 of the system 8 selects the main performance profile P_1 from the database DAT_2 (block 200).

[0054] With regard to the above description, it is worth mentioning that the implementation of the performance profile of blocks 160, 200 and 180 essentially provides for the electronic control unit 10 of the system 8 sending the control signal containing the information related to the identified performance profile to the electronic engine control unit 2 so that the electronic engine control unit 2 itself, on the basis of the received information, controls the motor vehicle engine according to the performance profile itself.

[0055] With regard to the above description, it is worth noting that, as mentioned above, the electronic control system 8 may be able to store a series of data defining the performance profiles associated with the infotelematic system 3 and implement a control mode of the infotelematic system 3 so as to obtain one of the various, predetermined performance profiles of the infotelematic system 3 itself, according to the condition of detection and/or identification of the portable communication device 5.

[0056] In this case, the electronic control unit 10 implements operations similar to those described in blocks 100-200 in which the main P_1, secondary P_2 and reduced P_3 performance profiles, instead of being associated with the engine, are associated with the functions of the infotelematic system 3 at respective accessibility conditions. Specifically, the main performance profile P_1 may provide for the detected and/or identified driver being able to completely access the available functions of the infotelematic system 3; the secondary performance profile P_2 may provide for the detected and/or identified driver being able to either completely or partially access the available functions of the infotelematic system 3; while, if no driver is either detected or identified, the reduced performance profile P_3 may provide for the driver not being able to

access the available functions of the infotelematic system 3, or being only able to access the system in a restricted manner. It is apparent that in this case, instead of controlling the engine control unit 2, the electronic control unit 2 controls the various performance profiles by means of an electronic control module (not shown) included in the infotelematic system 2.

[0057] With regard to the description above, it is worth adding that, according to a different embodiment, the electronic control system 8 may be able to store a series of data defining performance profiles associated with a gearbox of the motor vehicle of automatic or semi-automatic type (not shown) and implement a control mode of the gearbox itself so as to obtain one of the various, predetermined performance profiles of the gearbox itself, according to the condition of detection and/or identification of the portable communication device 5.

[0058] In this case, the electronic control unit 10 implements operations similar to those described in blocks 100-200, wherein the main P_1, secondary P_2 and reduced P_3 performance profiles, instead of being associated with the engine, are associated with respective actuating conditions of the gearbox. Specifically, the main performance profile P_1 may provide for the detected and/or identified driver being able to access all the gearbox actuating modes without any restriction; the secondary performance profile P_2 may provide for the detected and/or identified driver being able to completely or partially access the gearbox actuating modes; while if the driver is not detected or not identified, the reduced performance profile P_3 may provide for the driver being only able to actuate the gearbox in a highly restricted manner. It is apparent that in this case, instead of controlling the engine control unit, the electronic control unit 10 controls the various performance profiles by means of an electronic control module (not shown) of the gearbox.

[0059] From an examination of the features of the present invention, the advantages that it allows to obtain are apparent.

[0060] The association of a specific performance profile with a driver and the driver identification procedure when keying on allow to considerably increase the level of safety of the driver and of the passengers, because they avoid leaving the possibility of activating a speed limiting device or not at the driver's complete discretion, and they ensure the actual implementation of the specific performance profile associated with the driver who is driving the vehicle.

[0061] Furthermore, the use of an infotelematic onboard system, with which the vehicle is already equipped, for controlling the setting of engine performance profiles does not require the addition of auxiliary control systems and/or devices aboard the vehicle.

[0062] Furthermore, the assigning of the privileged function as system administrator to one of the drivers allows to establish a configuration of the profiles to be assigned to different vehicle drivers which may be easily modified in an extremely simple, versatile, yet safe manner.

[0063] It is finally apparent that modifications and variations may be made to the system described and illustrated herein, without departing from the scope of protection of the present invention, as defined in the appended claims.

Claims

1. An electronic motor vehicle control system (8);
said motor vehicle (1) being provided with automotive systems comprising an engine and user interface means (3) comprising wireless communication means (4) configured to automatically detect and/or identify personal portable wireless communication devices (5) within its communication field;
said electronic motor vehicle control system (8) being **characterized in that** it comprises means for automatically setting a performance profile of the automotive systems (10), which are configured to store performance data defining a series of performance profiles (P_1, P_2, P_3) of said automotive systems, and to implement a control mode of said automotive systems so as to obtain one of said various predetermined performance profiles (P_1, P_2, P_3) according to said detection and/or identification.

2. A system according to claim 1, wherein said performance data define a series of engine performance profiles, and wherein said means for automatically setting a performance profile of the automotive systems (10) are configured to implement an engine control mode so as to obtain one of said various, predetermined engine performance profiles (P_1, P_2, P_3) in response to said detection and/or identification.

3. A system according to claim 2, wherein said means for automatically setting a performance profile of the automotive systems (10) are configured so as to send a first control signal of a control mode related to a reduced performance profile (P_3) to an electronic engine control unit (2) when said personal portable wireless communication device (5) is not identified and/or detected.

4. A system according to claim 3, wherein said means for automatically setting a performance profile of the automotive systems (10) are configured to send:

   a second control signal of an engine control mode related to a main performance profile (P_1) of the vehicle associated with a first driver of the vehicle; or
   a third control signal of an engine control mode related to a secondary performance profile (P_2) of the vehicle associated with at least one second driver of the motor vehicle,

to said electronic engine control unit (2) when said detection and/or identification is performed.

5. A system according to claim 4, wherein said main performance profile (P_1) is a profile which allows a characteristic quantity of said engine related with the engine performance to reach and exceed a first predetermined maximum threshold (S1).

6. A system according to claim 4 or 5, wherein said secondary performance profile (P_2) is a profile which allows a characteristic quantity of said engine related to the engine performance to have a value either lower than or equal to said first predetermined maximum threshold (S1).

7. A system according to claim 4, 5 or 6, wherein said reduced performance profile (P_3) is a profile which allows a characteristic quantity related to the performance of said engine to have a value either lower than or equal to a second threshold (S2) lower than said first predetermined maximum threshold (S1).

8. A system according to any one of the claims from 5 to 7, wherein said characteristic quantity of the vehicle engine performance is at least one of a vehicle speed, a delivered power and a driving torque generated by the engine.

9. A system according to any one of the claims from 4 to 8, wherein said means for automatically setting a performance profile of the automotive systems (10) are configured for:

implementing an identification procedure of said portable communication device (5), and
sending the second or third control signal to said electronic engine control unit (2) when either said first or said second driver is identified, respectively.

10. A system according to claim 9, wherein said means for automatically setting a performance profile of the automotive systems (10) are configured to send said first control signal to the electronic engine control unit (2) if no driver is identified.

11. A system according to any one of the claims from 3 to 10, wherein said means for automatically setting a performance profile of the automotive systems (10) are configured to assign to said first driver a privileged function as system administrator of said secondary performance profile (P_2) assigned to said at least one second driver.

12. A system according to any one of the preceding claims, wherein said interfacing means (3) are able to actuate a Bluetooth communication with said portable communication device (5).

13. A system according to any one of the preceding claims, wherein said portable communication device (5) is a mobile phone.

14. A system according to any one of the preceding claims, wherein said user interface means (3) comprise an infotelematic system; said performance data defining a series of performance profiles of said infotelematic system; said means for automatically setting a performance profile of the automotive systems (10) are configured to implement a control mode of said infotelematic system so as to obtain one of said various, predetermined performance profiles (P_1, P_2, P_3) according to said detection and/or identification.

15. A system according to claim 14, wherein said means for automatically setting a performance profile of the automotive system (10) are configured to send control signals to said infotelematic system for activating or deactivating the functions of the infotelematic system according to said detection and/or said identification.

16. A system according to claim 15, wherein said main performance profile (P_1) provides for the detected and/or identified driver being completely able to access the available functions of said infotelematic system; while the secondary performance profile (P_2) may provide for the detected and/or identified driver being able to either completely or partially access the available functions of the infotelematic system.

17. A system according to claim 16, wherein if no driver is detected or identified, said reduced performance profile (P_3) may provide for the driver not being able to access the available functions of said infotelematic system (3), or being able to access them in a restricted form only.

18. A system according to any one of the preceding claims, wherein said automotive systems comprise an automotive gearbox; said performance data defining a series of performance profiles of said automotive gearbox; said means for automatically setting a performance profile of the automotive systems (10) being configured to implement a control mode of said automotive gearbox so as to obtain one of said various, predetermined performance profiles (P_1, P_2, P_3) according to said detection and/or identification.

19. A system according to claim 18, wherein said main performance profile (P_1) may provide for the detected and/or identified driver being able to access all actuating modes of the gearbox without any restriction; said secondary performance profile (P_2) may

provide for the detected and/or identified driver being able to either completely or partially access the actuating modes of the gearbox.

20. A system according to claim 18, wherein if no driver is detected or identified, said reduced performance profile (P_3) may provide for the driver being able to actuate said automotive gearbox in a restricted form.

21. A motor vehicle (1) comprising automotive systems comprising an engine and user interface means (3) comprising wireless communication means (4) configured to automatically detect and/or identify personal portable wireless communication devices (5) within its communication field; said motor vehicle (1) being **characterized in that** it comprises an electronic control system (8) made according to any one of the preceding claims.

22. A computer product which may be loaded into the memory of an electronic motor vehicle control system(8); said motor vehicle (1) being provided with automotive systems comprising an engine and user interface means (3) comprising wireless communication means (4) configured for automatically detecting and/or identifying personal portable wireless communication devices (5) within its own communication field; said computer product being configured so that said motor vehicle control system (8) works, when run, according to any one of the claims from 1 to 20.

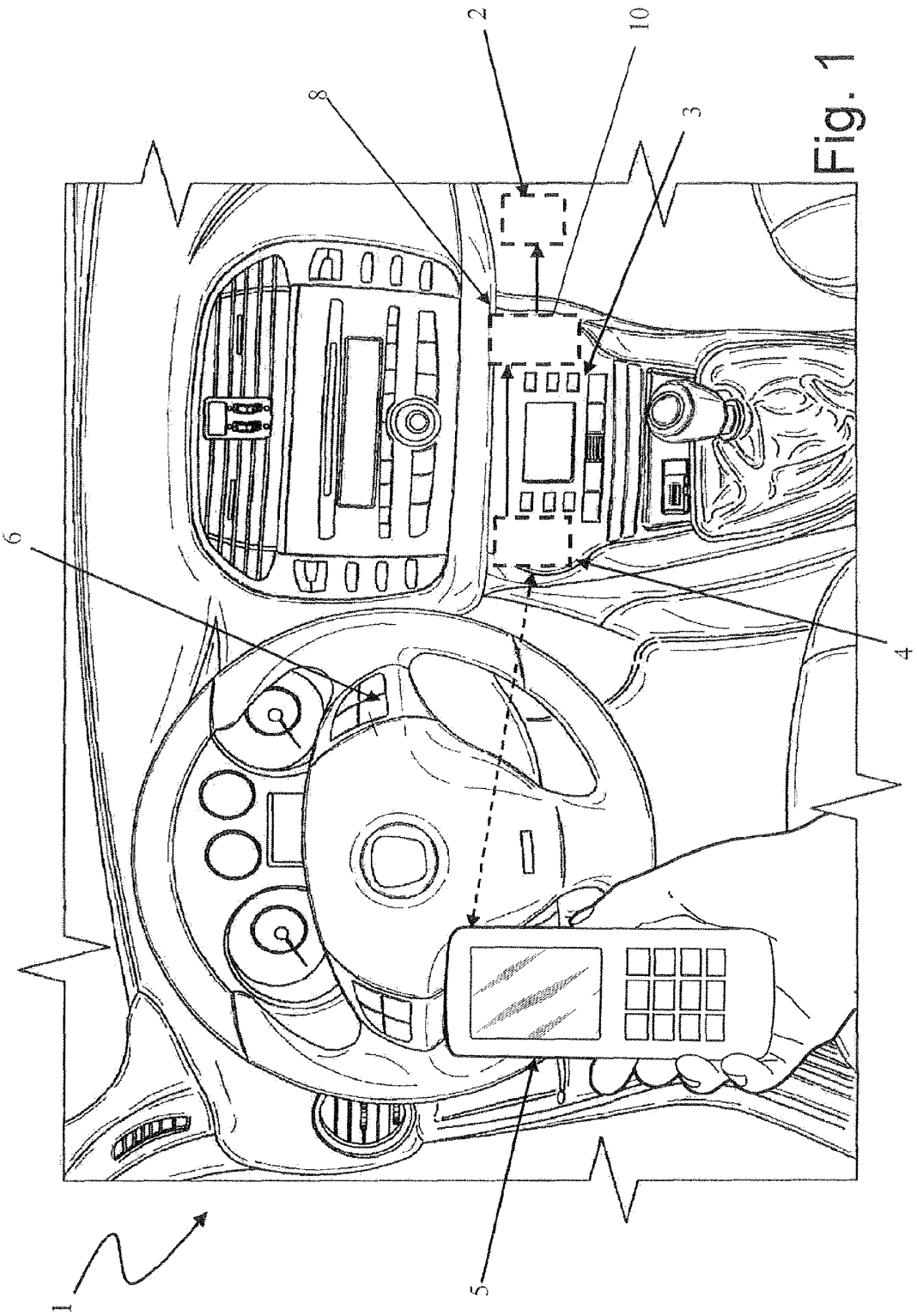


Fig. 1

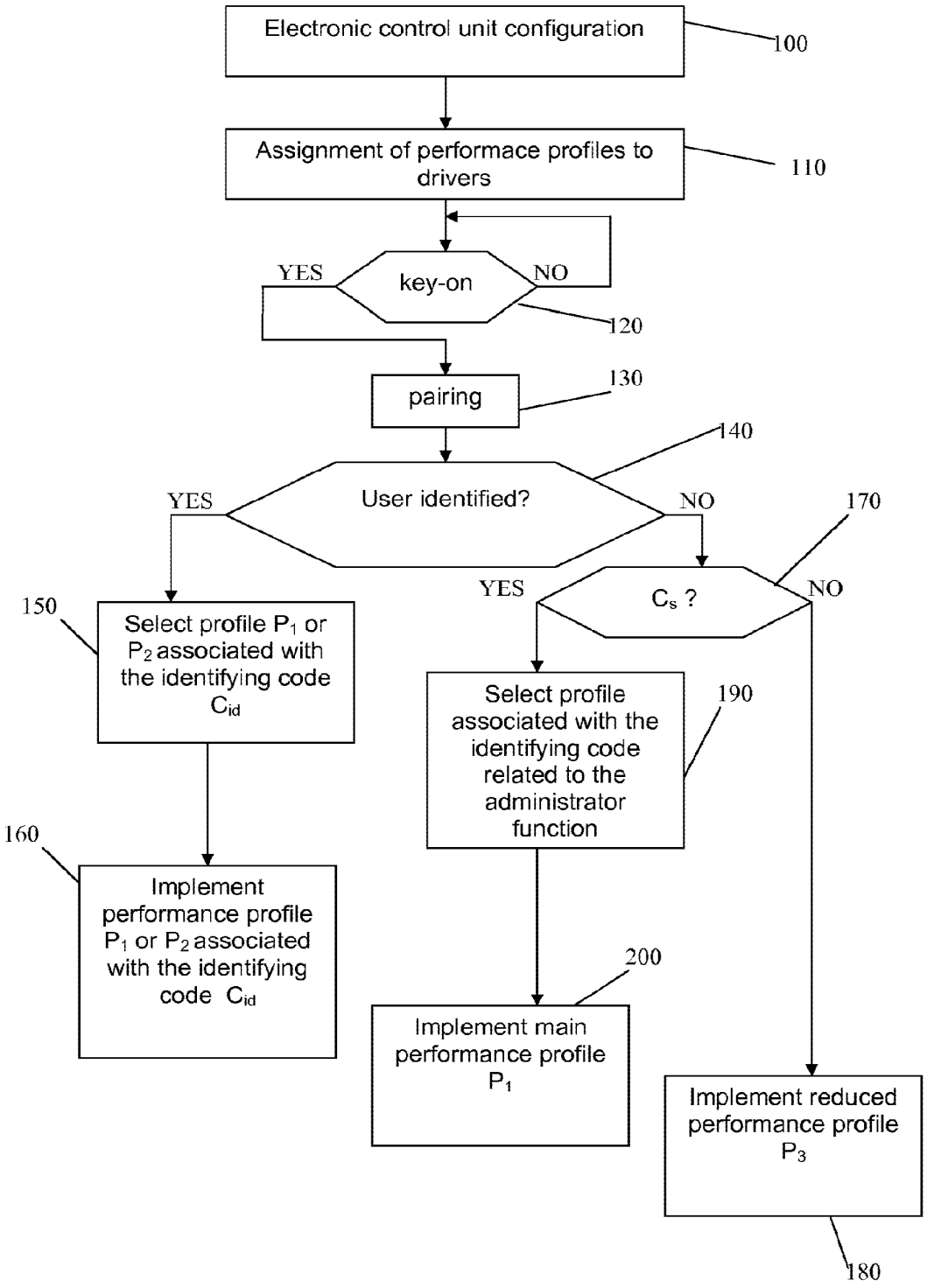

Electronic control unit configuration
100
Assignment of performace profiles to drivers
110
YES
key-on
NO
120
pairing
130
140
YES
User identified?
NO
170
YES
C_s ?
NO
150
Select profile P_1 or P_2 associated with the identifying code C_{id}
Select profile associated with the identifying code related to the administrator function
190
160
Implement performance profile P_1 or P_2 associated with the identifying code C_{id}
200
Implement main performance profile P_1
Implement reduced performance profile P_3
180

Fig. 2

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 08 42 5759

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X Y	WO 2004/103761 A (DAIMLER CHRYSLER AG [DE]; SCHAMZ ALEXANDER [DE]; SPIEKER ANDREAS [DE]) 2 December 2004 (2004-12-02) * pages 4-8; claims; figures *	1,2,5-9, 11, 14-17, 21,22 3,4,10, 12,13, 18-20	INV. B60W50/08 B60W40/08
Y	DE 10 2004 059692 A1 (DAIMLER CHRYSLER AG [DE]) 22 June 2006 (2006-06-22) * paragraph [0019]; claims; figures *	12,13	
Y	DE 10 2004 031348 A1 (DAIMLER CHRYSLER AG [DE]) 26 January 2006 (2006-01-26) * paragraphs [0030] - [0033]; claims; figures *	3,4,10	
Y	DE 10 2006 054738 A1 (ZAHNRADFABRIK FRIEDRICHSHAFEN [DE]) 29 May 2008 (2008-05-29) * paragraph [0023]; claims; figures *	18-20	
			TECHNICAL FIELDS SEARCHED (IPC)
A	US 7 184 873 B1 (IDSINGA ROBERT M [CA] ET AL) 27 February 2007 (2007-02-27) * columns 1-3; claims; figures *	1-22	B60R H04L B60W B60K
A	EP 0 178 439 A (ANT NACHRICHTENTECH [DE]) 23 April 1986 (1986-04-23) * the whole document *	1-22	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	28 April 2009	Ducher, Alban

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 08 42 5759

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

28-04-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2004103761 A	02-12-2004	DE 10323723 A1	09-12-2004
DE 102004059692 A1	22-06-2006	NONE	
DE 102004031348 A1	26-01-2006	NONE	
DE 102006054738 A1	29-05-2008	NONE	
US 7184873 B1	27-02-2007	WO 2007128108 A1	15-11-2007
EP 0178439 A	23-04-1986	DE 3438385 A1	30-04-1986

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 3667
Christopher Ricci	)	Confirmation No.: 3693
Serial No.: 13/679,204	)	Examiner: Marc McDieunel
Filed: November 16, 2012	)	
Atty. File No.: 6583-318	)	INFORMATION DISCLOSURE STATEMENT
Entitled: "Feature Recognition for Configuring a Vehicle Console and Associated Devices"	)	*Electronically Submitted*

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.

☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.

☒ Copies of the cited U.S. patents/unpublished patent applications/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).

☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.

☐ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.

☒ Examiner's attention is drawn to the following related applications:

- Serial No. 13/679,412 filed 11/16/2012 (Attorney's Ref. No. 6583-230)
- Serial No. 13/679,350 filed 11/16/2012 (Attorney's Ref. No. 6583-412)
- Serial No. 13/679,358 filed 11/16/2012 (Attorney's Ref. No. 6583-413)
- Serial No. 13/679,363 filed 11/16/2012 (Attorney's Ref. No. 6583-414)
- Serial No. 13/679,368 filed 11/16/2012 (Attorney's Ref. No. 6583-415)

☐ Other:_____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☒	**37 CFR 1.97(b)**: No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☒ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☐	**37 CFR 1.97(c)**: The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☐ Please charge Deposit Account 19-1970 in the amount of $180.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	**37 CFR 1.97(d)**: This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of $180.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

☐ The undersigned certifies that:

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).

☐ A copy of the communication from the foreign patent office is enclosed.

OR

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /Douglas W. Swartz/
Douglas W. Swartz
Registration No. 37,739
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: October 22, 2013

SAC

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
TADD F. WILSON
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

FEB 25 2013

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 20 FEB 2013
Applicant's or agent's file reference 6583-318-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US 12/65421	International filing date *(day/month/year)* 16 November 2012 (16.11.2012)
Applicant FLEXTRONICS AP, LLC	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   . **When?** The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

   Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90*bis*.1 and 90*bis*.3).

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450	Authorized officer Lee W. Young
Facsimile No. 571-273-3201	Telephone No. PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-318-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US 12/65421	International filing date *(day/month/year)* 16 November 2012 (16.11.2012)	(Earliest) Priority Date *(day/month/year)* 16 November 2011 (16.11.2011)
Applicant FLEXTRONICS AP, LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 9 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 1

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 12/65421

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - B60W 40/08; H04Q 9/02 (2013.01)
USPC - 701/29.6; 340/5.81
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8): B60W 40/08; H04Q 9/02 (2013.01)
USPC: 701/29.6; 340/5.81

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 701/29.6, 36, 49; 340/5.8-5.85

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase; PGPB, USPT, EPAB, JPAB; Google Scholar; Google Patent; Search Terms: vehicle sensor processor passenger driver occupant facial authorize identify bio-metric micro-processor storage memory RAM ROM flash health heart rate pressure weight presence absence

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008/0143085 A1 (Breed et al.) 19 June 2008 (19.06.2008) para. [0113]-[0653], Fig. 1-38	1-60
A	US 6,157,321 A (Ricci) 05 December 2000 (05.12.2000) entire document	1-60
A	US 5,847,661 A (Ricci) 08 December 1998 (08.12.1998) entire document	1-60
A	US 6,690,260 B1 (Ashihara) 10 February 2004 (10.02.2004) entire document	1-60
A	EP 2192015 A1 (Aventa) 02 June 2010 (02.06.2010) entire document	1-60
A	US 2002/0126876 A1 (Paul et al.) 12 September 2002 (12.09.2002) entire document	1-60
A	US 2007/0195997 A1 (Paul et al.) 23 August 2007 (23.08.2007) entire document	1-60

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 January 2013 (21.01.2013)	20 FEB 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: TADD F. WILSON
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	20 FEB 2013

Applicant's or agent's file reference	**FOR FURTHER ACTION**
6583-318-PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US 12/65421	16 November 2012 (16.11.2012)	16 November 2011 (16.11.2011)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - B60W 40/08; H04Q 9/02 (2013.01)
USPC - 701/29.6; 340/5.81

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [X] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	21 January 2013 (21.01.2013)	Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 12/65421

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 12/65421

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	none	YES
	Claims	1-60	NO
Inventive step (IS)	Claims	none	YES
	Claims	1-60	NO
Industrial applicability (IA)	Claims	1-60	YES
	Claims	none	NO

2. Citations and explanations:
Claims 1-60 lack novelty under PCT Article 33(2) as being anticipated by US 2008/0143085 A1 to Breed et al. (hereinafter Breed).

Regarding claim 1, Breed discloses a method (Fig. 1-9, 18-21), comprising:
automatically determining a person is within a vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
automatically identifying the person (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions and images from CCD arrays of, or more generally waves received by wave-receiving transducers from, the passenger compartment when the occupants in the different positions are present, para. [0232], Fig. 5);
determining if there is a setting to be stored for the person (processor is provided in a training or programming stage with the preferred seat positions for different morphologies of occupants;
para. [0623], [0626], [0630], [0631]); and storing the setting (para. [0133], [0134], [0163], [0564]).

Regarding claim 2, Breed discloses the method of claim 1, further comprising: determining if the person can be identified (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions, para. [0232], [0458], [0459]).

Regarding claim 3, Breed discloses the method of claim 2, further comprising: if the person cannot be identified (non-recognized person/unauthorized operator, para. [0456]), characterizing the person (via neural network/pattern recognition system, para. [0456]).

Regarding claim 4, Breed discloses the method of claim 3, wherein automatically determining a person is within a vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D).

Regarding claim 5, Breed discloses the method of claim 4, wherein automatically identifying the person comprises:
comparing the sensor data to feature data in a data structure (via neural network/pattern recognition system, para. [0456]); and
determining if the sensor data is substantially similar to the feature data (face recognition; via neural network; morphological characteristics used are the occupant height from the vehicle seat, weight of the occupant and facial features, para. [0232], [0455]-[0471], [0652]).

Regarding claim 6, Breed discloses the method of claim 5, wherein determining if there is a setting to be stored for the person comprises determining if the person has made a setting (system automatically estimates the best location of the component for that occupant and moves the component to that location, assuming it is not already at the best location; if the occupant changes the location, the system should remember that change and incorporate it into the adjustment the next time that person enters the vehicle and is seated in the same seat; occupant will correct the adjustment and the next time that the system measures the same measurements for those measurement characteristics, it will set the component to the corrected position, para. [0460], [0582], [0583]).

Regarding claim 7, Breed discloses the method of claim 6, wherein determining if there is a setting to be stored for the person further comprises waiting a period of time to determine if the settings have achieved a steady state (system need not make a perfect selection the first time but it should remember the person and the position the component was in for that person. The system, therefore, makes one, two or three measurements of morphological characteristics of the occupant and then adjusts the component based on an algorithm, para. [0583]).

Regarding claim 8, Breed discloses the method of claim 1, wherein the setting is stored in cloud storage (component can also be a telematics system such as the Skybitz or OnStar systems where information about the occupancy state of the vehicle, or changes in that state, can be sent to a remote site; para. [0133], [0268], [0513]-[0516], [0581]).

See Continuation Sheet.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 12/65421

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Dependent claims 22-30, 32-35, 37-40, 42-50, 52-55 and 57-60 include defective dependencies.
Claims 22-30 have been examined as depending upon independent claim 21.
Claims 32-35 have been examined as depending upon independent claim 31.
Claims 37-40 have been examined as depending upon independent claim 36.
Claims 42-50 have been examined as depending upon independent claim 41.
Claims 52-55 have been examined as depending upon independent claim 51.
Claims 57-60 have been examined as depending upon independent claim 56.

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V, item 2. Citations and explanations.

Regarding claim 9, Breed discloses the method of claim 1, wherein the setting is one of a position of a seat (para. [0626]), a position of a mirror, a heat or cold setting, a configuration of a console, a configuration of a dash, a configuration of a heads up display, or a setting for a radio (other driver preferences can still be added to seat position with this level of occupant recognition accuracy; include the automatic selection of a preferred radio station, pedal position, vehicle temperature, steering wheel and steering column position, etc, para. [0631]).

Regarding claim 10, Breed discloses the method of claim 1, wherein the person occupies an area or zone within the vehicle, and wherein the setting is associated with the person in the area or zone (location or position of the occupant can be determined; occupant changes the location, the system should remember that change and incorporate it into the adjustment the next time that person enters the vehicle and is seated in the same seat, para. [0233], [0333], [0521], [0583]).

Regarding claim 11, Breed discloses a vehicle system (components of environment of vehicle 100, para. [0241], Fig. 1-9, 18-21) comprising:
one or more sensors (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
a vehicle control system comprising: a processor; a memory (processor such as control circuitry 20; microprocessor containing sufficient memory and appropriate software, para. [0163]); wherein the processor is operable to:
receive sensor data from the one or more sensors (processor such as control circuitry 20 is connected to the transmitter/receiver assemblies 49, 50, 51, 52, 54 , para. [0162]-[0167]);
based on the sensor data, automatically determine a person is within a vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
based on the sensor data, automatically identify the person (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions and images from CCD arrays of, or more generally waves received by wave-receiving transducers from, the passenger compartment when the occupants in the different positions are present, para. [0232], Fig. 5);
determine if the person has made a setting (system automatically estimates the best location of the component for that occupant and moves the component to that location, assuming it is not already at the best location; if the occupant changes the location, the system should remember that change and incorporate it into the adjustment the next time that person enters the vehicle and is seated in the same seat; occupant will correct the adjustment and the next time that the system measures the same measurements for those measurement characteristics, it will set the component to the corrected position, para. [0460], [0582], [0583]); and
store the setting (para. [0133], [0134], [0163], [0564]).

Regarding claim 12, Breed discloses the device of claim 11, wherein the sensor data is an image of the person (para. [0127], [0128], [0156], [0157]).

Regarding claim 13, Breed discloses the device of claim 12, wherein in automatically identifying the person the processor is operable to match the image (para. [0127], [0128], [0156], [0157]) to a stored image in a data structure (project onto the occupant, a structured light that permits a recognizable pattern to be observed and matched up in both images, para. [0378], [0459]).

Regarding claim 14, Breed discloses the device of claim 11, wherein the sensor data is voice data from the person (voice print recognition, para. [0270], [0459], [0464], [0615], [0631]).

Regarding claim 15, Breed discloses the device of claim 14, wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure (voice print recognition, para. [0270], [0459], [0464], [0615], [0631]).

Regarding claim 16, Breed discloses a computer readable medium (components of environment of vehicle 100, para. [0241], Fig. 1-9, 18-21) having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop (processor such as control circuitry 20; via interface; vehicle cellular or other communication system 32, para. [0067], [0138], [0142], [0163]-[0165], Fig. 2); the computer-executable instructions comprising:
instructions to receive sensor data from the one or more sensors (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
based on the sensor data, instructions to automatically determine a person is within a vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D); and
based on the sensor data, instructions to automatically identify the person (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions and images from CCD arrays of, or more generally waves received by wave-receiving transducers from, the passenger compartment when the occupants in the different positions are present, para. [0232], Fig. 5);
instructions to retrieve one or more settings associated with the identified person (face recognition; via neural network; morphological characteristics used are the occupant height from the vehicle seat, weight of the occupant and facial features, para. [0232], [0455]-[0471], [0652]);
instructions to automatically configure the vehicle according to the retrieved settings (other driver preferences can still be added to seat position with this level of occupant recognition accuracy; include the automatic selection of a preferred radio station, pedal position, vehicle temperature, steering wheel and steering column position, etc, para. [0631]).

See Continuation Sheet.

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V, item 2. Citations and explanations.

Regarding claim 17, Breed discloses the computer readable medium of claim 16, wherein in automatically determining the person is within a vehicle comprises instructions to determine an area or zone in which the person occupies (location or position of the occupant can be determined; occupant changes the location, the system should remember that change and incorporate it into the adjustment the next time that person enters the vehicle and is seated in the same seat, para. [0233], [0333], [0521], [0583]).

Regarding claim 18, Breed discloses the computer readable medium of claim 17, wherein the settings retrieved are associated with the determined area or zone (location or position of the occupant can be determined; occupant changes the location, the system should remember that change and incorporate it into the adjustment the next time that person enters the vehicle and is seated in the same seat, para. [0233], [0333], [0521], [0583]).

Regarding claim 19, Breed discloses the computer readable medium of claim 18, wherein the settings (morphological characteristics used are the occupant height from the vehicle seat, weight of the occupant and facial features, para. [0232], [0455]-[0471], [0652]) are retrieved from a data structure (via neural network 65, para. [0203], [0217], [0218], [0223], Fig. 14).

Regarding claim 20, Breed discloses the computer readable medium of claim 19, wherein the data structure is stored in cloud storage (component can also be a telematics system such as the Skybitz or OnStar systems where information about the occupancy state of the vehicle, or changes in that state, can be sent to a remote site; para. [0133], [0268], [0513]-[0516], [0581]).

Regarding claim 21, Breed discloses a method (components of environment of vehicle 100, para. [0241], Fig. 1-9, 18-21) comprising:
automatically determining a person is within a vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
automatically identifying the person (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions and images from CCD arrays of, or more generally waves received by wave-receiving transducers from, the passenger compartment when the occupants in the different positions are present, para. [0232], Fig. 5);
determining if there is a gesture to be stored for the person; and storing the gesture (algorithm interpret a gesture, e.g.: may be in response to a question from the computer system, para. [0269], [0270]).

Regarding claim 22, Breed discloses the method of claim [21], further comprising: determining if the person (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions, para. [0232], [0458], [0459]) can be identified (non-recognized person/unauthorized operator; via neural network/pattern recognition system, para. [0456]).

Regarding claim 23, Breed discloses the method of claim [22], further comprising: if the person cannot be identified, characterizing the person (non-recognized person/unauthorized operator; via neural network/pattern recognition system, para. [0456]).

Regarding claim 24, Breed discloses the method of claim [23], wherein automatically determining a person is within a vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D).

Regarding claim 25, Breed discloses the method of claim [24], wherein automatically identifying the person comprises: comparing the sensor data to feature data in a data structure; and
determining if the sensor data is substantially similar to the feature data (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions, para. [0232], [0458], [0459]).

Regarding claim 26, Breed discloses the method of claim [25], wherein determining if there is a gesture to be stored for the person comprises determining if the person has created a gesture (algorithm interpret a gesture, e.g.: may be in response to a question from the computer system, para. [0269], [0270]).

Regarding claim 27, Breed discloses the method of claim [26], wherein determining if there is a gesture to be stored for the person further comprises receiving an indication from the person that a gesture is to be created (algorithm interpret a gesture, e.g.: may be in response to a question from the computer system, para. [0269], [0270]).

Regarding claim 28, Breed discloses the method of claim [21], wherein the gesture is stored in cloud storage (component can also be a telematics system such as the Skybitz or OnStar systems where information about the occupancy state of the vehicle, or changes in that state, can be sent to a remote site; para. [0133], [0268], [0513]-[0516], [0581]).

Regarding claim 29, Breed discloses the method of claim [21], wherein the gesture is one of a gesture in a gesture capture region, a gesture in a touch sensitive display, or a movement in a three-dimensional space (algorithm interpret a gesture, e.g.: may be in response to a question from the computer system, para. [0269], [0270]).

See Continuation Sheet.

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V, item 2. Citations and explanations.

Regarding claim 30, Breed discloses the method of claim [21], wherein the person occupies an area or zone within the vehicle, and wherein the gesture is associated with the person in the area or zone (location or position of the occupant can be determined; occupant changes the location, the system should remember that change and incorporate it into the adjustment the next time that person enters the vehicle and is seated in the same seat, para. [0233], [0333], [0521], [0583]).

Regarding claim 31, Breed discloses a vehicle system (components of environment of vehicle 100, para. [0241], Fig. 1-9, 18-21), comprising:
one or more sensors (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
a vehicle control system comprising: a processor; a memory (processor such as control circuitry 20; microprocessor containing sufficient memory and appropriate software, para. [0163]); wherein the processor is operable to:
receive sensor data from the one or more sensors; based on the sensor data, automatically determine a person is within a vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
based on the sensor data, automatically identify the person (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions and images from CCD arrays of, or more generally waves received by wave-receiving transducers from, the passenger compartment when the occupants in the different positions are present, para. [0232], Fig. 5);
determine if the person has made a gesture; and store the gesture (algorithm interpret a gesture, e.g.: may be in response to a question from the computer system, para. [0269], [0270]).

Regarding claim 32, Breed discloses the device of claim [31], wherein the sensor data is an image of the person (para. [0127], [0128], [0156], [0157]).

Regarding claim 33, Breed discloses the device of claim [32], wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure (para. [0127], [0128], [0156], [0157]).

Regarding claim 34, Breed discloses the device of claim [31], wherein the sensor data is voice data from the person (voice print recognition, para. [0270], [0459], [0464], [0615], [0631]).

Regarding claim 35, Breed discloses the device of claim [34], wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure (voice print recognition, para. [0270], [0459], [0464], [0615], [0631]).

Regarding claim 36, Breed discloses a computer readable medium (components of environment of vehicle 100, para. [0241], Fig. 1-9, 18-21), having stored thereon computer-executable instructions, the computer executable instructions causing a processor (processor such as control circuitry 20; microprocessor containing sufficient memory and appropriate software, para. [0163]) to execute a method for providing a unified desktop (processor such as control circuitry 20; via interface; vehicle cellular or other communication system 32, para. [0067], [0138], [0142], [0163]-[0165], Fig. 2), the computer-executable instructions comprising:
instructions to receive sensor data from the one or more sensors (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
based on the sensor data, instructions to automatically determine a person is within a vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
based on the sensor data, instructions to automatically identify the person (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions and images from CCD arrays of, or more generally waves received by wave-receiving transducers from, the passenger compartment when the occupants in the different positions are present, para. [0232], Fig. 5);
instructions to retrieve one or more gestures associated with the identified person; instructions to receive a gesture; and instructions to automatically configure the vehicle according to the received gesture (algorithm interpret a gesture, e.g.: may be in response to a question from the computer system, para. [0269], [0270]).

Regarding claim 37, Breed discloses the computer readable medium of claim [36], wherein in automatically determining the person is within a vehicle comprises instructions to determine an area or zone in which the person occupies (location or position of the occupant can be determined; occupant changes the location, the system should remember that change and incorporate it into the adjustment the next time that person enters the vehicle and is seated in the same seat, para. [0233], [0333], [0521], [0583]).

Regarding claim 38, Breed discloses the computer readable medium of claim [37], wherein the retrieved gestures are associated with the determined area or zone (algorithm interpret a gesture, e.g.: may be in response to a question from the computer system; presence of an occupant in a seat can even be confirmed by a word spoken by the occupant, for example, which can use a technology known as voice print if it is desired to identify the particular occupant, para. [0269], [0270]).

See Continuation Sheet.

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V, item 2. Citations and explanations.

Regarding claim 39, Breed discloses the computer readable medium of claim [38], wherein the gestures are retrieved from a data structure (algorithm interpret a gesture, e.g.: may be in response to a question from the computer system; presence of an occupant in a seat can even be confirmed by a word spoken by the occupant, for example, which can use a technology known as voice print if it is desired to identify the particular occupant, para. [0269], [0270]).

Regarding claim 40, Breed discloses the computer readable medium of claim [38], wherein the data structure is stored in cloud storage (component can also be a telematics system such as the Skybitz or OnStar systems where information about the occupancy state of the vehicle, or changes in that state, can be sent to a remote site; para. [0133], [0268], [0513]-[0516], [0581]).

Regarding claim 41, Breed discloses a method (components of environment of vehicle 100, para. [0241], Fig. 1-9, 18-21), comprising:
automatically determining a person is within a vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
automatically identifying the person (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions and images from CCD arrays of, or more generally waves received by wave-receiving transducers from, the passenger compartment when the occupants in the different positions are present, para. [0232], Fig. 5);
determining if there is health data to be stored for the person; and storing the health (sensor that determines the presence and health state of an occupant can also be integrated into the vehicle interior monitoring system; Heartbeat and Health State, para. [0134], [0435]-[0431], [0472]-[0475]).

Regarding claim 42, Breed discloses the method of claim [41], further comprising: determining if the person can be identified (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions, para. [0232], [0458], [0459]).

Regarding claim 43, Breed discloses the method of claim [42], further comprising: if the person cannot be identified (non-recognized person/unauthorized operator, para. [0456]), characterizing the person (via neural network/pattern recognition system, para. [0456]).

Regarding claim 44, Breed discloses the method of claim [43], wherein automatically determining a person is within a vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D).

Regarding claim 45, Breed discloses the method of claim [40], wherein automatically identifying the person comprises:
comparing the sensor data to feature data in a data structure; and determining if the sensor data is substantially similar to the feature data (face recognition; via neural network; morphological characteristics used are the occupant height from the vehicle seat, weight of the occupant and facial features, para. [0232], [0455]-[0471], [0652]).

Regarding claim 46, Breed discloses the method of claim [45], wherein determining if there is health data to be stored for the person comprises receiving the health data from one or more sensors (sensor that determines the presence and health state of an occupant can also be integrated into the vehicle interior monitoring system; Heartbeat and Health State, para. [0134], [0435]-[0431], [0472]-[0475]).

Regarding claim 47, Breed discloses the method of claim [46], wherein determining if there is health to be stored for the person further comprises: storing the health data (sensor that determines the presence and health state of an occupant can also be integrated into the vehicle interior monitoring system; Heartbeat and Health State, para. [0134], [0435]-[0431], [0472]-[0475]); and
waiting a period of time before storing the health data again (system 150 for determining the presence of any occupants 151, which may take the form of a heartbeat sensor, chemical sensor or motion sensor as described above and a system for determining the health state of any occupants 151, para. [0439]).

Regarding claim 48, Breed discloses the method of claim [48], wherein the health data is measured periodically to obtain average health data (via neural network; heartbeat sensor 71 is arranged to detect a heartbeat, and the magnitude thereof, of a human occupant of the seat, if such a human occupant is present; output of the heartbeat sensor 71 is input to the neural network 65, para. [0201]).

Regarding claim 49, Breed discloses the method of claim [41], wherein the health data is one of a heart rate (heartbeat sensor 71 is arranged to detect a heartbeat, and the magnitude thereof, of a human occupant of the seat, if such a human occupant is present; output of the heartbeat sensor 71 is input to the neural network 65, para. [0201]), a blood pressure, a blood composition (Chemical sensors can also be used to detect whether there is blood present in the vehicle such as after an accident, para. [0117], [0151], [0437], [0438]); a weight, a temperature, an image, or a sound (Neural networks work well with data from ultrasonic sensors, optical imagers, strain gage and bladder weight sensors, temperature sensors, chemical sensors, radiation sensors, pressure sensors, electric field sensors, capacitance based sensors, any other wave sensors including the entire electromagnetic spectrum, etc, para. [0567]).

Regarding claim 50, Breed discloses the method of claim [41], wherein the person occupies an area or zone within the vehicle, and wherein the health data is associated with the person in the area or zone (location or position of the occupant can be determined; occupant changes the location, the system should remember that change and incorporate it into the adjustment the next time that person enters the vehicle and is seated in the same seat, para. [0233], [0333], [0521], [0583]).

See Continuation Sheet.

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In case **the space in any of the preceding boxes is not sufficient.**
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Box V, item 2. Citations and explanations.

Regarding claim 51, Breed discloses a vehicle system (components of environment of vehicle 100, para. [0241], Fig. 1-9, 18-21), comprising:
one or more sensors (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
a vehicle control system comprising: a processor; a memory (processor such as control circuitry 20; microprocessor containing sufficient memory and appropriate software, para. [0163]); wherein the processor is operable to:
receive sensor data from the one or more sensors; based on the sensor data, automatically determine a person is within a vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
based on the sensor data, automatically identify the person (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions and images from CCD arrays of, or more generally waves received by wave-receiving transducers from, the passenger compartment when the occupants in the different positions are present, para. [0232], Fig. 5);
determine if the person has health data; and store the health data (sensor that determines the presence and health state of an occupant can also be integrated into the vehicle interior monitoring system; Heartbeat and Health State, para. [0134], [0435]-[0431], [0472]-[0475]).

Regarding claim 52, Breed discloses the device of claim [51], wherein the sensor data is an image of the person (para. [0127], [0128], [0156], [0157]).

Regarding claim 53, Breed discloses the device of claim [52], wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure (para. [0127], [0128], [0156], [0157]).

Regarding claim 54, Breed discloses the device of claim [51], wherein the sensor data is voice data from the person (voice print recognition, para. [0270], [0459], [0464], [0615], [0631]).

Regarding claim 55, Breed discloses the device of claim [54], wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure (voice print recognition, para. [0270], [0459], [0464], [0615], [0631])..

Regarding claim 56, Breed discloses a computer readable medium (components of environment of vehicle 100, para. [0241], Fig. 1-9, 18-21), having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop (processor such as control circuitry 20; via interface; vehicle cellular or other communication system 32, para. [0067], [0138], [0142], [0163]-[0165], Fig. 2), the computer-executable instructions comprising:
instructions to receive sensor data from the one or more sensors (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
based on the sensor data, instructions to automatically determine a person is within a vehicle (transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment; detecting the presence or absence of the driver and passengers, para. [0162], Fig. 5, 8A-8D);
based on the sensor data, instructions to automatically identify the person (microprocessor 20 includes one or more a trained pattern recognition algorithms which have been trained using data about known locations of the head and facial features of occupants in different positions and images from CCD arrays of, or more generally waves received by wave-receiving transducers from, the passenger compartment when the occupants in the different positions are present, para. [0232], Fig. 5);
instructions to retrieve health data associated with the identified person (sensor that determines the presence and health state of an occupant can also be integrated into the vehicle interior monitoring system; Heartbeat and Health State, para. [0134], [0435]-[0431], [0472]-[0475]);
instructions to obtain new health data (via heartbeat sensor 71 is input to the neural network 65, para. [0201]);
instructions to compare the new health data to the retrieved health data (via neural network; heartbeat sensor 71 is arranged to detect a heartbeat, and the magnitude thereof, of a human occupant of the seat, if such a human occupant is present; output of the heartbeat sensor 71 is input to the neural network 65, para. [0201]); and
instructions to react to the comparison (para. [0513]-[05616]], [0657]).

Regarding claim 57, Breed discloses the computer readable medium of claim [56], wherein in automatically determining the person is within a vehicle comprises instructions to determine an area or zone in which the person occupies (location or position of the occupant can be determined; occupant changes the location, the system should remember that change and incorporate it into the adjustment the next time that person enters the vehicle and is seated in the same seat, para. [0233], [0333], [0521], [0583]).

Regarding claim 58, Breed discloses the computer readable medium of claim [57], wherein the health data retrieved are previously stored health data (via neural network; heartbeat sensor 71 is arranged to detect a heartbeat, and the magnitude thereof, of a human occupant of the seat, if such a human occupant is present; output of the heartbeat sensor 71 is input to the neural network 65, para. [0201]).

See Continuation Sheet.

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V, item 2. Citations and explanations.

Regarding claim 59, Breed discloses the computer readable medium of claim [58], wherein the health data is retrieved from a data structure (via neural network; heartbeat sensor 71 is arranged to detect a heartbeat, and the magnitude thereof, of a human occupant of the seat, if such a human occupant is present; output of the heartbeat sensor 71 is input to the neural network 65, para. [0201]).

Regarding claim 60, Breed discloses the computer readable medium of claim [59], wherein the data structure is stored in cloud storage (component can also be a telematics system such as the Skybitz or OnStar systems where information about the occupancy state of the vehicle, or changes in that state, can be sent to a remote site; para. [0133], [0268], [0513]-[0516], [0581]).

Claims 1-60 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

SAC

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

MAR - 4 2013

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 28 FEB 2013
Applicant's or agent's file reference 6583-413-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US 12/65474	International filing date *(day/month/year)* 16 November 2012 (16.11.2012)
Applicant FLEXTRONICS AP, LLC	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

   Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90*bis*.1 and 90*bis*.3).

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Lee W. Young PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-413-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US 12/65474	International filing date *(day/month/year)* 16 November 2012 (16.11.2012)	(Earliest) Priority Date *(day/month/year)* 16 November 2011 (16.11.2011)
Applicant FLEXTRONICS AP, LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 9 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 1B

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure:

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 12/65474

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G09G 5/00 (2013.01)
USPC - 345/5
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8): G09G 5/00 (2013.01)
USPC: 345/5

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
IPC(8): G09G 5/00 (2013.01) (keyword limited; terms below)
USPC: 345/1.1, 1.2, 4, 5; 701/1, 123; 715/700, 705, 714, 863, 867, 961 (keyword limited; terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase; Google (Web, Scholar). Search terms used: dash HUD heads-up vehicle cockpit configurable fit hidden layout scalable resize gesture recognition sensor rules criteria priority gauge gage panel instrumentation dashboard console etc.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/0194902 A1 (Blanco et al.) 23 August 2007 (23.08.2007), entire document especially Fig. 1, 2, 3A, 3E, 3F, 4; para [0005], [0014]-[0016], [0020]-[0023], [0026], [0029], [0032]-[0041], [0043], [0046]-[0051], [0055]-[0059]	1-44
A	US 2011/0175754 A1 (Karpinsky) 21 July 2011 (21.07.2011), entire document	1-44
A	US 2010/0127847 A1 (Evans et al.) 27 May 2010 (27.05.2010), entire document	1-44
A	US 2010/0268426 A1 (Pathak et al.) 21 October 2010 (21.10.2010), entire document	1-44
A	Cairnie et al. "Using finger-pointing to operate secondary controls in automobiles." In: IEEE Intelligent Vehicles Symposium, 03-05 October 2000, pages 550-555 [online] [retrieved on 30 January 2013 (30.01.2013)] Retrieved from the Internet <URL: http://www.computing.dundee.ac.uk/staff/ricketts/cv/preprints/CairnieIV2000.pdf>, entire document	1-44

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
30 January 2013 (30.01.2013)	28 FEB 2013

Name and mailing address of the ISA/US	Authorized officer:
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	28 FEB 2013

Applicant's or agent's file reference	FOR FURTHER ACTION
6583-413-PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US 12/65474	16 November 2012 (16.11.2012)	16 November 2011 (16.11.2011)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G09G 5/00 (2013.01)
USPC - 345/5

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Fom PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	30 January 2013 (30.01.2013)	Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 12/65474

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 12/65474

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1-44	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-44	NO
Industrial applicability (IA)	Claims	1-44	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-44 lack novelty under PCT Article 33(2) as being anticipated by US 2007/0194902 A1 to Blanco et al. (hereinafter 'Blanco').

Regarding claim 1, Blanco teaches a method of configuring a vehicle dash display (Fig. 2, 3F, 4; para [0014], [0015], [0050]), comprising: displaying, at a first time, vehicle dash information in a first layout on a graphical user interface ("GUI"), wherein the vehicle dash information comprises one or more applications (Fig. 3A; para [0014], [0034], [0041]), and wherein the one or more applications correspond to vehicle readouts (Fig. 3A; para [0014], [0034], [0041]); receiving a first input at the GUI, wherein the first input corresponds to an instruction to alter the first layout of the vehicle dash information to a second layout of the vehicle dash information (para [0016], [0032], [0035], [0040], [0050], [0051]), and wherein the second layout of the vehicle dash information is different from the first layout of the vehicle dash information (Fig. 3F; para [0047]); selecting, by a processor, the second layout of the vehicle dash information to display on the GUI (Fig. 4; para [0049], [0057]-[0059]); and displaying, at a second time, the second layout of the vehicle dash information on the GUI (Fig. 4; para [0049], [0050], [0057]-[0059]).

Regarding claim 2, Blanco teaches that the same vehicle dash information is displayed in the first and second layout (Fig. 3A, 3F; para [0049], [0050], [0057]-[0059]).

Regarding claim 3, Blanco teaches that the second layout of the vehicle dash information is selected from one or more preconfigured layouts (preset layout schema / settings; para [0014], [0056]).

Regarding claim 4, Blanco teaches that the vehicle readouts include at least one of a speedometer, odometer, tachometer, trip meter, fuel gage, temperature gage, electrical gage, and indicators (Fig. 3F; para [0041], [0046]).

Regarding claim 5, Blanco teaches receiving a second input at the GUI, wherein the second input represents an instruction to alter a first display position associated with at least one application of the one or more applications (Fig. 4; para [0049], [0050], [0057]-[0059]); determining, by a processor, the first display position to alter based on the second input (para [0040], [0057]-[0059]); altering the first display position of the at least one application based on the second input (para [0040], [0057]-[0059]); and displaying, the altered first display position of the at least one application as as a second display position (para [0040], [0057]-[0059]).

Regarding claim 6, Blanco teaches that altering the first display position further comprises: determining, by a processor, a relative position of at least one other application of the one or more applications displayed to the GUI (para [0037], [0058]); determining, by a processor, the altered first display position of the at least one application (para [0037], [0058]); comparing the relative position of the at least one other application to the altered first display position of the at least one application (comparing relative space / real estate and obscured locations; para [0037], [0038], [0058]); and adjusting, based on rules, a position of the at least one application or the at least one other application (reducing and moving based on rules and remaining / compared window / screen real estate; para [0037], [0038], [0051], [0056]-[0059]).

Regarding claim 7, Blanco teaches that altering the first layout of the one or more applications to the second layout of the one or more applications includes adding at least one application to be displayed on the first GUI (Fig. 3A; para [0014], [0034], [0038], [0041], [0043], [0059]).

Regarding claim 8, Blanco teaches that altering the first layout of the one or more applications to the second layout of the one or more applications includes removing at least one application from being displayed on the first GUI (para [0036]-[0038], [0051]).

Regarding claim 9, Blanco teaches receiving a third input at the first GUI, wherein the third input corresponds to an instruction to save the second layout in a memory (preset layout schema / settings and preferences; para [0014], [0021], [0040], [0048], [0056]); and saving the second layout in a memory (preset layout schema / settings and preferences; para [0014], [0021], [0040], [0048], [0056]).

Regarding claim 10, Blanco teaches that the GUI is partitioned into two or more zones, wherein each of the two or more zones is capable of displaying the vehicle dash information (Fig. 3F; para [0050], [0055], [0057]).

--CONTINUED IN SUPPLEMENTAL BOX--

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box No. V. 2. Citations and explanations:

Regarding claim 11, Blanco teaches that a first zone of the two or more zones is configured to display a first application of the one or more applications in the first layout, and that a second zone of the two or more zones is configured to display the first application of the one or more applications in the second layout (expand / collapse application zones between two layouts; Fig. 3E, 3F; para [0050], [0057], [0059]).

Regarding claim 12, Blanco teaches receiving one or more signals sent from a plurality of sensing elements associated with a vehicle (Fig. 3F; para [0041], [0046]); interpreting, by a processor, the one or more signals to determine whether an emergency event has occurred (sense important / dangerous vehicle conditions indicating events, e.g., no oil, fuel, over heating, sleeping driver, etc.; para [0033], [0047], [0057]); determining that an emergency event has occurred (para [0033], [0039], [0047]); and displaying, automatically, at least one emergency identifier on the first GUI (automatically display dangerous condition / context based indicators to the driver; para [0033], [0035], [0039], [0047], [0057]).

Regarding claim 13, Blanco teaches that the interpretation step further comprises: referring to a memory, wherein the memory stores rules that define a plurality of signal conditions corresponding to an emergency event (automatically display dangerous condition / context based indicators to the driver based on rules; para [0033], [0035], [0039], [0047], [0056], [0057]).

Regarding claim 14, Blanco teaches that the emergency identifier is displayed as a third layout of the one or more applications on the first GUI (safety requirement / rules display adjusted / expanded information; para [0035], [0036], [0056], [0057]).

Regarding claim 15, Blanco teaches that the emergency identifier is displayed over at least one of the first and second layout of the one or more applications on the first GUI (crucial information displayed vertically or obscuring / overlaying / dimming, etc.; para [0036], [0037], [0047], [0051]).

Regarding claim 16, Blanco teaches that an appearance of at least one of the first and second layout is altered to emphasize the display of the emergency identifier (crucial information displayed vertically or obscuring / overlaying / dimming, etc.; para [0036], [0037], [0047], [0051]).

Regarding claim 17, Blanco teaches that the emergency identifier is displayed on a second GUI (HUD and dashboard display integration; Fig. 2; para [0026], [0029]).

Regarding claim 18, Blanco teaches a non-transitory computer readable medium having instructions stored thereon that, when executed by a processor, perform the method of claim 1 (Fig. 1; para [0020], [0021]).

Regarding claim 19, Blanco teaches a method of configuring an appearance of a vehicle dash display (Fig. 2, 3F, 4; para [0014], [0015], [0050]), comprising: displaying, at a first time, a first appearance of one or more applications on a first graphical user interface ("GUI"), wherein the one or more applications correspond to one or more instruments associated with a vehicle dash (HUD and dashboard display integration; Fig. 2; para [0026], [0029]), and wherein the first appearance corresponds to at least one of a first aesthetic and a first function of the one or more applications (Fig. 3A; para [0014], [0026], [0034], [0041]); receiving a first input at the first GUI, the first input corresponding to an instruction to alter the first appearance of the one or more applications to a second appearance of the one or more applications (para [0016], [0032], [0035], [0040], [0050], [0051]), and wherein the second appearance of the one or more applications is different from the first appearance of the one or more applications (Fig. 3F; para [0047]); selecting, by a processor, the second appearance of the one or more applications to display on the first GUI (Fig. 4; para [0049], [0057]-[0059]); and displaying, at a second time, the second appearance of the one or more applications on the first GUI (Fig. 4; para [0049], [0050], [0057]-[0059]).

Regarding claim 20, Blanco teaches that altering the first appearance of the one or more applications to the second appearance of the one or more applications includes adjusting a size of at least one application to be displayed on the first GUI (reducing and moving based on rules and remaining / compared window / screen real estate; para [0037], [0038], [0051], [0056]-[0059]).

Regarding claim 21, Blanco teaches that altering the first appearance of the one or more applications to the second appearance of the one or more applications includes adjusting at least one scale of at least one application to be displayed on the first GUI (reducing and moving based on rules and remaining / compared window / screen real estate; para [0037], [0038], [0051], [0056]-[0059]).

Regarding claim 22, Blanco teaches receiving a second input at the first GUI, wherein the second input corresponds to an instruction to save the second appearance in a memory (preset layout schema / settings and preferences; para [0014], [0021], [0040], [0048], [0056]); and saving the second appearance in a memory (preset layout schema / settings and preferences; para [0014], [0021], [0040], [0048], [0056]).

Regarding claim 23, Blanco teaches a non-transitory computer readable medium having instructions stored thereon that, when executed by a processor, perform the method of claim 19 (Fig. 1; para [0020], [0021]).

--CONTINUED IN NEXT SUPPLEMENTAL BOX--

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box No. V. 2. Citations and explanations:

Regarding claim 24, Blanco teaches a device for configuring a presentation layout of one or more vehicle applications displayed to a vehicle dash display (Fig. 2, 3A; para [0014], [0026], [0029], [0034], [0041]), comprising: a first graphical user interface ("GUI") including a first display area (Fig. 2, 3A); a first input gesture area of the first display area (user input cues / gestures and body movement recognition; 228 - Fig. 2; para [0014]); a vehicle signal input/output port, wherein the vehicle signal input/output port is configured to receive and send signals to and from one or more vehicle devices (I/O interfaces to the vehicle; Fig. 1, 2; para [0020]-[0023]); a non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (Fig. 1; para [0020], [0021]), perform the method comprising: displaying, at a first time, vehicle dash information in a first layout on the first GUI (Fig. 3A; para [0014], [0034], [0041]), wherein the vehicle dash information comprises one or more applications (Fig. 3A; para [0014], [0034], [0041]), and wherein the one or more applications correspond to vehicle readouts (Fig. 3A; para [0014], [0034], [0041]); receiving a first input at the GUI, wherein the first input corresponds to an instruction to alter the first layout of the vehicle dash information to a second layout of the vehicle dash information (para [0016], [0032], [0035], [0040], [0050], [0051]), and wherein the second layout of the vehicle dash information is different from the first layout of the vehicle dash information (Fig. 3F; para [0047]); selecting, by a processor, the second layout of the vehicle dash information to display on the GUI (Fig. 4; para [0049], [0057]-[0059]); and displaying, at a second time, the second layout of the vehicle dash information on the GUI (Fig. 4; para [0049], [0050], [0057]-[0059]).

Regarding claim 25, Blanco teaches a second GUI including a second display area (para [0040], [0057]-[0059]).

Regarding claim 26, Blanco teaches a method of configuring a heads-up display ("HUD") of a vehicle dash (preset layout schema / settings; Fig. 2, 3A; para [0014], [0034], [0041], [0056]), comprising: displaying, at a first time, vehicle dash information in a first layout on at least one of a graphical user interface ("GUI") (Fig. 2, 3A; para [0014], [0034], [0041]) and a HUD unit to project the vehicle dash information above a vehicle dash, wherein the vehicle dash information comprises one or more applications (Fig. 2, 3A; para [0014], [0034], [0041]), and wherein the one or more applications correspond to vehicle readouts (Fig. 3A; para [0014], [0034], [0041]); receiving a first input at the GUI, wherein the first input corresponds to an instruction to alter the first layout of the vehicle dash information to a second layout of the vehicle dash information (para [0016], [0032], [0035], [0040], [0050], [0051]), and wherein the second layout of the vehicle dash information is different from the first layout of the vehicle dash information (Fig. 3F; para [0047]); selecting, by a processor, the second layout of the vehicle dash information to display on the GUI (Fig. 4; para [0049], [0057]-[0059]) and project by the HUD unit (HUD and dashboard display integration; Fig. 2; para [0026], [0029]); and displaying, at a second time, the second layout of the vehicle dash information by the HUD unit (Fig. 4; para [0049], [0050], [0057]-[0059]).

Regarding claim 27, Blanco teaches receiving a second input at the GUI, wherein the second input represents an instruction to cease a display of one or more applications to at least one of the GUI and the HUD unit (para [0036]-[0038], [0051]), wherein at least one of the first and second layouts includes a type of vehicle dash information not in the other of the first and second layouts (Fig. 3F; para [0047], [0055], [0056]).

Regarding claim 28, Blanco teaches receiving a second input at the GUI, wherein the second input represents an instruction to alter a first display position associated with at least one application of the one or more applications (para [0016], [0032], [0035], [0040], [0050], [0051]); determining, by a processor, the first display position to alter based on the second input (Fig. 4; para [0049], [0050], [0057]-[0059]); altering the first display position of the at least one application based on the second input (Fig. 2, 4; para [0014], [0032], [0049], [0050], [0057]-[0059]); and displaying the altered first display position of the at least one application as a second display position on the HUD unit (para [0040], [0057]-[0059]).

Regarding claim 29, Blanco teaches that altering the first layout of the one or more applications to the second layout of the one or more applications includes adding at least one application to be displayed on the HUD unit (Fig. 3A; para [0014], [0034], [0038], [0041], [0043], [0059]).

Regarding claim 30, Blanco teaches that altering the first layout of the one or more applications to the second layout of the one or more applications includes removing at least one application from being displayed on the HUD unit (para [0036]-[0038], [0051]).

Regarding claim 31, Blanco teaches that at least one of the GUI and the HUD is partitioned into two or more zones, wherein each of the two or more zones is capable of displaying the vehicle dash information (Fig. 3F; para [0050], [0055], [0057]).

Regarding claim 32, Blanco teaches that a first zone of the two or more zones is configured to display a first application of the one or more applications in the first layout, and that a second zone of the two or more zones is configured to display the first application of the one or more applications in the second layout (expand / collapse application zones between two layouts; Fig. 3E, 3F; para [0050], [0057], [0059]).

Regarding claim 33, Blanco teaches receiving one or more signals sent from a plurality of sensing elements associated with a vehicle (Fig. 3F; para [0041], [0046]); interpreting, by a processor, the one or more signals to determine whether an emergency event has occurred (sense important / dangerous vehicle conditions indicating events, e.g., no oil, fuel, over heating, sleeping driver, etc.; para [0033], [0047], [0057]); determining that an emergency event has occurred (para [0033], [0039], [0047]); and displaying, automatically, at least one emergency identifier on the HUD unit (automatically display dangerous condition / context based indicators to the driver; para [0033], [0035], [0039], [0047], [0057]).

--CONTINUED IN NEXT SUPPLEMENTAL BOX--

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box No. V. 2. Citations and explanations:

Regarding claim 34, Blanco teaches that the emergency identifier is displayed as a third layout of the one or more applications on the HUD unit (safety requirement / rules display adjusted / expanded information; para [0035], [0036], [0056], [0057]).

Regarding claim 35, Blanco teaches that the emergency identifier is displayed on the HUD unit and at least one GUI (crucial information displayed vertically or obscuring / overlaying / dimming, etc.; para [0036], [0037], [0047], [0051]).

Regarding claim 36, Blanco teaches that the emergency identifier is displayed over at least one of the first and second layout of the one or more applications on the HUD unit (crucial information displayed vertically or obscuring / overlaying / dimming, etc.; para [0036], [0037], [0047], [0051]).

Regarding claim 37, Blanco teaches that an appearance of at least one of the first and second layout is altered to emphasize the display of the emergency identifier (crucial information displayed vertically or obscuring / overlaying / dimming, etc.; para [0036], [0037], [0047], [0051]).

Regarding claim 38, Blanco teaches a method of configuring an appearance of one or more applications shown on a heads-up display ("HUD") of a vehicle dash (Fig. 2, 3A; para [0014], [0034], [0041], [0056]), comprising: displaying, at a first time, a first appearance of one or more applications on at least one of a graphical user interface ("GUI") and a HUD unit, wherein the one or more applications correspond to one or more instruments associated with the vehicle dash (HUD and dashboard display integration; Fig. 2, 3F; para [0026], [0029]), and wherein the first appearance corresponds to at least one of a first aesthetic and a first function of the one or more applications (Fig. 3A; para [0014], [0034], [0041]); receiving a first input at the GUI, the first input corresponding to an instruction to alter the first appearance of the one or more applications to a second appearance of the one or more applications (para [0016], [0032], [0035], [0040], [0050], [0051]), and wherein the second appearance of the one or more applications is different from the first appearance of the one or more applications (Fig. 3F; para [0047]); selecting, by a processor, the second appearance of the one or more applications to display on the GUI and project by the HUD unit (Fig. 4; para [0049], [0057]-[0059]); and displaying, at a second time, the second appearance of the one or more applications by the HUD unit (Fig. 4; para [0049], [0050], [0057]-[0059]).

Regarding claim 39, Blanco teaches that altering the first appearance of the one or more applications to the second appearance of the one or more applications includes adjusting a size of at least one application to be displayed on the HUD unit (reducing and moving based on rules and remaining / compared window / screen real estate; para [0037], [0038], [0051], [0056]-[0059]).

Regarding claim 40, Blanco teaches that altering the first appearance of the one or more applications to the second appearance of the one or more applications includes adjusting at least one scale of at least one application to be displayed on the HUD unit (reducing and moving based on rules and remaining / compared window / screen real estate; para [0037], [0038], [0051], [0056]-[0059]).

Regarding claim 41, Blanco teaches receiving a second input at the GUI, wherein the second input corresponds to an instruction to save the second appearance in a memory (preset layout schema / settings and preferences; para [0014], [0021], [0040], [0048], [0056]); and saving the second appearance in a memory (preset layout schema / settings and preferences; para [0014], [0021], [0040], [0048], [0056]).

Regarding claim 42, Blanco teaches a non-transitory computer readable medium having instructions stored thereon that, when executed by a processor, perform the method of claim 38 (Fig. 1; para [0020], [0021]).

Regarding claim 43, Blanco teaches a device for configuring a heads-up display ("HUD") of a vehicle dash to display one or more vehicle applications (Fig. 2, 3A; para [0014], [0034], [0041], [0056]), comprising: a Graphical User Interface ("GUI") including a first display area (Fig. 2, 3A; para [0014], [0034], [0041]); an input gesture area of the first display area (user input cues / gestures and body movement recognition; 228 - Fig. 2; para [0014]); a HUD unit (Fig. 2, 3A; para [0014], [0034], [0041]); a vehicle signal input/output port, wherein the vehicle signal input/output port is configured to receive and send signals to and from a plurality of vehicle devices (I/O interfaces to the vehicle; Fig. 1, 2; para [0020]-[0023]); a non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (Fig. 1; para [0020], [0021]), perform the method comprising: displaying, at a first time, vehicle dash information in a first layout on at least one of the GUI and the HUD unit to project the vehicle dash information above a vehicle dash, wherein the vehicle dash information comprises one or more applications (Fig. 3A; para [0014], [0034], [0041]), and wherein the one or more applications correspond to vehicle readouts (Fig. 3A; para [0014], [0034], [0041]); receiving a first input at the GUI, wherein the first input corresponds to an instruction to alter the first layout of the vehicle dash information to a second layout of the vehicle dash information (para [0016], [0032], [0035], [0040], [0050], [0051]), and wherein the second layout of the vehicle dash information is different from the first layout of the vehicle dash information (Fig. 3F; para [0047]); selecting, by a processor (Fig. 4; para [0049], [0057]-[0059]), the second layout of the vehicle dash information to display on the GUI and project by the HUD unit (HUD and dashboard display integration; Fig. 2; para [0026], [0029]); and displaying, at a second time, the second layout of the vehicle dash information by the HUD unit (Fig. 4; para [0049], [0050], [0057]-[0059]).

Regarding claim 44, Blanco teaches that the HUD unit further comprises: a projector unit, wherein the projector unit is configured to project at least one image representing content associated with the vehicle dash (Fig. 2, 3A; para [0005]); a combiner, wherein the combiner is configured to redirect the at least one image into a field of view of at least one user (HUD and dashboard display integration; Fig. 2; para [0026], [0029], [0032]); and a video generating processor, wherein the video generating processor is configured to generate the at least one image to be displayed by the projector unit (Fig. 2, 3A; para [0005], [0026]).

Claims 1-44 have industrial applicability as defined by PCT Article 33(4), because the subject matter can be made or used in industry.

SAC

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

MAR 12 2013

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 07 MAR 2013
Applicant's or agent's file reference 6583-412-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US 12/65470	International filing date *(day/month/year)* 16 November 2012 (16.11.2012)
Applicant FLEXTRONICS AP, LLC	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

   Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90*bis*.1 and 90*bis*.3).

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Lee W. Young PCT Helpdesk 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-412-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US 12/65470	International filing date *(day/month/year)* 16 November 2012 (16.11.2012)	(Earliest) Priority Date *(day/month/year)* 16 November 2011 (16.11.2011)
Applicant FLEXTRONICS AP, LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 1

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 12/65470

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G01C 23/00 (2013.01)
USPC - 701/418
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
USPC-701/418

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC-701/1, 36, 40, 41, 44, 48, 400, 418, 432; 340/901, 905, 932.2, 988, 995.1, 995.26, 995.27; 700/1, 89, 90; G01C 23/00

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase; Google Patents; Google Scholar
Search terms: vehicle, car, automobile, truck, control, graphical user interface, GUI, interface, application, app, layout, presentation, display, touch screen, LCD, mount, support, latch, fasten, alter, change, modify, remove, attach, detach, portable, separate, computer

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2011/0082615 A1 (Small et al.) 07 April 2011 (07.04.2011) entire document; fig 1-7; para [0018]-[0023], [0026]-[0028], [0034]	1-6, 15, 16, 19, 20 --- 7-14,17, 18, 24, 25, 31-74
X --- Y	US 6,816,783 B2 (Hashima et al.) 09 November 2004 (09.11.2004) entire document; fig 1, 2, 7; col 2, ln 13-31; col 3, ln 54 to col 4, ln 29	21, 22, 26-29 --- 23-25, 30-40, 50, 51, 61, 62, 72-74
Y	US 4,875,391 A (Leising et al.) 24 October 1989 (24.10.1989) entire document; col 108, ln 31 to col 109, ln 26	7-14, 17, 18
Y	US 7,881,703 B2 (Roundtree et al.) 01 February 2011 (01.02.2011) entire document; col 11, ln 1-9	23, 30
Y	US 6,339,826 B2 (Hayes, Jr. et al.) 15 January 2002 (15.01.2002) entire document; col 22, ln 13 to col 23, ln 7	41-74
Y	US 2011/0028138 A1 (Davies-Moore et al.) 03 February 2011 (03.02.2011) entire document; para [0051]	43, 47-49, 54, 58-60, 65, 69-71

☒ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 February 2013 (21.02.2013)	07 MAR 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2010/0121570 A1 (Tokue et al.) 13 May 2010 (13.05.2010) entire document	1-74
A	US 2010/0069115 A1 (Liu) 18 March 2010 (18.03.2010) entire document	1-74
A	US 2005/0144156 A1 (Barber) 30 June 2005 (30.06.2005) entire document	1-74
A	US 6,662,077 B2 (Haag) 09 December 2003 (09.12.2003) entire document	1-74

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	07 MAR 2013
Applicant's or agent's file reference: 6583-412-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US 12/65470	16 November 2012 (16.11.2012)	16 November 2011 (16.11.2011)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G01C 23/00 (2013.01)
USPC - 701/418

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Fom PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	21 February 2013 (21.02.2013)	Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 12/65470

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 12/65470

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	7-14, 17, 18, 23-25, 30-74	YES
	Claims	1-6, 15, 16, 19-22, 26-29	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-74	NO
Industrial applicability (IA)	Claims	1-74	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-6, 15, 16, 19, 20 lack of novelty under PCT Article 33(2) as being anticipated by US 2011/0082615 A1 to Small et al. (hereinafter 'Small').

As per claims 1 and 15, Small discloses a method of configuring a vehicle control system graphical user interface (method for configuring vehicle user interface, Abstract) to display a plurality of vehicle applications (fig 1, 2; para [0020]) and a non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (CPU 205; para [0019]), perform the method comprising a non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (CPU 205; para [0019]), perform the method, comprising: displaying (100), at a first time, a plurality of applications (such as subsystems 209, 211, 213, 215, 217, 219, 221, 223, 225) in a first presentation layout on at least a first GUI, wherein the plurality of applications are configured to communicate with at least one vehicle function associated with each application (fig 2; para [0019]-[0020]); receiving a first input at the at least a first GUI, wherein the first input corresponds to an instruction to alter the first presentation layout to a second presentation layout (such as subsystems of fig 3-7), wherein the first presentation layout corresponds to a first position and behavior of each application of the displayed plurality of applications on the at least a first GUI and the second presentation layout corresponds to a second position and behavior of each application different from the first presentation layout (para [0020]-[0021]); selecting, by a processor (205; para [0019]), the second presentation layout to display on the at least a first GUI (para [0020]-[0021]; sending, by a processor (205), a command to display the second presentation layout on the at least a first GUI; and displaying, at a second time, the second presentation layout on the at least a first GUI (such as subsystems of fig 3-7; para [0023]).

As per claims 2 and 16, Small discloses the method of claim 1 and the non-transitory computer readable medium of claim 15, further comprising: receiving a second input at the at least a first GUI, wherein the second input manipulates at least one control associated with at least one application of the plurality of applications; determining, by a processor (205), a vehicle function (subsystems) to control based on the second input; and controlling the determined vehicle function based on the second input (para [0023], [0026]-[0028]).

As per claim 3, Small discloses the method of claim 1, wherein the first input comprises a movement from a first position on the at least a first GUI to a second position on the at least a first GUI (such as subsystem of fig 5; para [0034]).

As per claim 4, Small discloses the method of claim 1, wherein altering the first presentation layout to the second presentation layout includes adding at least one application to be displayed on the at least a first GUI (para [0034]).

As per claim 5, Small discloses the method of claim 1, wherein altering the first presentation layout to the second presentation layout includes removing at least one application from being displayed on the at least a first GUI (para [0034]).

As per claim 6, Small discloses the method of claim 1, wherein the vehicle functions include one or more of the climate system, audio system, mechanical features, electrical features, trip computer, associated phone, map and guidance system (fig 2).

As per claim 19, Small discloses a device for configuring a vehicle control system graphical user interface ("GUI") to display a plurality of vehicle applications, comprising: a first GUI including a first display area (100); a first input gesture area (touch screen; para [0021]) of the first display; a vehicle signal input/output port (communication link 227), wherein the vehicle signal input/output port is configured to receive and send signals to and from a plurality of vehicle controls (fig 2); a non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (205; para [0019]), perform the method comprising: displaying, at a first time, a plurality of applications in a first presentation layout on the first GUI, wherein the plurality of applications (such as subsystems 209, 211, 213, 215, 217, 219, 221, 223, 225) are configured to communicate with vehicle functions that are associated with each application (fig 2; para [0019]); receiving a first input at the first GUI, wherein the first input corresponds to an instruction to alter the first presentation layout to a second presentation layout (such as subsystems of fig 3-7), wherein the first presentation layout corresponds to a first position and behavior of each application of the displayed plurality of applications on the first GUI and the second presentation layout corresponds to a second position and behavior of each application different from the first presentation layout (para [0020], [0021]); selecting, by a processor (205), the second presentation layout to display on the first GUI; sending, by a processor, a command to display the second presentation layout on the first GUI; and displaying, at a second time, the second presentation layout on the first GUI (such as subsystems of fig 3-7; para [0023]).

*****Continued on the Supplemental Box*****

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

In Claim 39, recitation "The device of claim 18" has been changed to "The device of claim 38", and treated as such.

In Claim 74, recitation "The device of claim 74" has been changed to "The device of claim 73", and treated as such.

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Citations and Explanations.

As per claim 20, Small discloses the device of claim 19, further comprising a second GUI (one of the zones) including a second display area (para [0023]).

Claims 21, 22, 26-29 lack novelty under PCT Article 33(2) as being anticipated by US 6,816,783 B2 to Hashima et al. (hereianfter 'Hashima').

As per claims 21 and 28, Hashima discloses a method of configuring a vehicle control system graphical user interface ("GUI" and touch panel switch 4) of a console device (of a vehicle; fig 1, 2; col 2, ln 13-21), and a non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (5), perform the method comprising comprising: detecting, by a processor (5), a first state (in-vehicle mode) of the console device, wherein the first state of the console device is one of attached to or removed from a vehicle-mounted position on a vehicle (fig 2); storing, in memory, the first state of the console device and a first presentation layout associated with the first state (fig 6);
detecting, by a processor, a second state (portable mode) console device, wherein the second state of the console device is different from the first state of the console device (fig 7; col 4, ln 17-29), and wherein the second state of the console device is the other of attached to or removed from the vehicle-mounted position; and referring, by a processor, to stored rules (layout base on location) to determine whether to change the first presentation layout of the console device based on the detected second state of the console device (col 3, ln 54 to col 4, ln 5 and ln 16-29).

As per claims 22 and 29, Hashima discloses the method of claim 21 and the non-transitory computer readable medium of claim 28, wherein the stored rules comprise directions to maintain the first presentation layout (fig 6) of the console device when the second state of the console device is detected (col 3, ln 54 and col 4, ln 5).

As per claim 26, Hashima discloses the method of claim 21, wherein the stored rules comprise directions to change the first presentation layout of the console device to a second presentation layout when the second state of the console device is detected (col 4, ln 16-29).

As per claim 27, Hashima discloses the method of claim 26, wherein the second presentation layout is configured to operate as a stand-alone computing device (a portable navigation system, col 4, ln 16-29).

Claims 7-14, 17, 18 lack an inventive step under PCT Article 33(3) as being obvious over Small, in view of US 4,875,391 A to Leising et al. (hereinafter 'Leising').

As per claims 7 and 17, Small discloses the method of claim 1 and the non-transitory computer readable medium of claim 15, Small further discloses control and monitor of subsystems can be accessed and/or view on the display, (such as a drivetrain 215; para [0019]), but not receiving, one or more signals sent from a plurality of sensing elements associated with a vehicle; interpreting, by a processor, the one or more signals to determine whether an emergency event has occurred; determining that an emergency event has occurred; and displaying, automatically, an emergency identifier on the at least a first GUI. Leising discloses an adaptive control system comprise a controller (3010, 3020) provide diagnostic alert based on signals from sensors (3030, 3040) (col 108, ln 31 to col 109, ln 26). It would have been obvious to one skilled in the art to have incorporate the control system to the system of Small as taught by Leising in order to provide a vehicle component diagnostic and warning to a user, providing advance warning of possible malfunctions.

As per claim 8, Small and Leising disclose the method of claim 7, Small further discloses a memory (207); Leising further discloses wherein the interpretation step further comprises: referring to a memory, wherein the memory stores rules that define a plurality of signal conditions corresponding to an emergency event (col 108, ln 31 to col 109, ln 26).

As per claim 9 Small and Leising disclose the method of claim 7, but do not explicitly disclose the emergency identifier is displayed as a third presentation layout on the at least a first GUI. However, Small does disclose the system allows the user to alter the configuration of the interface, number of zones, size etc to his/her particular interface preferences (para [0024]-[0027]). A person skilled in the art would have been motivated to further modify Small and Leising such that the emergency identifier is displayed as a third presentation layout on the at least a first GUI, since such as modification would have been an obvious engineering design/choice to one of ordinary skill to clearly convey a message (alert) to the user of the system.

As per claim 10, Small and Leising disclose the method of claim 7, but do not explicitly disclose the emergency identifier is displayed over at least one of the first and second presentation layout on the at least a first GUI. However, Small does disclose the system allows the user to alter the configuration of the interface, number of zones, size etc to his/her particular interface preferences (para [0024]-[0027]). A person skilled in the art would have been motivated to further modify Small and Leising such that the emergency identifier is displayed over at least one of the first and second presentation layout on the at least a first GUI, since such as modification would have been an obvious engineering design/choice to one of ordinary skill to clearly convey a message (alert) to the user of the system.

As per claim 11, Small and Leising disclose the method of claim 10, but do not disclose an appearance of at least one of the first and second presentation layout is altered to emphasize the display of the emergency identifier. However, Small does disclose the system allows the user to alter the configuration of the interface, number of zones, size etc to his/her particular interface preferences (para [0024]-[0027]). A person skilled in the art would have been motivated to further modify Small and Leising such that an appearance of at least one of the first and second presentation layout is altered to emphasize the display of the emergency identifier, since such as modification would have been an obvious engineering design/choice to one of ordinary skill to differentiate the conveyed messages (alert) to the user of the system.

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As per claim 12, Small and Leising disclose the method of claim 7, but do not explicitly disclose displaying automatically one or more interactive emergency elements on the at least a first GUI, wherein at least one of the one or more interactive emergency elements is configured to control a device associated with the vehicle. However, Small does disclose the system allows the user to alter the configuration of the interface, number of zones, size etc to his/her particular interface preferences (para [0024]-[0027]). A person skilled in the art would have been motivated to further modify Small and Leising such that displaying automatically one or more interactive emergency elements on the at least a first GUI, since such as modification would have been an obvious engineering design/choice to one of ordinary skill to control the associated component(s).

As per claim 13, Small and Leising disclose the method of claim 12, Leising further wherein the controlled at least one device is communication hardware (communication between 3010 and 3020; col 8, ln 59 to col 9, ln 6).

As per claim 14, Small and Leising disclose the method of claim 12, but do not explicitly disclose the emergency identifier is displayed on a second GUI. However, Small does disclose the system allows the user to alter the configuration of the interface, number of zones, size etc to his/her particular interface preferences (para [0024]-[0027]). A person skilled in the art would have been motivated to further modify Small and Leising such that the emergency identifier is displayed on a second GUI, since such as modification would have been an obvious engineering design/choice to one of ordinary skill to display the identifier according to the user preference.

As per claim 18, Small disclose the non-transitory computer readable medium of claim 15, Small does disclose control and monitor of subsystems can be accessed and/or view on the display, (such as a drivetrain 215; para [0019]), but do not explicitly disclose displaying automatically one or more interactive emergency elements on the at least a first GUI, wherein at least one of the one or more interactive emergency elements is configured to control a device associated with the vehicle. Leising discloses an adaptive control system comprise a controller (3010, 3020) provide diagnostic alert based on signals from sensors (3030, 3040) (col 108, ln 31 to col 109, ln 26). It would have been obvious to one skilled in the art to have incorporate the control system to the system of Small as taught by Leising in order to provide a vehicle component diagnostic and warning.

Claims 23 and 30 lack an inventive step under PCT Article 33(3) as being obvious over Hashima, in view of US 7,881,703 B2 to Roundtree et al. (hereinafter 'Roundtree').

As per claims 23 and 30, Hashima discloses the method of claim 22 and the the non-transitory computer readable medium of claim 29, Hashima further discloses the user can input which mode for operation (col 6, ln 58-65), but not explicitly querying a user with an option to change the first presentation layout to a second presentation layout; receiving input from the user, wherein the input corresponds to a decision to change or maintain the first presentation layout; and sending, by a processor, a command that represents the decision to change or maintain the first presentation layout. Roundtree teaches querying users (prompting users to send messages (col 10, ln 10-13), receiving input from the user (col 10, ln 13-16) and a user interface device wherein a user selects an option to change the display appearance on the device (col 11, ln 1-9). It would have been obvious to one skilled in the art to have incorporate the option to change the display to the system of Small by querying a user with an option to change the first presentation layout to a second presentation layout; receiving input from the user, wherein the input corresponds to a decision to change or maintain the first presentation layout; and sending, by a processor, a command that represents the decision to change or maintain the first presentation layout as taught by Roundtree in order to provide a user preferred layout in response to real time conditions as detected.

Claims 24, 25, 31-40 lack an inventive step under PCT Article 33(3) as being obvious over Hashima, in view of Small.

As per claims 24 and 31, Hashima discloses the method of claim 22 and the non-transitory computer readable medium of claim 29, but not displaying, at a first time, a plurality of applications in the first presentation layout on a first GUI, wherein the plurality of applications are configured to communicate with vehicle functions that are associated with each application; receiving a first input at the first GUI, wherein the first input corresponds to an instruction to alter the first presentation layout to a second presentation layout, wherein the first presentation layout corresponds to a first position and behavior of each application of the displayed plurality of applications on the first GUI and the second presentation layout is different from the first presentation layout; selecting, by a processor, the second presentation layout to display on the first GUI; sending, by a processor, a command to display the second presentation layout on the first GUI; and displaying, at a second time, the second presentation layout on the first GUI. Small teaches a vehicle control system comprising displaying (100), at a first time, a plurality of applications (such as subsystems 209, 211, 213, 215, 217, 219, 221, 223, 225) in a first presentation layout on at least a first GUI, wherein the plurality of applications are configured to communicate with at least one vehicle function associated with each application (fig 2; para [0019]); receiving a first input at the at least a first GUI, wherein the first input corresponds to an instruction to alter the first presentation layout to a second presentation layout (such as subsystems of fig 3-7), wherein the first presentation layout corresponds to a first position and behavior of each application of the displayed plurality of applications on the at least a first GUI and the second presentation layout corresponds to a second position and behavior of each application different from the first presentation layout (para [0020], [0021]); selecting, by a processor (205; para [0019]), the second presentation layout to display on the at least a first GUI; sending, by a processor (205), a command to display the second presentation layout on the at least a first GUI; and displaying, at a second time, the second presentation layout on the at least a first GUI (such as subsystems of fig 3-7; para [0023]). It would have been obvious to one skilled in the art to modify Hashima by incorporating the teachings of Small for the purpose of providing a device of multiple functionality.

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As per claims 25 and 32, Hashima and Small disclose the method of claim 24 and the non-transitory computer readable medium of claim 31, further comprising: Small further discloses receiving a second input at the at least a first GUI, wherein the second input manipulates at least one control associated with at least one application of the plurality of applications; determining, by a processor (205), a vehicle function (subsystems) to control based on the second input; and controlling the determined vehicle function based on the second input (para [0023], [0026]-[0028]).

As per claim 33, Hashima and Small disclose the non-transitory computer readable medium of claim 32, Hashima further discloses the method further comprising: wherein the stored rules comprise directions to change the first presentation layout of the console device to a second presentation layout when the second state of the console device is detected (col 4, ln 16-29).

As per claim 34, Hashima and Small disclose the non-transitory computer readable medium of claim 32, the method further comprising: wherein the second presentation layout is configured to operate as a stand-alone computing device (portable navigation device).

As per claim 35, Small discloses a configurable console device for displaying and interacting with a plurality of user-controllable vehicle applications, comprising:
a first graphical user interface ("GUI") including a touch sensitive display (100);
an input/output port (communication link 227), wherein the input/output port is configured to send and receive signals between the console device and a plurality of devices (209, 211, 213, 215, 217, 219, 221, 223, 225) associated with a vehicle (fig 2; para [0019]-[0021]). Small does disclose the device is mounted within the vehicle central console (para [0018]). Small does not disclose that the device is removable, at least one engagement feature, wherein the at least one engagement feature is configured to selectively connect the console device to a vehicle-mounted position on the vehicle; and a switch element configured to detect a state of the console device, wherein the state of the console device is one of attached to or removed from the vehicle-mounted position. Hashima teaches a console device for displaying and interacting of a user-controllable vehicle application (14) is operate-able in two mode, an in-vehicle (connected to the vehicle) and portable mode (col 3, ln 54 to col 4, ln 5). It would have been obvious to one skilled in the art to have the device of Small be attached or removed from the vehicle mounted position as taught by Hashima in order to provide a dynamic console device.

As per claim 36, Small and Hashima disclose the device of claim 35, Hashima further discloses
a processor (5); and a non-transitory computer readable medium having instructions stored thereon that, when executed by a processor perform the method comprising: detecting, by a processor (5), a first state (in-vehicle mode) of the console device, wherein the first state of the console device is one of attached to or removed from a vehicle-mounted position on a vehicle (fig 2);
storing, in memory, the first state of the console device and a first presentation layout associated with the first state (fig 6); detecting, by a processor, a second state (portable mode) console device, wherein the second state of the console device is different from the first state of the console device (fig 7; col 4, ln 17-29), and wherein the second state of the console device is the other of attached to or removed from the vehicle-mounted position; and referring, by a processor, to stored rules (layout base on location) to determine whether to change the first presentation layout of the console device based on the detected second state of the console device (col 3, ln 54 to col 4, ln 5).

As per claim 37, Small and Hashima disclose the device of claim 36, Hashima further teaching a power supply (col 2, ln 21-29).

As per claim 38, Small and Hashima disclose the device of claim 35, Hashima further teaching a tether (2), wherein the tether connects the device to at least one of a vehicle mount and vehicle (fig 2; col 3, ln 1-5).

As per claim 39, Small and Hashima disclose the device of claim 38, Hashima further teaching the tether (2) is configured to supply at least one of power, communications, and physical connection to the device (fig 2; col 3, ln 1-5).

As per claim 40, Small and Hashima disclose the device of claim 35, Small further teaching one of the plurality of devices associated with the vehicle is a phone (fig 2; para [0019]).

Claims 41, 42, 44-46, 52, 53, 55-57, 63, 64, 66-68 lack an inventive step under PCT Article 33(3) as being obvious over US 6,339,826 B2 to Hayes, Jr. et al. (hereinafter 'Hayes') in view of Small.

As per claims 41 and 63, Hayes discloses a method and a device, comprising:
providing, by a microprocessor executable application manager, an end user station with an application store (server), the application store comprising information relating to a plurality of applications available for installation on a user station (list of applications, claim 21);
receiving, from the user station, a request to install at least one of the plurality of applications (dragging and droppng, claim 21); and
installing, by the application manager, the selected at least one of the plurality of applications in an electronic readable memory of the user station (request a download, claim 21). Hayes discloses the claimed invention except for the end user station being a vehicle control device. Small discloses a computer system (200) used for control various applications of a vehicle (such as subsystems 209, 211, 213, 215, 217, 219, 221, 223), a web browser subsystem (225) and a mobile telecommunication link (227) allowing a controller (201) to obtain data from external sources such as web-based applications (para [0019]). Accordingly, it would have been obvious to one skilled in the art to that the process and download applications from a server/store to an end user station of Hayes could be used for a vehicle system as taught by Small.

As per claims 42 and 64, Hayes and Small disclose the method of claim 41 and device of claim 63, Hayes further teaching configuring the application store based on one or more of vehicle state, configuration, and/or operation (programmable omitting and programmable including, claim 21).

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As per claims 44 and 66, Hayes and Small disclose the method of claim 42 and device of claim 64, Small further discloses wherein the plurality of applications comprise applications directed to one or more of the following: a vehicle control application, application associated with at least one vehicle task, function, and operation, application related to handicap and accessibility graphical user interfaces, email client, web browser, communications application, game, entertainment application, satellite positioning system receiver application, automotive navigation application or device, map application, medical information application, emergency service application, noise suppression application, news-related application, vehicle manual related application, weather information-related application, biometric application, travel application, speech recognition application such as to provide hands-free voice control of other applications, application to read to the operator Really Simple Syndication ("RSS") feeds, Twitter messages, email messages, and/or instant messages, social networking application, streaming media application, and utility application, wherein the application store configuration is based on sensed information received from one or more vehicle sensors, and wherein the sensed information comprises one or more of the following: wheel state, vehicle speed, acceleration, deceleration, wheel rotation, wheel speed, wheel slip, power source energy output, engine speed, energy input and/or output, turbine speed, input speed, crankshaft position, manifold absolute pressure, mass flow, switch state, a transmission setting, a gear control current setting, a setting of a power controller, a state of a braking system, a seat setting, a weight and/or identity of seated occupant, exterior sound levels, interior sound levels, safety system state, light setting, brake control setting, accelerator pedal setting or angle, clutch pedal setting, emergency brake pedal setting, door setting,
engine temperature, passenger compartment or cabin temperature sensor, window setting, imaging output, odometer reading, trip mileage reading, wind speed, radar transmitter/receiver output, brake wear, steering/torque, oxygen level, ambient lighting, ranging sensor output, parking sensor output, heating, venting, and air conditioning (HVAC) sensor output, water sensor output, air-fuel ratio meter output, blind spot monitor output, hall effect sensor output, radio frequency (RF) sensor output, infrared (IR) sensor output, vehicle control system sensor output, wireless network sensor output, vehicle location, vehicle direction of travel, and cellular data sensor output (para [0019]).

As per claims 45 and 67, Hayes and Small disclose the method of claim 42 and the device of claim 64, but not the application store configuration is based on observed behavior of the vehicle operator and/or behaviors of operators of other vehicles. However, Small discloses the system is designed to allow a user to configure and alter the configuration to their personal preferences (para [0027]). A person skilled in the art would have been motivated to further Hayes and Small such that the application store configuration is based on observed behavior of the vehicle operator and/or behaviors of operators of other vehicles, to accommodate the user personal preferences.

As per claims 46 and 68, Hayes and Small disclose the method of claim 42 and the device of claim 64, but not the application store configuration is based on one or more of a type, make, model and/or year of manufacture of the vehicle. However, Small further discloses the external data source can be a manufacturer, dealer, service center (para [0019]). A person skilled in the art would have been motivated to further modify Hayes and Small such that the application store configuration is based on one or more of a type, make, model and/or year of manufacture of the vehicle, in order to provide the accurate application to the vehicle.

As per claim 52, Hayes discloses a tangible, non-transient computer readable medium, comprising
microprocessor executable instructions that, when executed, perform the following steps:
providing an end user station with an application store (server), the application store comprising information relating to a plurality of applications available for installation on an end user station (list of applications, claim 21); and receiving, from the end user, a request to install at least one of the plurality of applications in an electronic readable memory of the end user station (dragging and dropping, claim 21). Hayes discloses the claimed invention except for the end user station being a vehicle control device. Small discloses a computer system (200) used for control various applications of a vehicle (such as subsystems 209, 211, 213, 215, 217, 219, 221, 223), a web browser subsystem (225) and a mobile telecommunication link (227) allowing a controller (201) to obtain data from external sources such as web-based applications (para [0019]). Accordingly, it would have been obvious to one skilled in the art to that the process and download applications from a server/store to an end user station of Hayes could be used for a vehicle system as taught by Small.

As per claim 53, Hayes and Small disclose the computer readable medium of claim 52, but not the instructions, when executed, perform the further step: configuring the application store based on one or more of vehicle state, configuration, and/or operation. A person skilled in the art would have been motivated to further modify Hayes and Small such that the application store based on one or more of vehicle state, configuration, and/or operation, since such a modification would have been an obvious engineering design/choice to one of ordinary skill to accommodate the vehicle.

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As per claim 55, Hayes and Small disclose the computer readable medium of claim 53, Small further discloses wherein the plurality of applications comprise applications directed to one or more of the following: a vehicle control application, application associated with at least one vehicle task, function, and operation, application related to handicap and accessibility graphical user interfaces, email client, web browser, communications application, game, entertainment application, satellite positioning system receiver application, automotive navigation application or device, map application, medical information application, emergency service application, noise suppression application, news-related application, vehicle manual related application, weather information-related application, biometric application, travel application, speech recognition application such as to provide hands-free voice control of other applications, application to read to the operator Really Simple Syndication ("RSS") feeds, Twitter messages, email messages, and/or instant messages, social networking application, streaming media application, and utility application, wherein the application store configuration is based on sensed information received from one or more vehicle sensors, and wherein the sensed information comprises one or more of the following: wheel state, vehicle speed, acceleration, deceleration, wheel rotation, wheel speed, wheel slip, power source energy output, engine speed, energy input and/or output, turbine speed, input speed, crankshaft position, manifold absolute pressure, mass flow, switch state, a transmission setting, a gear control current setting, a setting of a power controller, a state of a braking system, a seat setting, a weight and/or identity of seated occupant, exterior sound levels, interior sound levels, safety system state, light setting, brake control setting, accelerator pedal setting or angle, clutch pedal setting, emergency brake pedal setting, door setting,
engine temperature, passenger compartment or cabin temperature sensor, window setting, imaging output, odometer reading, trip mileage reading, wind speed, radar transmitter/receiver output, brake wear, steering/torque, oxygen level, ambient lighting, ranging sensor output, parking sensor output, heating, venting, and air conditioning (HVAC) sensor output, water sensor output, air-fuel ratio meter output, blind spot monitor output, hall effect sensor output, radio frequency (RF) sensor output, infrared (IR) sensor output, vehicle control system sensor output, wireless network sensor output, vehicle location, vehicle direction of travel, and cellular data sensor output (para [0019]).

As per claim 56, Hayes and Small disclose the computer readable medium of claim 53, but not the application store configuration is based on observed behavior of the vehicle operator and/or behaviors of operators of other vehicles. However, Small discloses the system is designed to allow a user to configure and alter the configuration to their personal preferences (para [0027]). A person skilled in the art would have been motivated to further Hayes and Small such that the application store configuration is based on observed behavior of the vehicle operator and/or behaviors of operators of other vehicles, to accommodate the user personal preferences.

As per claim 57, Hayes and Small disclose the computer readable medium of claim 53, but not the application store configuration is based on one or more of a type, make, model and/or year of manufacture of the vehicle. However, Small further discloses the external data source can be a manufacturer, dealer, service center (para [0019]). A person skilled in the art would have been motivated to further modify Hayes and Small such that the application store configuration is based on one or more of a type, make, model and/or year of manufacture of the vehicle, in order to provide the accurate application to the vehicle.

Claims 43, 47-49, 54, 58-60, 65, 69-71 lack an inventive step under PCT Article 33(3) as being obvious over Hayes, in view of Small, in further view of US 2011/0028138 A1 to Davies-Moore-Moore et al. (hereinafter 'Davies-Moore').

As per claims 43, 47-49, Hayes and Small disclose the method of claim 42, but not wherein said configuring comprises at least one of: (i) determining a relative ranking of each of the plurality of applications; (ii) determining which applications are to be included in the plurality of applications; and (iii) enabling and/or disabling one or more features and/or functions of the application store. Davies-Moore teaches a method and apparatus for determine a relative ranking of applications and features based upon a user activity record (para [0051]). It would have been obvious to one skilled in the art to have used the relative ranking with the system of Hayes and Small as taught by Davies-Moore such that (i) determining a relative ranking of each of the plurality of applications; (ii) determining which applications are to be included in the plurality of applications; and (iii) enabling and/or disabling one or more features and/or functions of the application store, in order to provide easier accessibility.

As per claims 54, 58-60, Hayes and Small disclose the computer readable medium of claim 53, but not wherein said configuring comprises at least one of: (i) determining a relative ranking of each of the plurality of applications; (ii) determining which applications are to be included in the plurality of applications; and (iii) enabling and/or disabling one or more features and/or functions of the application store. Davies-Moore teaches a method and apparatus for determine a relative ranking of applications and features based upon a user activity record (para [0051]). It would have been obvious to one skilled in the art to have used the relative ranking with the system of Hayes and Small as taught by Davies-Moore such that (i) determining a relative ranking of each of the plurality of applications; (ii) determining which applications are to be included in the plurality of applications; and (iii) enabling and/or disabling one or more features and/or functions of the application store, in order to provide easier accessibility.

As per claim 65, 69-71, Hayes and Small disclose the device of claim 64, but not wherein the application store configuration is based on observed behavior of the vehicle operator and/or behaviors of operators of other vehicles. However, Small discloses the system is designed to allow a user to configure and alter the configuration to their personal preferences (para [0027]). A person skilled in the art would have been motivated to further Hayes and Small such that the application store configuration is based on observed behavior of the vehicle operator and/or behaviors of operators of other vehicles, to accommodate the user personal preferences.

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Claims 50, 51, 61, 62, 72-74 lack an inventive step under PCT Article 33(3) as being obvious over Hayes, in view of Small, in further view of Hashima.

As per claim 50, Hayes and Small disclose the method of claim 42, but not an application store configuration is based on one or more of whether a communication device, separate from the vehicle, is docked or otherwise in signal communication with the application manager and a configuration of and/or applications stored on and executable by the communication device. Hashima teaches a console device for displaying and interacting of a user-controllable vehicle application (14) is operate-able in two mode, an in-vehicle (connected to the vehicle) and portable mode (col 3, ln 54 to col 4, ln 5). It would have been obvious to one skilled in the art to further modify the device of Hayes and Small by incorporated the teachings of Hashima such that an application store configuration is based on one or more of whether a communication device, separate from the vehicle, is docked or otherwise in signal communication with the application manager and a configuration of and/or applications stored on and executable by the communication device in order to provide a dynamic console device.

As per claim 51, Hayes, Small and Hashima disclose the method of claim 50, but not the application manager changes license restrictions or permissions to enable one or more of the applications stored on the communication device to execute on a processor on-board the vehicle. A person skilled in the art would have been motivated to further modify Hayes, Small and Hashima such that the application manager changes license restrictions or permissions to enable one or more of the applications stored on the communication device to execute on a processor on-board the vehicle, since such modification would have been an obvious engineering design/choice to ensure proper user of the applications.

As per claim 61, Hayes and Small disclose the computer readable medium of claim 53, but not an application store configuration is based on one or more of whether a communication device, separate from the vehicle, is docked or otherwise in signal communication with the application manager and a configuration of and/or applications stored on and executable by the communication device. Hashima teaches a console device for displaying and interacting of a user-controllable vehicle application (14) is operate-able in two mode, an in-vehicle (connected to the vehicle) and portable mode (col 3, ln 54 to col 4, ln 5). It would have been obvious to one skilled in the art to further modify the device of Hayes and Small by incorporated the teachings of Hashima such that an application store configuration is based on one or more of whether a communication device, separate from the vehicle, is docked or otherwise in signal communication with the application manager and a configuration of and/or applications stored on and executable by the communication device in order to provide a dynamic console device.

As per claim 62, Hayes, Small and Hashima disclose the computer readable medium of claim 61, but not the application manager changes license restrictions or permissions to enable one or more of the applications stored on the communication device to execute on a processor on-board the vehicle. A person skilled in the art would have been motivated to further modify Hayes, Small and Hashima such that the application manager changes license restrictions or permissions to enable one or more of the applications stored on the communication device to execute on a processor on-board the vehicle, since such modification would have been an obvious engineering design/choice to ensure proper user of the applications.

As per claim 72, Hayes and Small disclose the device of claim 64, but not an application store configuration is based on one or more of whether a communication device, separate from the vehicle, is docked or otherwise in signal communication with the application manager and a configuration of and/or applications stored on and executable by the communication device. Hashima teaches a console device for displaying and interacting of a user-controllable vehicle application (14) is operate-able in two mode, an in-vehicle (connected to the vehicle) and portable mode (col 3, ln 54 to col 4, ln 5). It would have been obvious to one skilled in the art to further modify the device of Hayes and Small by incorporated the teachings of Hashima such that an application store configuration is based on one or more of whether a communication device, separate from the vehicle, is docked or otherwise in signal communication with the application manager and a configuration of and/or applications stored on and executable by the communication device in order to provide a dynamic console device.

As per claim 73, Hayes, Small and Hashima disclose the device of claim 72, but not the application manager changes license restrictions or permissions to enable one or more of the applications stored on the communication device to execute on a processor on-board the vehicle. A person skilled in the art would have been motivated to further modify Hayes, Small and Hashima such that the application manager changes license restrictions or permissions to enable one or more of the applications stored on the communication device to execute on a processor on-board the vehicle, since such modification would have been an obvious engineering design/choice to ensure proper user of the applications.

As per claim 74, Hayes, Small and Hashima disclose the device of claim 73, Small further comprising:
a passenger compartment for the vehicle operator; a transmission; a power source to provide power to the transmission; a plurality of sensors to collect the sensed information; and a vehicle control system to control vehicle operations (inherent or well known components of an operate-able vehicle).

Claims 1-74 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

Electronic Acknowledgement Receipt

EFS ID:	17193049
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Douglas W. Swartz/Robert Roe-Pachirat
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-318
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Filing Date:	16-NOV-2012
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Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		IDS_01.pdf	303574 1f13c8a7780abdebf26fe285d10a2af2d875c436	yes	7

	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal Letter		1	3	
	Information Disclosure Statement (IDS) Form (SB08)		4	7	
Warnings:					
Information:					
2	Foreign Reference	EP2192015.pdf	858682 4d7b60b95f1fdc2c940f2770c3451bb26864ee18	no	12
Warnings:					
Information:					
3	Non Patent Literature	6583-318-PCT_ISR_WO_02-20-2013.pdf	1648710 99278c85ccba0364c16b4efe13567dd411128dce	no	13
Warnings:					
Information:					
4	Non Patent Literature	6583-412-PCT_ISR_WO_03-07-2013.pdf	1869457 460a08731f06be5ee258f60451686941e58d718b	no	14
Warnings:					
Information:					
5	Non Patent Literature	6583-413-PCT_ISR_WO_02-28-2013.pdf	1233428 c5d9ef72f13e22326220fed41f2cdbccb107cb35	no	9
Warnings:					
Information:					
6	Non Patent Literature	Cadillac_2013_XTS_Full-Size_Luxury_Sedan.pdf	377339 d908f2c931cf26ae47faca108f44d7e5f5e5b916	no	4
Warnings:					
Information:					
7	Non Patent Literature	CAIRNIE_Using_Finger-Pointing.pdf	895941 c85371b78fa73130e474da23ae170dba698ba053	no	6
Warnings:					
Information:					
8	Non Patent Literature	LEE_Cadillac_revamps_the_instrument_panel.pdf	728977 991e46cc2bc09d6d83a7f3cfe5021205d059d534	no	5
Warnings:					
Information:					

9	Non Patent Literature	MARTURANO_General_Motors_Takes_a_CUE_from_Customers.pdf	333978 8f5234ea57f07186431085aadd81865bc939d6e9	no	3
Warnings:					
Information:					
10	Non Patent Literature	Time-triggered_CAN.pdf	299076 9f6ba1a65fe56d4b9845110fa035864e12349a56	no	4
Warnings:					
Information:					
11	Non Patent Literature	DAVIS_Controller_Area_Network_CAN_schedulability.pdf	1952181 c90818628da658f61ec3199c0867bfa73caaf6e9	no	34
Warnings:					
Information:					
12	Non Patent Literature	DI_NATALE_Controller_Area_Network.pdf	396626 10f186ced304bce00ef97a39009ff13f33a8af0b	no	54
Warnings:					
Information:					
13	Non Patent Literature	FONSECA_Scheduling_for_a_TTCAN_network_with_a_stochastic.pdf	967397 3a4a97b68807d79e32f42a61af5fb74f8995c009	no	7
Warnings:					
Information:					
14	Non Patent Literature	HARTWICH_CAN_Network_with_Time_Triggered_Communication.pdf	868041 5dc84b7a8674b0a0df24519613a356f671566158	no	7
Warnings:					
Information:					
15	Non Patent Literature	IDSTEIN_Using_the_Controller_Area_Network.pdf	535403 219faceaab45787bbc7f149d60c89f87b20ab841	no	4
Warnings:					
Information:					
			Total Files Size (in bytes):	13268810	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	1	of	4	Attorney Docket Number	6583-318

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	4875391	10/24/1989	Leising et al.	
	2	5847661	12/08/1998	Ricci	
	3	6157321	12/05/2000	Ricci	
	4	6339826	01/15/2002	Hayes, Jr. et al.	
	5	6662077	12/09/2003	Haag	
	6	6690260	02/10/2004	Ashihara	
	7	6816783	11/09/2004	Hashima et al.	
	8	7738462	06/15/2010	HWANG	
	9	7881703	02/01/2011	Roundtree et al.	
	10	2002/0126876	09/12/2002	Paul et al.	
	11	2005/0144156	06/30/2005	Barber	
	12	2007/0194902	08/23/2007	Blanco et al.	
	13	2007/0195997	08/23/2007	Paul et al.	
	14	2008/0143085	06/19/2008	Breed et al.	
	15	2010/0069115	03/18/2010	Liu	
	16	2010/0121570	05/13/2010	Tokue et al.	
	17	2010/0127847	05/27/2010	Evans et al.	
	18	2010/0268426	10/21/2010	Pathak et al.	
	19	2011/0028138	02/03/2011	Davies-Moore et al.	
	20	2011/0082615	04/07/2011	Small et al.	
	21	2011/0175754	07/21/2011	Karpinsky	
	22	2012/0081267	04/05/2012	Sirpal et al.	
	23	2012/0081311	04/05/2012	Sirpal et al.	
	24	2013/0134730	05/30/2013	Ricci	
	25	2013/0135118	05/30/2013	Ricci	
	26	2013/0138591	05/30/2013	Ricci	
	27	2013/0138714	05/30/2013	Ricci	
	28	2013/0141247	06/06/2013	Ricci	
	29	2013/0141252	06/06/2013	Ricci	
	30	2013/0143495	06/06/2013	Ricci	
	31	2013/0143546	06/06/2013	Ricci	
	32	2013/0143601	06/06/2013	Ricci	

Examiner Signature		Date Considered	

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(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	2	of	4	Attorney Docket Number	6583-318

	33	2013/0144459	06/06/2013	Ricci	
	34	2013/0144460	06/06/2013	Ricci	
	35	2013/0144461	06/06/2013	Ricci	
	36	2013/0144463	06/06/2013	Ricci et al.	
	37	2013/0144469	06/06/2013	Ricci	
	38	2013/0144470	06/06/2013	Ricci	
	39	2013/0144474	06/06/2013	Ricci	
	40	2013/0144486	06/06/2013	Ricci	
	41	2013/0144520	06/06/2013	Ricci	
	42	2013/0144657	06/06/2013	Ricci	
	43	2013/0145065	06/06/2013	Ricci	
	44	2013/0145279	06/06/2013	Ricci	
	45	2013/0145297	06/06/2013	Ricci et al.	
	46	2013/0145360	06/06/2013	Ricci	
	47	2013/0145401	06/06/2013	Ricci	
	48	2013/0145482	06/06/2013	Ricci et al.	
	49	2013/0147638	06/13/2013	Ricci	
	50	2013/0151031	06/13/2013	Ricci	
	51	2013/0151065	06/13/2013	Ricci	
	52	2013/0151088	06/13/2013	Ricci	
	53	2013/0152003	06/13/2013	Ricci et al.	
	54	2013/0154298	06/20/2013	Ricci	
	55	2013/0158821	06/20/2013	Ricci	
	56	2013/0166097	06/27/2013	Ricci	
	57	2013/0167159	06/27/2013	Ricci et al.	
	58	2013/0241720	09/19/2013	Ricci et al.	

UNPUBLISHED U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Filing Date MM-DD-YYYY	Name of Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	59	13/420240	03/14/2012	Ricci	
	60	13/462593	05/02/2013	Ricci et al.	
	61	13/462596	05/02/2013	Ricci et al.	
	62	13/840240	03/15/2013	Ricci	

Examiner Signature		Date Considered	

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(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	3	of	4	Attorney Docket Number	6583-318

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]; Number[4]; Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	63	EP 2192015	06/02/2010	FIAT GROUP AUTOMOBILES SPA		

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	64	International Search Report and Written Opinion for International (PCT) Patent Application No. PCT/US12/65421 mailed Feb. 20, 2013 (Attorney Ref. No. 6583-318-PCT), 13 pages.
	65	International Search Report and Written Opinion for International (PCT) Patent Application No. PCT/US12/65470 mailed Mar. 7, 2013 (Attorney Ref. No. 6583-412-PCT), 14 pages.
	66	International Search Report and Written Opinion for International (PCT) Patent Application No. PCT/US12/65474 mailed Feb. 28, 2013 (Attorney Ref. No. 6583-413-PCT), 9 pages.
	67	"Cadillac: 2013 XTS Full-Size Luxury Sedan," Cadillac.com, 4 pages, Jun. 2012 internet archive, found at: (web.archive.org/web/20120606185204/http://www.cadillac.com/xts-luxury-sedan.html)
	68	CAIRNIE et al., "Using finger-pointing to operate secondary controls in automobiles," Proceedings of the IEEE Intelligent Vehicles Symposium 2000, Oct. 3-5, 2000, 6 pages.
	69	LEE "Cadillac revamps the instrument panel with CUE," CNET Reviews, Oct. 11, 2011, 5 pages, found at: (reviews.cnet.com/8301-12261_7-20118807-10356022/cadillac-revamps-the-instrument-panel-with-cue/)
	70	MARTURANO "General Motors Takes a CUE from Customers," InContext, Nov. 08, 2011, 3 pages, found at: (incontextdesign.com/blog/general-motors-takes-a-cue-from-customers/)
	71	"Time-triggered CAN," CIA, © 2001-2013, 4 pages, found at: (www.can-cia.org/index.php?id+166)
	72	DAVIS et al. "Controller Area Network (CAN) schedulability analysis: Refuted, revisited and revised," Real-Time Systems, Apr. 2007, Vol. 35, No. 3, pages 239-272
	73	DI NATALE "Controller Area Network," Dec. 2009, 54 pages
	74	FONSECA et al. "Scheduling for a TTCAN network with a stochastic optimization algorithm," Proceedings 8th Internatioanl CAN Conference, Jan. 2002, 7 pages

Examiner Signature		Date Considered	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	4	of	4	Attorney Docket Number	6583-318

	75	HARTWICH et al. "CAN Network with Time Triggered Communication," Robert Bosch GmbH Proceedings 7th International CAN Conference, Jul. 2000, 7 pages
	76	IDSTEIN et al. "Using the Controller Area Network for Communication Between Prostesis Sensors and Control Systems," Proceedings of the 2011 MyoElectric Controls/Powered Prostetics Symposium Fredericton, New Brunswick, Canada, Aug. 14-19, 2011, 4 pages

Examiner Signature		Date Considered	

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/679,204	11/16/2012	Christopher P. Ricci	6583-318	3693

111285 7590 11/14/2013

Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

EXAMINER	
MARC, MCDIEUNEL	
ART UNIT	PAPER NUMBER
3667	

NOTIFICATION DATE	DELIVERY MODE
11/14/2013	ELECTRONICELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

flexpatents@sheridanross.com

Office Action Summary	Application No. 13/679,204	Applicant(s) RICCI, CHRISTOPHER P.	
	Examiner MCDIEUNEL MARC	Art Unit 3667	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, 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 *10/22/2013*.

☐ 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) *1-20* 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) *1-20* 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 or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☒ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *11/16/2012* 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/08) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-20 are pending.

2. The present application is being examined under the pre-AIA first to invent provisions.

Priority

3. Acknowledgment is made of applicant's claim for priority of U.S provisional application under 35 U.S.C. 119(e).

Information Disclosure Statement

4. The information disclosure statements filed on 10/22/2013 complies with the provisions of MPEP § 609. It has been placed in the application file, and the information referred to therein has been considered as to the merits. A signed copy of the form is attached.

Specification

5. The abstract of the disclosure is objected to because of the word "disclose". Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

6. 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.

7. Claims 1-10 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.

Claim 1 recites "automatically identifying the person" while claims 2 and 3 determine if the person can be identified. It is therefore not possible that claim 1 automatically identified the person based on claims 2 and 3.

Claim Rejections - 35 USC § 101

8. 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.

9. Claims 1 is rejected under 35 U.S.C. 101 because based upon consideration of all of the relevant factors with respect to the claim as a whole, the claimed features of claim 1 is lack of a computer system for a method is therefore rejected as ineligible subject matter under 35 U.S.C. 101. The rationale for this finding is explained below:

The *Interim Bilski Guidance* provides factors to consider in determining whether a claim is directed to an abstract idea and is therefore not patent-eligible under 35 U.S.C. 101. Under the *Interim Bilski Guidance,* factors that weigh in favor of patent-eligibility are factors that satisfy the criteria of the recursive system and method for predicting dynamics of a vehicle moving on a road test or provide evidence that has been practically applied, and factors that weigh against patent-eligibility are factors that neither satisfy the criteria of the method test nor provide evidence *that* has been practically applied.

Under broadest reasonable interpretation for these claims, which recite the steps:

a) *automatically determining* a person....;

b) *determining* if there is a setting....;

These limitations are broad enough to encompass actions that have no tie to a computerized system responsible for performing these above mentioned steps. To the extent that detecting, and generating steps may imply a computer or a processor, it should be noted however that the scope is broad enough to also encompass a human operator merely initiating a manual action. Thus, the claim provides no insufficient tie to a computerized system. Additionally, claim 1 includes conceptual steps that lack either a computer or a processor. To provide further clarity in making future amendments, the Applicant may wish to observe the *Interim Guidance for Determining Subject Matter Eligibility for Process Claims in View of Bilski v. Kappos* memo provided to Examiners, which is available from the USPTO website at: http://www.uspto.gov/patents/law/exam/bilski_guidance_27jul2010.pdf.

10. Applicant is suggested to rewrite the claimed language as the following:

To overcome the issue raised above with respect to claim 1, the Applicant is suggested to add, in line 2, after the word "determining" --, by a processor --; and in line 4, after the word "determining", -- by the processor --.

Dependent claims 2-10 not specifically rejected are rejected as being dependent upon a rejected base claim.

11. Claim 16 is rejected under 35 U.S.C. 101 because they are directed to non-statutory subject matter. The specification is silent as to the definition of a computer readable medium. Thus, the broadest reasonable interpretation of machine readable medium in light of the specification includes a signal. Signals are not included in the four statutory categories: process, machine, manufacture, or composition of matter. See, e.g., In re Nuitjen, 84 U.S.P.Q.2d 1495 (Fed. Cir. 2007), ("A transitory, propagating signal like Nuitjen's is not a 'process, machine, manufacture, or composition of matter.' Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be patentable subject matter."). Therefore, these claims are non-statutory. To overcome this rejection, "non-transitory" may be inserted into the preamble before "computer readable medium.".

Dependent 17-20 claims not specifically rejected are rejected as being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 103

12. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a

person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 1-7, 9 and 11-15 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Breed et al. (2008/0051957) in view of Kanevsky et al. (2006/0047386).

As claims 1, 2, 4-6, 9 and 11, Breed discloses a method and vehicle control system, including a processor and memory (par. 171), comprising: automatically determining a person is within a vehicle by receiving sensor data from at least one sensor that indicates the person is within the vehicle (6, 8, 10, FIG 1 ; pars. 128, 141, and 146), determining if the person can be identified, and automatically identifying the person by comparing the sensor data to feature data in a data structure and determining if the sensor data is substantially similar to the feature data (FIG 22; pars. 468,469, 437, and 702). Breed also discloses settings used to control or configure the vehicle (par. 277), but does not disclose determining if the person has made or created a setting, thereby determining if there is a setting to be stored for the person, and storing the setting.

Kanevsky discloses, in a vehicle control system and method using setting-based controls, allowing the driver to make or create a setting via a touch sensitive display, and storing the created setting (112, FIG 1 ; 310, 316, FIG 3; pars. 22, 34, and 36, *hereinafter* gesture has been interpreted as one of the settings). Although Kanevsky does disclose the driver making or creating

the setting before storage (par. 36), Kanevsky does not explicitly disclose first determining that the driver has made or created a setting before storing the setting. One with ordinary skill in the art at the time of the invention would find it logically obvious that Kanevsky would first determine setting entry to avoid storing a non-existent setting to correspond to a command. It would have been obvious to modify Breed to determine if there is a setting to be stored for the person by determining if the person has made or created a setting, and storing the setting, for the advantage of allowing the person to customize the setting-based vehicle controls.

As per claim 3, Breed, as described under claim 1 above, discloses automatically determining if the person can be identified, and in order to do so, Breed compares the features of the person in an image to identification features in images stored in a database (pars. 468,469,437, and 702). Consequently, Breed determines the features of the person regardless of whether that person can be identified from the database comparison or not, and therefore, Breed inherently discloses characterizing the person if the person cannot be identified.

As per claim 7, Kanevsky discloses determining if there is a setting to be stored for the person further comprising the user selecting the command for which the setting will be created before entering the setting, thereby indicating

that a setting is to be created (318, FIG 3; par. 36). It would have been obvious to further modify Breed to have determining if there is a setting to be stored for the person further comprise receiving an indication from the person that a setting is to be created, for the advantage of properly associating the setting with the driver's intended command.

As per claims 12 and 13, Breed discloses the sensor data as an image of a person, wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure (6, 8, 10, FIG 1; FIG 22; pars. 141,468,469, and 473).

As per claims 14 and 15, Breed discloses the sensor data as voice data from a person, wherein in automatically identifying the person the processor is operable to identify the voice data (150, 158, FIG 61; pars. 277 and 447). Although Breed does not explicitly disclose identification by matching the voice data to voice data stored in a data structure, one with ordinary skill in the art would find it logically obvious that the identifying voice data could be stored and compared in the same way as the identifying image data (par. 617). It would have been obvious to further modify Breed to have the processor automatically identify the person by voice by matching the voice data to stored voice data in a data structure, because such comparisons to stored data are common means of data identification.

14. Claim 8 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Breed et al. (2008/0051957) in view of Kanevsky et al. (2006/0047386) as applied to claim 1 above, and further in view of Khosravy et al. (2009/0319181).

As per claim 8, Khosravy discloses, in a method and vehicle system using user settings to interact with vehicle information (par. 66), retrieving setting definitions from cloud storage (106, 150, FIG 1; pars. 87, 89, and 90). It would have been obvious to further modify Breed to have the settings stored in cloud storage for the advantage of conserving memory space within the system.

15. Claim 10 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Breed et al. (2008/0051957) in view of Kanevsky et al. (2006/0047386) as applied to claim 1 above, and further in view of Cai et al. (2011/0234369).

As per claim 10, Kanevsky discloses the person occupying the driver area or zone within the vehicle, and the settings created by the driver (104, 112, 114, FIG 1; pars. 21, 22, and 39), but does not explicitly disclose the settings associated with the particular person in the driver zone. Cai discloses, in a

device providing setting-based vehicle controls, storing settings for each particular person in a memory, and retrieving those settings when the person is identified as the user (par. 42). It would have been obvious to further modify Breed to have the person occupying an area or zone within the vehicle, and the setting associated with the person in the area or zone, for the advantage of personalizing the settings.

16. Claims 16-19 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Breed et al. (2008/0051957) in view of Cai et al. (2011/0234369).

As per claims 16 and 19, Breed discloses a computer readable medium having stored thereon computer-executable instructions, causing a processor to execute a method (par. 171), comprising: instructions to receive sensor data from the one or more sensors, and based on the sensor data, automatically determine a person is within a vehicle (6, 8, 10, FIG 1; pars. 128, 141, and 146), and further based on the sensor data, instructions to automatically identify a person (FIG 22; pars. 468,469,437, and 702). Breed also discloses instructions to receive a setting, and instructions to automatically configure the vehicle according to the received setting (par. 277). Breed does not disclose

instructions to retrieve one or more settings associated with the identified person.

Cai discloses, in a device providing setting-based vehicle controls, storing settings for each particular person in a memory, and retrieving those settings from the memory data structure when the person is identified as the user (par. 42). It would have been obvious to further modify Breed to have instructions to retrieve one or more settings associated with the identified person for the advantage of personalizing the settings.

As per claim 17, Breed further discloses automatically determining the person is within the vehicle comprising instructions to determine an area or zone in which the person occupies (pars. 146 and 147).

As per claim 18, Breed discloses determining that a person is within the driver zone (par. 170), and the settings associated with the driver of the vehicle (par. 277), therefore disclosing that the settings are associated with the determined driver area or zone.

17. Claim 20 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Breed et al. (2008/0051957) in view of and Cai et al.

(2011/0234369) as applied to claim 19 above, and further in view of Khosravy et al. (2009/0319181).

As per claim 20, Khosravy discloses, in a method and vehicle system using user settings to interact with vehicle information (par. 66), retrieving setting definitions from cloud storage (106, 150, FIG 1; pars. 87, 89, and 90). It would have been obvious to further modify Breed to have the data structure containing the settings in cloud storage for the advantage of conserving memory space within the system.

Double Patenting

18. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the claims at issue are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In*

re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the reference application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO internet Web site contains terminal disclaimer forms which may be used. Please visit http://www.uspto.gov/forms/. The filing date of the application will determine what form should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to http://www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

19. Claims 1-20 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-20 of copending

Application No. 13/679,441. Although the claims at issue are not identical, they are not patentably distinct from each other because the claims of the copending application encompass the claims this instant application.

This is a provisional nonstatutory double patenting rejection because the patentably indistinct claims have not in fact been patented.

20. Claims 1-20 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-20 of copending Application No. 13/679,234. Although the claims at issue are not identical, they are not patentably distinct from each other because the claims of the copending application encompass the claims this instant application.

This is a provisional nonstatutory double patenting rejection because the patentably indistinct claims have not in fact been patented.

21. It is well settle that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson,* 136 USPQ 184 (CCPA 1963). Also note *Ex parte Rainu,* 168 USPQ 375 (Bd. App. 1969). Omission of a reference element of step whose function is not needed would be obvious to one of ordinary skill in the art.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO L-892.

Other Prior Art Made Of Record

23. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. U.S. patents and U.S. patent application publications will not be supplied with Office actions. Examiners advise the Applicant that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.,gov), from the Office of Public Records and from commercial sources. For the use of the Office's PAIR system, Applicants may refer to the Electronic Business Center (EBC) at http://ww.uspto.,gov/ebc/index.html or 1-866- 217-919.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (571) 272-6964. The examiner can normally be reached on Mon. - Thu..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell can be reached on (571) 272-6712. 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.

/McDieunel Marc/
Primary Examiner, Art Unit 3667

Notice of References Cited	Application/Control No. 13/679,204	Applicant(s)/Patent Under Reexamination RICCI, CHRISTOPHER P.	
	Examiner MCDIEUNEL MARC	Art Unit 3667	Page 1 of 2

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	O					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 13/679,204	Applicant(s)/Patent Under Reexamination RICCI, CHRISTOPHER P.	
	Examiner MCDIEUNEL MARC	Art Unit 3667	Page 2 of 2

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13679204	RICCI, CHRISTOPHER P.
	Examiner	Art Unit
	MCDIEUNEL MARC	3667

CPC- SEARCHED		
Symbol	Date	Examiner

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Symbol	Date	Examiner

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Class	Subclass	Date	Examiner
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342	59,70,71,72,159	10/30/2013	MM
192	35,48.2,54.52,84.1,40,48.92	10/30/2013	MM
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SEARCH NOTES		
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US-PGPUB;USPAT;USOCR;FPRS;DERWENT;EPO;JPO;IBM_TDB, see attached listings	10/30/2013	MM
PLUS search	10/30/2013	MM

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

	/MCDIEUNEL MARC/ Primary Examiner.Art Unit 3667

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
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				First Named Inventor	Christopher Ricci
(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
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				Art Unit	3667
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	75	HARTWICH et al. "CAN Network with Time Triggered Communication," Robert Bosch GmbH Proceedings 7th International CAN Conference, Jul. 2000, 7 pages
	76	IDSTEIN et al. "Using the Controller Area Network for Communication Between Prostesis Sensors and Control Systems," Proceedings of the 2011 MyoElectric Controls/Powered Prostetics Symposium Fredericton, New Brunswick, Canada, Aug. 14-19, 2011, 4 pages

Examiner Signature	/McDieunel Marc/ (10/30/2013)	Date Considered	10/30/2013

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [2] Applicant's unique citation designation number (optional). [3] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [4] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [5] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [6] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [7] Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.M

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13679204	RICCI, CHRISTOPHER P.
	Examiner	**Art Unit**
	MCDIEUNEL MARC	3667

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/30/2013								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 3693

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
13/679,204	11/16/2012	701	3667	6583-318

APPLICANTS

Christopher P. Ricci, Saratoga, CA;
FLEXTRONICS AP, LLC, Milpitas, CA

**** CONTINUING DATA ***************************

This appln claims benefit of 61/560,509 11/16/2011
and claims benefit of 61/637,164 04/23/2012
and claims benefit of 61/646,747 05/14/2012
and claims benefit of 61/653,275 05/30/2012
and claims benefit of 61/653,264 05/30/2012
and claims benefit of 61/653,563 05/31/2012
and claims benefit of 61/663,335 06/22/2012
and claims benefit of 61/672,483 07/17/2012
and claims benefit of 61/714,016 10/15/2012
and claims benefit of 61/715,699 10/18/2012

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

12/10/2012

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /MCDIEUNEL MARC/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		CA	17	20	3

ADDRESS

Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
UNITED STATES

TITLE

FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

FILING FEE RECEIVED		
1390	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	20	2008/0051957 or 2006/0047386 or 2009/0319181 or 2011/0234369	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/11/01 19:43
L3	12	"20080051957" or "20060047386" or "20090319181" or "20110234369"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/11/01 19:46
S1	1	"13679204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 16:43
S2	15	US-6583318-$.DID. OR US-4875391-$.DID. OR US-5847661-$.DID. OR US-6157321-$.DID. OR US-6339826-$.DID. OR US-6662077-$.DID. OR US-6690260-$.DID. OR US-6816783-$.DID. OR US-7738462-$.DID. OR US-7881703-$.DID. OR US-20020126876-$.DID. OR US-20050144156-$.DID. OR US-20070194902-$.DID. OR US-20070195997-$.DID. OR US-20080143085-$.DID.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/30 19:12
S3	17557	(701/1 342/59,70,71,72,159 192/48.2,54.52,84.1,40,48.92 363/41 192/35 343/713).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 19:22
S4	103	("4522607" "4785920" "4994798" "5462496" "5463294" "5465820" "5469124" "5475581" "5481194" "5485904" "5494021" "5504655" "5510725" "5519269" "5529114" "5579858" "5581171" "5609940" "5620172" "5627758" "5634262" "5642106" "5644826" "5664863" "5692827" "5734971" "5765886" "5787636" "5815087" "5833321" "5833317" "5938717" "5953960" "6003307" RE36502 "6027163"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:19

		"6286787" "7010682" "20030010868" "20030117328" "20050221821" "20050264891" "20070001914" "20070152869" "20070152870" "20070152873" "20070152874" "20070265769" "20070271030" "20080167804").pn.				
S5	53	automatically with person with within near3 vehicle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:39
S6	3111713	sensors	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:39
S7	2297115	processor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:40
S8	3660433	memory	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:40
S9	98316	sensor near0 data	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:40
S10	7	S5 and S6 and S7 and S8 and S9	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:41
S11	2	"20090180668"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 22:28
S12	23474	(701/1,2,36,436,450,487,788 342/59,70,71,72,159 192/48.2,54.52,84.1,40,48.92 363/41 192/35 343/713).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2013/10/31 00:17

			DERWENT; IBM_TDB			
S13	53	automatically with person with within near3 vehicle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:24
S14	7	S13 and S12	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:24
S15	299605	setting with stor$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:33
S16	9	S13 and S15	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:33
S17	23493	(701/1,2,36,436,450,487,488 342/59,70,71,72,159 192/48.2,54.52,84.1,40,48.92 363/41 192/35 343/713).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:43
S18	7	S13 and S17	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:44

11/ 1/ 2013 8:20:12 PM
C:\ Users\ mmarc\ Documents\ EAST\ Workspaces\ 13679204.wsp

Electronic Patent Application Fee Transmittal

Application Number:	13679204
Filing Date:	16-Nov-2012
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Filer:	Douglas W. Swartz/Robert Roe-Pachirat
Attorney Docket Number:	6583-318

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 3667
Christopher Ricci	)	Confirmation No.: 3693
Serial No.: 13/679,204	)	Examiner: Marc McDieunel
Filed: November 16, 2012	)	SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
Atty. File No.: 6583-318	)	
Entitled: "Feature Recognition for Configuring a Vehicle Console and Associated Devices"	)	*Electronically Submitted*

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.

☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.

☒ Copies of the cited U.S. patents/unpublished patent applications/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).

☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.

☐ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.

☒ Examiner's attention is drawn to the following related applications:

- Serial No. 13/963,728 filed 08/09/13 (Attorney's Ref. No. 6583-525)

☐ Other:_____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence

of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☐	**37 CFR 1.97(b)**: No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☐ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☒	**37 CFR 1.97(c)**: The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☒ Please charge Deposit Account 19-1970 in the amount of $180.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	**37 CFR 1.97(d)**: This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of $180.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

☐ The undersigned certifies that:

☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).

☐ A copy of the communication from the foreign patent office is enclosed.

OR

☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /Douglas W. Swartz/
Douglas W. Swartz
Registration No. 37,739
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: January 30, 2014

Electronic Acknowledgement Receipt

EFS ID:	18069493
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Douglas W. Swartz/Robert Roe-Pachirat
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-318
Receipt Date:	30-JAN-2014
Filing Date:	16-NOV-2012
Time Stamp:	14:13:35
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	397
Deposit Account	191970
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		6583-318_IDS_02.pdf	258142 bd66ed4448cb9156e7e05305146d503ba4bcbf9d	yes	6
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Transmittal Letter		1	3	
	Information Disclosure Statement (IDS) Form (SB08)		4	6	
Warnings:					
Information:					
2	Non Patent Literature	PURCHER_Apple_Invents_In-Vehicle.pdf	756299 16eae4e6d98c8855f4523681915b27648c976b9f	no	8
Warnings:					
Information:					
3	Non Patent Literature	6583-244-PCT_ISR_WO_05-06-2013.pdf	2726504 aa212a1bbd95b45f1271c2b5291f30677c014574	no	17
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Information:					
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Information:					
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7	Non Patent Literature	6583-229_OA_12-03-2013.pdf	433258 446e1228ac599e1511fd99a8b935ca84eb9b0c4d	no	12
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Information:					

8	Non Patent Literature	6583-244_OA_09-05-2013.pdf	185675 0039078325a8ea4762147171bdb4e77c565a3616	no	6
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Information:					
9	Non Patent Literature	6583-244_OA_01-16-2014.pdf	204870 cf795a1d6a0174d740f0c952513e469dbf3fef9f	no	6
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Information:					
11	Non Patent Literature	6583-412_OA_11-13-2013.pdf	428125 bb4d85d3caf9b8fc1a7a655a04d172ba1c9f7992	no	12
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Information:					
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Warnings:					
Information:					
14	Fee Worksheet (SB06)	fee-info.pdf	30665 780e94d6cb008887f2c284f0a6d1a80e1a423afa	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	8736121	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
Sheridan Ross PC
1560 Broadway
Suite 1200
Denver, CO 80202
USA

PCT

NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Rule 71.1)

Date of mailing *(day/month/year)*	17 OCT 2013

Applicant's or agent's file reference	IMPORTANT NOTIFICATION
6583-318-PCT	

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US12/65421	16 November 2012 (16.11.2012)	16 November 2011 (16.11.2011)

Applicant

FLEXTRONICS AP, LLC

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.

2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.

3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the IPEA/ US	Authorized officer
Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	MCDIEUNEL MARC Telephone No. (571) 272-5250

Form PCT/IPEA/416 (January 2004)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 6583-318-PCT	**FOR FURTHER ACTION**	See Form PCT/IPEA/416
International application No. PCT/US12/65421	International filing date *(day/month/year)* 16 November 2012 (16.11.2012)	Priority date *(day/month/year)* 16 November 2011 (16.11.2011)
International Patent Classification (IPC) or national classification and IPC IPC: **G06F 17/00**(2006.01) USPC: 701/1		
Applicant FLEXTRONICS AP, LLC		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:

   a. ☒ *(sent to the applicant and to the International Bureau)* a total of 27 sheets, as follows:

   ☒ sheets of the description, claims and/or drawings which have been amended and/or sheets containing rectifications authorized by this Authority, unless those sheets were superseded or cancelled, and any accompanying letters (see Rules 46.5, 66.8, 70.16, 91.2, and Section 607 of the Administrative Instructions).

   ☐ sheets containing rectifications, where the decision was made by this Authority not to take them into account because they were not authorized by or notified to this Authority at the time when this Authority began to draw up this report, and any accompanying letters (Rules 66.4*bis*, 70.2(e), 70.16 and 91.2).

   ☐ superseded sheets and any accompanying letters, where this Authority either considers that the superseding sheets contain an amendment that goes beyond the disclosure in the international application as filed, or the superseding sheets were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in item 4 of Box No.I and the Supplemental Box (see Rule 70.16(b)).

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s))
   _____ containing a sequence listing, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see paragraph 3*bis* of Annex C of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand 16 September 2013 (16.09.2013)	Date of completion of this report 08 October 2013 (08.10.2013)
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer MCDIEUNEL MARC Telephone No. (571) 272-5250

Form PCT/IPEA/409 (cover sheet) (July 2011)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US12/65421

Box No. I Basis of the report

1. With regard to the **language**, this report is based on:
   - ☒ the international application in the language in which it was filed.
   - ☐ a translation of the international application into English which is the language of a translation furnished for the purposes of:
     - ☐ international search (Rules 12.3(a) and 23.1(b)).
     - ☐ publication of the international application (Rule 12.4(a)).
     - ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a) and (b)).
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
   - ☐ the international application as originally filed/furnished
   - ☒ the description:
     pages 1-45 as originally filed/furnished
     pages* NONE received by this Authority on
     pages* NONE received by this Authority on
   - ☒ the claims:
     pages NONE as originally filed/furnished
     pages* NONE as amended (together with any statement) under Article 19
     pages* 46-54 received by this Authority on 16 September 2013 (16.09.2013)
     pages* NONE received by this Authority on
   - ☒ the drawings:
     pages 1/17-17/17 as originally filed/furnished
     pages* NONE received by this Authority on
     pages* NONE received by this Authority on
   - ☐ a sequence listing - see Supplemental Box Relating to Sequence Listing.
3. ☒ The amendments have resulted in the cancellation of:
   - ☒ the description, pages None
   - ☒ the claims, Nos. 2-3, 26 and 50
   - ☒ the drawings, sheets/figs None
   - ☒ the sequence listing (*specify*): None
4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since either they are considered to go beyond the disclosure as filed, or they were not accompanied by a letter indicating the basis for the amendments in the application as filed, as indicated in the Supplemental Box (Rules 70.2(c) and(*c-bis*)):
   - ☒ the description, pages None
   - ☒ the claims, Nos. None
   - ☒ the drawings, sheets/figs None
   - ☒ the sequence listing (*specify*): None
5. ☐ This report has been established:
   - ☐ taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.1(d-*bis*) and 70.2(e)).
   - ☐ without taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rules 66.4*bis*) and 70.2(e)).
6. ☐ Supplementary international search report(s) from Authority(ies) _____ has/have been received and taken into account in establishing this report (Rule 45*bis*.8(b) and (c)).

** If item 4 applies, some or all of those sheets may be marked "superseded."*

Form PCT/IPEA/409 (Box No. I) (July 2011)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US12/65421

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1, 4-25, 27-49 and 51-78	YES
	Claims NONE	NO
Inventive Step (IS)	Claims 1, 4-25, 27-49 and 51-78	YES
	Claims NONE	NO
Industrial Applicability (IA)	Claims 1, 4-25, 27-49 and 51-78	YES
	Claims NONE	NO

2. Citations and Explanations (Rule 70.7)

Claims 1, 4-25, 27-49 and 50 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest methods and systems for a complete vehicle ecosystem are provided. Specifically, systems that when taken alone, or together, provide an individual or group of individuals with an intuitive and comfortable vehicular environment. A system to recognize the drivers and/or passengers within the automobile. Based on the recognition, the vehicle may change a configuration of the automobile to match predetermined preferences for the driver and/or passenger. The configurations may also include the recognition of a unique set of gestures for the person. Further, the configuration can also include the tracking of health data related to the person.

---------- NEW CITATIONS ----------

None

Form PCT/IPEA/409 (Box No. V) (July 2011)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/US12/65421

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

What is claimed is:

1. A method, comprising:

automatically determining a person is within a vehicle;

automatically identifying the person;

determining if there is a setting to be stored for the person, wherein automatically identifying the person comprises (i) determining if the person can be identified and (ii) characterizing the person if the person cannot be identified; and

storing the setting.

2. Canceled.

3. Canceled.

4. The method of claim 1, wherein automatically determining a person is within a vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle.

5. The method of claim 4, wherein automatically identifying the person comprises:

comparing the sensor data to feature data in a data structure; and

determining if the sensor data is substantially similar to the feature data.

6. The method of claim 5, wherein determining if there is a setting to be stored for the person comprises determining if the person has made a setting.

7. The method of claim 6, wherein determining if there is a setting to be stored for the person further comprises waiting a period of time to determine if the settings have achieved a steady state.

8. The method of claim 1, wherein the setting is stored in cloud storage.

9. The method of claim 1, wherein the setting is one of a position of a seat, a position of a mirror, a heat or cold setting, a configuration of a console, a configuration of a dash, a configuration of a heads up display, or a setting for a radio.

10. The method of claim 1, wherein the person occupies an area or zone within the vehicle, and wherein the setting is associated with the person in the area or zone.

11. A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive sensor data from the one or more sensors;

based on the sensor data, automatically determine a person is within a vehicle;

based on the sensor data, automatically identify the person, wherein automatically identifying the person comprises (i) determining if the person can be identified and (ii) characterizing the person if the person cannot be identified;

determine if the person has made a setting; and

store the setting.

12. The device of claim 11, wherein the sensor data is an image of the person.

13. The device of claim 12, wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure.

14. The device of claim 11, wherein the sensor data is voice data from the person.

15. The device of claim 14, wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure.

16. A computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine a person is within a vehicle;

based on the sensor data, instructions to automatically identify the person wherein automatically identifying the person comprises (i) determining if the person can be identified and (ii) characterizing the person if the person cannot be identified;

instructions to retrieve one or more settings associated with the identified person; and

instructions to automatically configure the vehicle according to the retrieved settings.

17. The computer readable medium of claim 16, wherein in automatically determining the person is within a vehicle comprises instructions to determine an area or zone in which the person occupies.

18. The computer readable medium of claim 17, wherein the settings retrieved are associated with the determined area or zone.

19. The computer readable medium of claim 18, wherein the settings are retrieved from a data structure.

20. The computer readable medium of claim 19, wherein the data structure is stored in cloud storage.

21. A method, comprising:

automatically determining a person is within a vehicle;

automatically identifying the person;

determining if there is a gesture to be stored for the person, wherein determining if there is a gesture to be stored for the person comprises determining if the person has created a gesture; and

storing the gesture.

22. The method of claim 21, further comprising: determining if the person can be identified.

23. The method of claim 22, further comprising: if the person cannot be identified, characterizing the person.

24. The method of claim 23, wherein automatically determining a person is within a vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle.

25. The method of claim 24, wherein automatically identifying the person comprises:

comparing the sensor data to feature data in a data structure; and

determining if the sensor data is substantially similar to the feature data.

26. Canceled.

27. The method of claim 25, wherein determining if there is a gesture to be stored for the person further comprises receiving an indication from the person that a gesture is to be created.

28. The method of claim 21, wherein the gesture is stored in cloud storage.

29. The method of claim 21, wherein the gesture is one of a gesture in a gesture capture region, a gesture in a touch sensitive display, or a movement in a three-dimensional space.

30. The method of claim 21, wherein the person occupies an area or zone within the vehicle, and wherein the gesture is associated with the person in the area or zone.

31. A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive sensor data from the one or more sensors;

based on the sensor data, automatically determine a person is within a vehicle;

based on the sensor data, automatically identify the person;

determine if the person has made a gesture; and

store the gesture.

32. The device of claim 31, wherein the sensor data is an image of the person.

33. The device of claim 32, wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure.

34. The device of claim 31, wherein the sensor data is voice data from the person.

35. The device of claim 34, wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure.

36. A computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine a person is within a vehicle;

based on the sensor data, instructions to automatically identify the person;

instructions to retrieve one or more gestures associated with the identified person;

instructions to receive a gesture; and

instructions to automatically configure the vehicle according to the received gesture.

37. The computer readable medium of claim 36, wherein in automatically determining the person is within a vehicle comprises instructions to determine an area or zone in which the person occupies.

38. The computer readable medium of claim 37, wherein the retrieved gestures are associated with the determined area or zone.

39. The computer readable medium of claim 38, wherein the gestures are retrieved from a data structure.

40. The computer readable medium of claim 39, wherein the data structure is stored in cloud storage.

41. A method, comprising:

automatically determining a person is within a vehicle;

automatically identifying the person;

determining if there is health data to be stored for the person; and

storing the health data, wherein the health data is associated with the person in an area or zone in which the person occupies.

42. The method of claim 41, further comprising: determining if the person can be identified.

43. The method of claim 42, further comprising: if the person cannot be identified, characterizing the person.

44. The method of claim 43, wherein automatically determining a person is within a vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle.

45. The method of claim 44, wherein automatically identifying the person comprises:

comparing the sensor data to feature data in a data structure; and

determining if the sensor data is substantially similar to the feature data.

46. The method of claim 45, wherein determining if there is health data to be stored for the person comprises receiving the health data from one or more sensors.

47. The method of claim 46, wherein determining if there is health to be stored for the person further comprises:

storing the health data; and

waiting a period of time before storing the health data again.

48. The method of claim 47, wherein the health data is measured periodically to obtain average health data.

49. The method of claim 41, wherein the health data is one of a heart rate, a blood pressure, a blood composition, a weight, a temperature, an image, or a sound.

50. Canceled.

51. A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive sensor data from the one or more sensors;

based on the sensor data, automatically determine a person is within a vehicle;

based on the sensor data, automatically identify the person;

determine if there is health data to be stored for the person; and

store the health data, wherein the health data is associated with teh person in an area or zone in which the person occupies.

52. The device of claim 51, wherein the sensor data is an image of the person.

53. The device of claim 52, wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure.

54. The device of claim 51, wherein the sensor data is voice data from the person.

55. The device of claim 54, wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure.

56. A computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine a person is within a vehicle;

based on the sensor data, instructions to automatically identify the person;

instructions to retrieve health data associated with the identified person, wherein the health data is associated with the person in an area or zone in which the person occupies;

instructions to obtain new health data;

instructions to compare the new health data to the retrieved health data; and

instructions to react to the comparison.

57. The computer readable medium of claim 56, wherein in automatically determining the person is within a vehicle comprises instructions to determine an area or zone in which the person occupies.

58. The computer readable medium of claim 57, wherein the health data retrieved are previously stored health data.

59. The computer readable medium of claim 58, wherein the health data is retrieved from a data structure.

60. The computer readable medium of claim 59, wherein the data structure is stored in cloud storage.

61. A method for identifying an occupant within a vehicle, comprising:

receiving biometric data from one or more vehicle sensors;

determining, using the biometric data, one or more characteristics of the occupant; and

identifying the occupant based on the one or more characteristics of the occupant, wherein the biometric data comprises one or more health data and safety data associated with the occupant in an area or zone in which the occupant occupies.

62. The method of claim 61, wherein the occupant is identified if the one or more characteristics match characteristics in one or more records.

63. The method of claim 62, further comprising:

creating a new record for the occupant if the one or more characteristics do not match characteristics in the one or more records.

64. The method of claim 61, wherein biometric data comprises one or more health data and safety data.

64. The method of claim 61, further comprising:

receiving one or more additional health data and safety data from the one or more vehicle sensors;

based on the received one or more additional health data and safety data, modifying at least one of a function and operation of the vehicle.

65. The method of claim 61, further comprising:

determining if the one or more health data and safety data is to be stored for the occupant; and

storing the one or more health data and safety data.

66. The method of claim 65, wherein determining if the one or more health data and safety data can be stored for a person comprises determining if a baseline data pattern for the person an be provided based on an amount of one or more health data and safety parameters.

67. The method of claim 61, further comprising:

receiving one or more additional health and safety data from the one or more vehicle sensor; and

storing the one or more health and safety data.

68. The method of claim 61, wherein the received one or more additional health data and safety data is additional health data, the method further comprising:

determining if the additional health data is within acceptable limits; and

modifying at least one of a function and operation of the vehicle if the additional health data is not within acceptable limits.

69 The method of claim 61, wherein the received one or more additional health data and safety data is additional safety data, and safety parameters comprise one or more common operating characteristics for the person, the method further comprising:

determining if the additional safety data deviates from the one or more safety parameters; and

modifying the at least one of a function and operation of the vehicle when the additional safety data deviates from the one or more safety parameters.

70. The method of claim 61, wherein health data comprises at least one of: heart rate, blood pressure, blood presence, blood composition, temperature, a presence of liquid, weight, weight shift, position, breathing rate, anxiety level, state of awareness, consciousness, and reaction from the driver.

71. The method of claim 61, wherein safety data comprises at least one of: head position, hand position, focus, position of the person, and reaction time of the person.

72. The method of claim 61, further comprising:

receiving sensor data from at least one sensor that indicates the person is within the vehicle.

73. A computer readable storage medium comprising processor executable instruction operable to perform the method of claim 61.

74. A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive biometric data from the one or more sensors;

determine, using the biometric data, one or more characteristics of an occupant; and

identify the occupant based on the one or more characteristics of the occupant, wherein the biometric data comprises one or more health data and safety data associated with the occupant in an area or zone in which the occupant occupies.

75. The device of claim 74, wherein the occupant is identified if the one or more characteristics match characteristics in one or more records.

76. The device of claim 74, wherein biometric data comprises one or more health data and safety data and the processor is further operable to:

receive one or more additional health data and safety data from the one or more vehicle sensors, and based on the received one or more additional health data and safety data, modify at least one of a function and operation of the vehicle.

77. The device of claim 74, wherein the one or more sensors comprise at least one of: a pulse measuring device; a temperature measuring device; an infrared camera; a vehicle seat sensor; a viscosity sensor; and a fluid sensor.

78. A method comprising:

receiving biometric data from one or more vehicle sensors, wherein the biometric data comprises one or more health data and safety data associated with the occupant in an area or zone in which the occupant occupies;

determining, using the biometric data, one or more characteristics representative of a health associated with an occupant;

determining if the one or more characteristics of the occupant is within acceptable limits; and

modifying at least one of a function and operation of a vehicle if the one or more characteristics is outside the acceptable limits.

INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY / US

Application No.	:	PCT/US2012/65421
Title	:	FEATURE RECOGNITION FOR CONFIGUIRING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
International Filing Date	:	13 April 2011
Applicant	:	Flextronics AP, LLC
Attorney Docket No.	:	6583-318-PCT

AMENDMENT UNDER ARTICLE 34

Mail Stop – PCT
Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This letter is presented pursuant to Article 34 of the Patent Cooperation Treaty and accompanies a Demand for International Preliminary Examination.

EXPLANATION OF AMENDMENTS

Amendments to the Specification and Claims are presented herein to more accurately and precisely described the invention.

Identification of specific amendments to the Originally Filed Claims begin on page **2**.

Remarks/Arguments discussing the amendments begin on page **14**.

Replacement sheets **46-54** are submitted herewith.

AMENDMENTS TO THE CLAIMS

Additions to the claims are indicated in underline and deletions are indicated in strikethrough or are enclosed in [[double brackets]].

Listing of Claims:

1. A method, comprising:

automatically determining a person is within a vehicle;

automatically identifying the person, wherein automatically identifying the person comprises (i) determining if the person can be identified and (ii) characterizing the person if the person cannot be identified;

determining if there is a setting to be stored for the person; and

storing the setting.

2. Canceled.

3. Canceled.

4. The method of claim [[3]]1, wherein automatically determining a person is within a vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle.

5. The method of claim 4, wherein automatically identifying the person comprises:

comparing the sensor data to feature data in a data structure; and

determining if the sensor data is substantially similar to the feature data.

6. The method of claim 5, wherein determining if there is a setting to be stored for the person comprises determining if the person has made a setting.

7. The method of claim 6, wherein determining if there is a setting to be stored for the person further comprises waiting a period of time to determine if the settings have achieved a steady state.

8. The method of claim 1, wherein the setting is stored in cloud storage.

9. The method of claim 1, wherein the setting is one of a position of a seat, a position of a mirror, a heat or cold setting, a configuration of a console, a configuration of a dash, a configuration of a heads up display, or a setting for a radio.

10. The method of claim 1, wherein the person occupies an area or zone within the vehicle, and wherein the setting is associated with the person in the area or zone.

11. A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive sensor data from the one or more sensors;

based on the sensor data, automatically determine a person is within a vehicle;

based on the sensor data, automatically identify the person, wherein automatically identifying the person comprises (i) determining if the person can be identified and (ii) characterizing the person if the person cannot be identified;

determine if the person has made a setting; and

store the setting.

12. The device of claim 11, wherein the sensor data is an image of the person.

13. The device of claim 12, wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure.

14. The device of claim 11, wherein the sensor data is voice data from the person.

15. The device of claim 14, wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure.

16. A computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine a person is within a vehicle;

based on the sensor data, instructions to automatically identify the person, wherein automatically identifying the person comprises (i) determining if the person can be identified and (ii) characterizing the person if the person cannot be identified;

instructions to retrieve one or more settings associated with the identified person; and

instructions to automatically configure the vehicle according to the retrieved settings.

17. The computer readable medium of claim 16, wherein in automatically determining the person is within a vehicle comprises instructions to determine an area or zone in which the person occupies.

18. The computer readable medium of claim 17, wherein the settings retrieved are associated with the determined area or zone.

19. The computer readable medium of claim 18, wherein the settings are retrieved from a data structure.

20. The computer readable medium of claim 19, wherein the data structure is stored in cloud storage.

21. A method, comprising:

automatically determining a person is within a vehicle;

automatically identifying the person;

determining if there is a gesture to be stored for the person, wherein determining if there is a gesture to be stored for the person comprises determining if the person has created a gesture; and

storing the gesture.

22. The method of claim [[1]]21, further comprising: determining if the person can be identified.

23. The method of claim [[2]]22, further comprising: if the person cannot be identified, characterizing the person.

24. The method of claim [[3]]23, wherein automatically determining a person is within a vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle.

25. The method of claim [[4]]24, wherein automatically identifying the person comprises:

comparing the sensor data to feature data in a data structure; and

determining if the sensor data is substantially similar to the feature data.

26. Canceled.

27. The method of claim [[6]]25, wherein determining if there is a gesture to be stored for the person further comprises receiving an indication from the person that a gesture is to be created.

28. The method of claim [[1]]21, wherein the gesture is stored in cloud storage.

29. The method of claim [[1]]21, wherein the gesture is one of a gesture in a gesture capture region, a gesture in a touch sensitive display, or a movement in a three-dimensional space.

30. The method of claim [[1]]21, wherein the person occupies an area or zone within the vehicle, and wherein the gesture is associated with the person in the area or zone.

31. A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive sensor data from the one or more sensors;

based on the sensor data, automatically determine a person is within a vehicle;

based on the sensor data, automatically identify the person;

determine if the person has made a gesture; and

store the gesture.

32. The device of claim [[11]]31, wherein the sensor data is an image of the person.

33. The device of claim [[12]]32, wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure.

34. The device of claim [[11]]31, wherein the sensor data is voice data from the person.

35. The device of claim [[14]]34, wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure.

36. A computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine a person is within a vehicle;

based on the sensor data, instructions to automatically identify the person;

instructions to retrieve one or more gestures associated with the identified person;

instructions to receive a gesture; and

instructions to automatically configure the vehicle according to the received gesture.

37. The computer readable medium of claim [[16]]36, wherein in automatically determining the person is within a vehicle comprises instructions to determine an area or zone in which the person occupies.

38. The computer readable medium of claim [[17]]37, wherein the retrieved gestures are associated with the determined area or zone.

39. The computer readable medium of claim [[18]]38, wherein the gestures are retrieved from a data structure.

40. The computer readable medium of claim [[19]]39, wherein the data structure is stored in cloud storage.

41. A method, comprising:

automatically determining a person is within a vehicle;

automatically identifying the person;

determining if there is health data to be stored for the person; and

storing the health data, wherein the health data is associated with the person in an area or zone in which the person occupies.

42. The method of claim [[1]]41, further comprising: determining if the person can be identified.

43. The method of claim [[2]]42, further comprising: if the person cannot be identified, characterizing the person.

44. The method of claim [[3]]43, wherein automatically determining a person is within a vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle.

45. The method of claim [[4]]44, wherein automatically identifying the person comprises:

comparing the sensor data to feature data in a data structure; and

determining if the sensor data is substantially similar to the feature data.

46. The method of claim [[5]]45, wherein determining if there is health data to be stored for the person comprises receiving the health data from one or more sensors.

47. The method of claim [[6]]46, wherein determining if there is health to be stored for the person further comprises:

storing the health data; and

waiting a period of time before storing the health data again.

48. The method of claim [[8]]47, wherein the health data is measured periodically to obtain average health data.

49. The method of claim [[1]]41, wherein the health data is one of a heart rate, a blood pressure, a blood composition, a weight, a temperature, an image, or a sound.

50. Canceled.

51. A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive sensor data from the one or more sensors;

based on the sensor data, automatically determine a person is within a vehicle;

based on the sensor data, automatically identify the person;

determine if ~~the~~there is health data to be stored for the person ~~has health data~~; and

store the health data, wherein the health data is associated with the person in an area or zone in which the person occupies.

52. The device of claim [[11]]51, wherein the sensor data is an image of the person.

53. The device of claim [[12]]52, wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure.

54. The device of claim [[11]]51, wherein the sensor data is voice data from the person.

55. The device of claim [[14]]54, wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure.

56. A computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine a person is within a vehicle;

based on the sensor data, instructions to automatically identify the person;

instructions to retrieve health data associated with the identified person, wherein the health data is associated with the person in an area or zone in which the person occupies;

instructions to obtain new health data;

instructions to compare the new health data to the retrieved health data; and

instructions to react to the comparison.

57. The computer readable medium of claim [[16]]56, wherein in automatically determining the person is within a vehicle comprises instructions to determine [[an]]the area or zone in which the person occupies.

58. The computer readable medium of claim [[17]]57, wherein the health data retrieved are previously stored health data.

59. The computer readable medium of claim [[18]]58, wherein the health data is retrieved from a data structure.

60. The computer readable medium of claim [[19]]59, wherein the data structure is stored in cloud storage.

61. A method for identifying an occupant within a vehicle, comprising:

receiving biometric data from one or more vehicle sensors;

determining, using the biometric data, one or more characteristics of the occupant; and

identifying the occupant based on the one or more characteristics of the occupant, wherein the biometric data comprises one or more health data and safety data associated with the occupant in an area or zone in which the occupant occupies.

62. The method of claim 61, wherein the occupant is identified if the one or more characteristics match characteristics in one or more records.

63. The method of claim 62, further comprising:

creating a new record for the occupant if the one or more characteristics do not match characteristics in the one or more records.

64. The method of claim 61, wherein biometric data comprises one or more health data and safety data.

64. The method of claim 61, further comprising:

receiving one or more additional health data and safety data from the one or more vehicle sensors;

based on the received one or more additional health data and safety data, modifying at least one of a function and operation of the vehicle.

65. The method of claim 61, further comprising:

determining if the one or more health data and safety data is to be stored for the occupant; and

storing the one or more health data and safety data.

66. The method of claim 65, wherein determining if the one or more health data and safety data can be stored for a person comprises determining if a baseline data pattern for the person can be provided based on an amount of one or more health data and safety parameters.

67. The method of claim 61, further comprising:

receiving one or more additional health and safety data from the one or more vehicle sensors; and

storing the one or more health and safety data.

68. The method of claim 61, wherein the received one or more additional health data and safety data is additional health data, the method further comprising:

determining if the additional health data is within acceptable limits; and

modifying at least one of a function and operation of the vehicle if the additional health data is not within acceptable limits.

69 The method of claim 61, wherein the received one or more additional health data and safety data is additional safety data, and safety parameters comprise one or more common operating characteristics for the person, the method further comprising:

determining if the additional safety data deviates from the one or more safety parameters; and

modifying the at least one of a function and operation of the vehicle when the additional safety data deviates from the one or more safety parameters.

70. The method of claim 61, wherein health data comprises at least one of: heart rate, blood pressure, blood presence, blood composition, temperature, a presence of liquid, weight, weight shift, position, breathing rate, anxiety level, state of awareness, consciousness, and reaction from the driver.

71. The method of claim 61, wherein safety data comprises at least one of: head position, hand position, focus, position of the person, and reaction time of the person.

72. The method of claim 61, further comprising:

receiving sensor data from at least one sensor that indicates the person is within the vehicle.

73. A computer readable storage medium comprising processor executable instruction operable to perform the method of claim 61.

74. A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive biometric data from the one or more sensors;

determine, using the biometric data, one or more characteristics of an occupant; and

identify the occupant based on the one or more characteristics of the occupant, wherein the biometric data comprises one or more health data and safety data associated with the occupant in an area or zone in which the occupant occupies.

75. The device of claim 74, wherein the occupant is identified if the one or more characteristics match characteristics in one or more records.

76. The device of claim 74, wherein biometric data comprises one or more health data and safety data and the processor is further operable to:

receive one or more additional health data and safety data from the one or more vehicle sensors, and based on the received one or more additional health data and safety data, modify at least one of a function and operation of the vehicle.

77. The device of claim 74, wherein the one or more sensors comprise at least one of: a pulse measuring device; a temperature measuring device; an infrared camera; a vehicle seat sensor; a viscosity sensor; and a fluid sensor.

78. A method comprising:

receiving biometric data from one or more vehicle sensors, wherein the biometric data comprises one or more health data and safety data associated with the occupant in an area or zone in which the occupant occupies;

determining, using the biometric data, one or more characteristics representative of a health associated with an occupant;

determining if the one or more characteristics of the occupant is within acceptable limits; and

modifying at least one of a function and operation of a vehicle if the one or more characteristics is outside the acceptable limits.

REMARKS

The Applicant provides the following remarks for consideration in further examination of the present application and explanation of the amendments presented herein.

CLAIM AMENDMENTS

The Applicant has amended claims 1, 4, 11, 16, 21, 22-25, 27-30, 32-35, 37-49, and 51-60. Claims 2-3, 26, and 50 have been canceled without intending to dedicate to the public any patentable subject matter. Claims 61-78 have been added. Claims 5-10, 12-15, 17-20, 31, and 36 are unchanged. Support for the amendments to claims 1, 11, and 16 can at least be found within paragraphs [0010], [0127], [0129], [0135], [0145], [0163], [0165], and [0166]. Support for amendments to claim 21 can at least be found within paragraphs [0124] and [0166]. Support for amendments to claims 41, 51, and 56 can at least be found within paragraphs [0077], [0127], [0129], [0131], [0134], [0135], [0136], [0138], [0142], [0147], and original claim 50. The amendments to claims 4, 22-25, 27-30, 32-35, 37-40, 42-49, 52-55, 57-60 correct typographical errors. Support for newly added claims 61-78 can at least be found within paragraphs [0075], [0083], [0084], [0123], [0125], [0146], [0148], [0149], [0150], [0151], [0152], and FIGS. 8, 9, 11, 14, and 15.

ARGUMENTS

The Written Opinion submits that claims 1-60 lack novelty and inventive step. The Written Opinion alleges that U.S. Patent Application No. 2008/0143085 A1 to Breed *et al.* (hereinafter, "Breed") anticipates claims 1-60 and that the claims, therefore, lack novelty under PCT Article 33(2).

Regarding independent claim 1, the Written Opinion alleges that Breed anticipates automatically identifying the person. Applicants submit that paragraph [0456] of Breed provides the following:

> A neural network, or other pattern recognition system, can be trained to recognize certain people as permitted operators of a vehicle or for granting access to a cargo container or truck trailer. In this case, if a non-recognized person attempts to operate the vehicle or to gain access, the system can disable the vehicle and/or sound an alarm or send a message to a remote site via telematics. Since it is unlikely that an unauthorized operator will resemble the authorized operator, the neural network system can be quite tolerant of differences in appearance of the operator. The system defaults to where a key or other identification system must be used in the case that the system doesn't

> recognize the operator or the owner wishes to allow another person to operate the vehicle or have access to the container. The transducers used to identify the operator can be any of the types described herein. A preferred method is to use optical imager-based transducers perhaps in conjunction with a weight sensor for automotive applications. This is necessary due to the small size of the features that need to be recognized for a high accuracy of recognition. An alternate system uses an infrared laser, which can be modulated to provide three-dimensional measurements, to irradiate or illuminate the operator and a CCD or CMOS device to receive the reflected image. In this case, the recognition of the operator is accomplished using a pattern recognition system such as described in Popesco, V. and Vincent, J. M. "Location of Facial Features Using a Boltzmann Machine to Implement Geometric Constraints", Chapter 14 of Lisboa, P. J. G. and Taylor, M. J. Editors, Techniques and Applications of Neural Networks, Ellis Horwood Publishers, New York, 1993. In the present case, a larger CCD element array containing 50,000 or more elements would typically be used instead of the 16 by 16 or 256 element CCD array used by Popesco and Vincent.

See e.g., Breed, ¶ 0456. That is, there is no disclosure in Breed of determining if the person can be identified and characterizing the person if the person cannot be identified. In fact, Breed is quite clear that when a person cannot be identified, the "system defaults to where a key or other identification system."

Regarding claims 1, 11, and 16, Applicants respectfully submit that Breed does not anticipate at least the following italicized portions of the claims:

> 1. A method, comprising:
> automatically determining a person is within a vehicle;
> *automatically identifying the person, wherein automatically identifying the person comprises (i) determining if the person can be identified and (ii) characterizing the person if the person cannot be identified;*
> determining if there is a setting to be stored for the person; and
> storing the setting.
>
> 11. A vehicle system, comprising:
> one or more sensors;
> a vehicle control system comprising:
> a processor;
> a memory;
> wherein the processor is operable to:
> receive sensor data from the one or more sensors;
> based on the sensor data, automatically determine a person is within a vehicle;
> based on the sensor data, *automatically identify the person, wherein automatically identifying the person comprises (i) determining if the person can be identified and (ii) characterizing the person if the person cannot be identified;*
> determine if the person has made a setting; and
> store the setting.

16. A computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine a person is within a vehicle;

based on the sensor data, *instructions to automatically identify the person, wherein automatically identifying the person comprises (i) determining if the person can be identified and (ii) characterizing the person if the person cannot be identified;*

instructions to retrieve one or more settings associated with the identified person; and

instructions to automatically configure the vehicle according to the retrieved settings.

Regarding independent claim 21, 31, and 36, the Written Opinion alleges that Breed anticipates determining if there is a gesture to be stored for the person. Applicants submit that paragraph [0269] and [0270] of Breed provide the following:

> As discussed above and below, other occupant sensing systems can also be provided that monitor the breathing or other motion of the driver, for example, including the driver's heartbeat, eye blink rate, gestures, direction or gaze and provide appropriate responses including the control of a vehicle component including any such components listed herein. If the driver is falling asleep, for example, a warning can be issued and eventually the vehicle directed off the road if necessary.
>
> [The combination of a camera system with a microphone and speaker allows for a wide variety of options for the control of vehicle components. A sophisticated algorithm can interpret a gesture, for example, that may be in response to a question from the computer system. The driver may indicate by a gesture that he or she wants the temperature to change and the system can then interpret a "thumbs up" gesture for higher temperature and a "thumbs down" gesture for a lower temperature. When it is correct, the driver can signal by gesture that it is fine. A very large number of component control options exist that can be entirely executed by the combination of voice, speakers and a camera that can see gestures. When the system does not understand, it can ask to have the gesture repeated, for example, or it can ask for a confirmation. Note, the presence of an occupant in a seat can even be confirmed by a word spoken by the occupant, for example, which can use a technology known as voice print if it is desired to identify the particular occupant.

See e.g., Breed, ¶ 0269, ¶0270. That is, there is no disclosure in Breed related to determining if there is a gesture to be stored for the person, wherein determining if there is a gesture to be stored for the person comprises determining if the person has created a gesture. Although Breed indicates that the system interprets a gesture, Breed makes no mention of determining if a gesture is to be stored for the person which further comprises determining if the person has created a gesture. For similar reasoning, Breed does not disclose a processor operable to determine if the person has made a gesture and then store the gesture as recited in claim 31. Similarly, Breed does not disclose instructions to retrieve one or more gestures

associated with the identified person as recited in claim 36. Indeed, Breed indicates that the system interprets a gesture, but as discussed earlier, this is not the same as either storing a gesture or retrieving one or more gestures associated with the identified person.

Regarding claims 21, 31, and 36, Applicants respectfully submit that Breed does not anticipate at least the following italicized portions of the claims:

21. A method, comprising:
automatically determining a person is within a vehicle;
automatically identifying the person;
determining if there is a gesture to be stored for the person, wherein determining if there is a gesture to be stored for the person comprises determining if the person has created a gesture; and
storing the gesture.

31. A vehicle system, comprising:
one or more sensors;
a vehicle control system comprising:
a processor;
a memory;
wherein the processor is operable to:
receive sensor data from the one or more sensors;
based on the sensor data, automatically determine a person is within a vehicle;
based on the sensor data, automatically identify the person;
determine if the person has made a gesture; and
store the gesture.

36. A computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:
instructions to receive sensor data from the one or more sensors;
based on the sensor data, instructions to automatically determine a person is within a vehicle;
based on the sensor data, instructions to automatically identify the person;
instructions to retrieve one or more gestures associated with the identified person;
instructions to receive a gesture; and
instructions to automatically configure the vehicle according to the received gesture.

Regarding independent claim 41, 51, and 56, the Written Opinion alleges that Breed anticipates storing the health data. Applicants submit that the cited paragraphs of Breed fail to suggest or disclose wherein the health data is associated with the person in an area or zone in which the person occupies. Paragraph [0583] of Breed provides the following:

> The adjustment system described herein, although improved over the prior art, will at best be approximate since two people, even if they are identical in all other respects, may have a different preferred driving position or other preferred adjusted component

> location or orientation. A system that automatically adjusts the component, therefore, should learn from its errors. Thus, when a new occupant sits in the vehicle, for example, the system automatically estimates the best location of the component for that occupant and moves the component to that location, assuming it is not already at the best location. If the occupant changes the location, the system should remember that change and incorporate it into the adjustment the next time that person enters the vehicle and is seated in the same seat. Therefore, the system need not make a perfect selection the first time but it should remember the person and the position the component was in for that person. The system, therefore, makes one, two or three measurements of morphological characteristics of the occupant and then adjusts the component based on an algorithm. The occupant will correct the adjustment and the next time that the system measures the same measurements for those measurement characteristics, it will set the component to the corrected position. As such, preferred components for which the system in accordance with the invention is most useful are those which affect a driver of the vehicle and relate to the sensory abilities of the driver, i.e., the mirrors, the seat, the steering wheel and steering column and accelerator, clutch and brake pedals.

See e.g., *Breed*, ¶ 0583. Applicant respectfully submits that Breed discusses one or more preferred adjusted component locations or orientations. That is, there is no discussion in Breed where the health data is associated with the person in an area or zone in which the person occupies. Instead, Breed discloses a system where a change is incorporates into the adjustment the next time that person enters the vehicle and is seated in the same seat. This is clearly not the same as health data being associated with the person in an area or zone in which the person occupies.

Regarding claims 41, 51, and 56, Applicants respectfully submit that Breed does not anticipate at least the following italicized portions of the claims:

> 41. A method, comprising:
> automatically determining a person is within a vehicle;
> automatically identifying the person;
> determining if there is health data to be stored for the person; and
> storing the health data, *wherein the health data is associated with the person in an area or zone in which the person occupies.*

> 51. A vehicle system, comprising:
> one or more sensors;
> a vehicle control system comprising:
> a processor;
> a memory;
> wherein the processor is operable to:
> receive sensor data from the one or more sensors;
> based on the sensor data, automatically determine a person is within a vehicle;
> based on the sensor data, automatically identify the person;
> determine if there is health data to be stored for the person; and
> store the health data, *wherein the health data is associated with the person in an area or zone in which the person occupies.*

56. A computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine a person is within a vehicle;

based on the sensor data, instructions to automatically identify the person;

instructions to retrieve health data associated with the identified person, *wherein the health data is associated with the person in an area or zone in which the person occupies;*

instructions to obtain new health data;

instructions to compare the new health data to the retrieved health data; and

instructions to react to the comparison.

Regarding that the dependent claims 4-10, 12-15, 17-20, 22-30, 32-35, 37-40, 42-49, 52-55, and 57-60 lack novelty over Breed, Applicants submit that the dependent claims are at least allowable due to their dependence from an allowable claim and the additional feature(s) recited therein.

Respectfully submitted this 16 day of September 2013.

SHERIDAN ROSS P.C.

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SAC

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
TADD F. WILSON
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

RECEIVED
MAY - 9 2013
SHERIDAN ROSS, P.C.
DOCKETING DEPT.

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-244-PCT	Date of mailing *(day/month/year)* 06 MAY 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US 12/65510	International filing date *(day/month/year)* 16 November 2012 (16.11.2012)
Applicant FLEXTRONICS AP, LLC	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

   Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90*bis*.1 and 90*bis*.3).

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Lee W. Young PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-244-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US 12/65510	International filing date *(day/month/year)* 16 November 2012 (16.11.2012)	(Earliest) Priority Date *(day/month/year)* 16 November 2011 (16.11.2011)
Applicant FLEXTRONICS AP, LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☒ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 12/65510

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
See extra sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Claims 1-30, 41-70, 81-90, and 101-110

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 12/65510

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G01M 17/00 (2013.01); G06F 7/00 (2013.01)
USPC - 701/31.5
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
USPC: 701/31.5; IPC(8): G01M 17/00 (2013.01); G06F 7/00 (2013.01)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 701/1, 31.4, 31.5, 468, 484-487; 342/450; IPC(8): G01M 17/00 (2013.01); G06F 7/00 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Google Scholar; Google Web; Google Patents; PatBase.
Search Terms: vehicle, car, signal, communicate, reject, deny, ignore, connect, bus, hotspot, transceiver, BLUETOOTH, antenna, wireless, local area network, weight, originate, inside, within, character, feature, location, person, user, passenger, driver, move, sense

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2010/0097239 A1 (Campbell et al.) 22 April 2010 (22.04.2010), entire document, especially para [0007], [0040]-[0041], [0045], [0053], [0055], [0059], [0061], [0064]-[0065], [0068]-[0070], [0075], [0083], [0087]-[0088], [0090], [0099], [0108]-[0109], [0116]-[0117], [0120], [0125], [0131]-[0132], [0135], [0137], [0139], [0141] 1-30, 41-70, 81-90, 101-110	1-30, 41-70, 81-90, 101-110
Y	US 2010/0090817 A1 (Yamaguchi et al.) 15 April 2010 (15.04.2010), entire document, especially para [0008]	1-30, 41-70, 81-90, 101-110
Y	US 2010/0144284 A1 (Chutorash et al.) 10 June 2010 (10.06.2010), entire document, especially para [0027], [0033], [0045], [0053], [0062]	2-15, 17-20, 48, 51-55, 57-60
Y	US 2011/0105097 A1 (Tadayon et al.) 05 May 2011 (05.05.2011), entire document, especially para [0069]	10, 20
Y	US 2009/0278750 A1 (Man et al.) 12 November 2009 (12.11.2009), entire document, especially para [0019]	21-30, 61-70
A	US 2008/0148374 A1 (Spaur et al.) 19 June 2008 (19.06.2008), entire document	1-30, 41-70, 81-90, 101-110
A	US 2011/0112969 A1 (Zaid et al.) 12 May 2011 (12.05.2011), entire document	1-30, 41-70, 81-90, 101-110

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
29 March 2013 (29.03.2013)	06 MAY 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

Continuation of Box No. III: Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

Reasons for Lack of Unity of Invention:

This application contains the following inventions or groups of inventions that are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group 1: Claims 1-30, 41-70, 81-90, and 101-110 directed to a method, system and computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method comprising receiving a signal at a vehicle communication system from a device, automatically determining if the signal originates from inside the vehicle and if the signal does not originate from inside the vehicle, rejecting the signal, but if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device.

Group 2: Claims 31-40, 71-80, 91-100 and 111-120 directed to a method, system and computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method comprising a vehicle communication system to receive a request for a function/application, determine one or more of available resources, available devices and available sources, determine load/cloud service/multimedia service, select/command a device or source to provide/activate the function/application/cloud service/multimedia service.

The inventions listed as Groups 1 - 2 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical feature of the Group 1 invention is directed to a method, system and computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method comprising receiving a signal at a vehicle communication system from a device, automatically determining if the signal originates from inside the vehicle and if the signal does not originate from inside the vehicle, rejecting the signal, but if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device.

The special technical feature of the Group 2 invention is directed to a method, system and computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method comprising a vehicle communication system to receive a request for a function/application, determine one or more of available resources, available devices and available sources, determine load/cloud service/multimedia service, select/command a device or source to provide/activate the function/application/cloud service/multimedia service.

The only common technical feature shared by the above groups is a vehicle communication system.

However, this shared technical feature does not represent a contribution over prior art, because the shared technical feature is anticipated/made obvious by reference US 7,548,815 B2 to Watkins et al. (Published on16 June 2009) that discloses a vehicle communication system in Abstract, col 8, ln 10-18 (Vehicle system module 290 contains one or more processors, one or more memory devices, and one or more connection ports. In one embodiment, VSM 290 includes a software switch for scanning received information such as, for example, real-time traffic updates and location information to identify that data has been received. VSM 290 is coupled to a vehicle communication network 212, and therefore to any other device that is also coupled to vehicle communication network 212).

As the above technical feature of vehicle communication system as taught by Watkins et al was known, this cannot be considered a special technical feature that would otherwise unify the groups.

Therefore, the inventions of Groups 1-2 lack unity of invention under PCT Rule 13 because they do not share a same or corresponding special technical feature.

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: TADD F. WILSON
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	06 MAY 2013
Applicant's or agent's file reference 6583-244-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US 12/65510	16 November 2012 (16.11.2012)	16 November 2011 (16.11.2011)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G01M 17/00 (2013.01); G06F 7/00 (2013.01)
USPC - 701/31.5

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [X] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Fom PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	29 March 2013 (29.03.2013)	Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 12/65510

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 12/65510

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the appicable time limit:

   ☐ paid additional fees

   ☐ paid additional fees under protest and, where applicable, the protest fee

   ☐ paid additional fees under protest but the applicable protest fee was not paid

   ☒ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

   ☐ complied with

   ☒ not complied with for the following reasons:

Reasons for Lack of Unity of Invention:

This application contains the following inventions or groups of inventions that are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group 1: Claims 1-30, 41-70, 81-90, and 101-110 directed to a method, system and computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method comprising receiving a signal at a vehicle communication system from a device, automatically determining if the signal originates from inside the vehicle and if the signal does not originate from inside the vehicle, rejecting the signal, but if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device.

Group 2: Claims 31-40, 71-80, 91-100 and 111-120 directed to a method, system and computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method comprising a vehicle communication system to receive a request for a function/application, determine one or more of available resources, available devices and available sources, determine load/cloud service/multimedia service, select/command a device or source to provide/activate the function/application/cloud service/multimedia service.

The inventions listed as Groups 1 - 2 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical feature of the Group 1 invention is directed to a method, system and computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method comprising receiving a signal at a vehicle communication system from a device, automatically determining if the signal originates from inside the vehicle and if the signal does not originate from inside the vehicle, rejecting the signal, but if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device.

The special technical feature of the Group 2 invention is directed to a method, system and computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method comprising a vehicle communication system to receive a request for a function/application, determine one or more of available resources, available devices and available sources, determine load/cloud service/multimedia service, select/command a device or source to provide/activate the function/application/cloud service/multimedia service.

The only common technical feature shared by the above groups is a vehicle communication system.

However, this shared technical feature does not represent a contribution over prior art, because the shared technical feature is anticipated/made obvious by reference US 7,548,815 B2 to Watkins et al. (Published on16 June 2009) that discloses a vehicle communication system in Abstract, col 8, ln 10-18 (Vehicle system module 290 contains one or more processors, one or more memory devices, and one or more connection ports. In one embodiment, VSM 290 includes a software switch for scanning received information such as, for example, real-time traffic updates and location information to identify that data has been received. VSM 290 is coupled to a vehicle communication network 212, and therefore to any other device that is also coupled to vehicle communication network 212).

As the above technical feature of vehicle communication system as taught by Watkins et al was known, this cannot be considered a special technical feature that would otherwise unify the groups.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

   ☐ all parts

   ☒ the parts relating to claims Nos. Claims 1-30, 41-70, 81-90, and 101-110

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US 12/65510

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-30, 41-70, 81-90, 101-110	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-30, 41-70, 81-90, 101-110	NO
Industrial applicability (IA)	Claims	1-30, 41-70, 81-90, 101-110	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1, 16, 41-47, 49, 50, 56, 81-90, and 101-110 lack an inventive step under PCT Article 33(3) as being obvious over US 2010/0097239 A1 to Campbell et al. (hereinafter Campbell) in view of US 2010/0090817 A1 to Yamaguchi et al. (hereinafter Yamaguchi).

Regarding claim 1, Campbell discloses a method, comprising: receiving a signal at a vehicle communication system from a device (para [0069]); automatically determining if the signal originates from inside the vehicle (" determination is made as to whether there is a connection to the vehicle control system (step 1306) (e.g., a connection between the component to be trained and the vehicle control system). If so, a determination as to whether a connection may be made between the vehicle control system and a phone or other outside device is made (step 1308)" para [0088]); and providing access to a vehicle bus (para [0069]). Campbell does not expressly disclose that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device and if the signal does not originate from inside the vehicle, rejecting the signal. However, Yamaguchi discloses that said method comprises: if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device ("determine whether the electronic portable key is located in an interior wireless communicatable area formed inside the vehicle or an exterior wireless communicatable area formed outside the vehicle" para [0008]) and if the signal does not originate from inside the vehicle, rejecting the signal ("The control unit limits the operations of the vehicle that can be performed in accordance with the communicable area in which the sub-key is located when determining that the sub-key is not in the lent state" para [0008]-[0009]). It would have been obvious to one having ordinary skill in the art to modify the system and method of Campbell so as that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, as disclosed by Yamaguchi, because Campbell and Yamaguchi are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, because such systems and methods provide a vehicle electronic portable key system that improves the level of security (Yamaguchi para [0007]).

Regarding claim 16, Campbell discloses a computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a universal bus, the computer-executable instructions comprising: instructions to receive a signal at a vehicle communication system from a device (para [0069]); instructions to automatically determine if the signal originates from inside the vehicle ((" determination is made as to whether there is a connection to the vehicle control system (step 1306) (e.g., a connection between the component to be trained and the vehicle control system). If so, a determination as to whether a connection may be made between the vehicle control system and a phone or other outside device is made (step 1308)" para [0088]); and instructions to provide access to a vehicle bus (para [0069]). Campbell does not expressly disclose that said computer-executable instructions comprise if the signal originates from inside the vehicle, instructions to communicatively connect the vehicle communication system to the device, and if the signal does not originate from inside the vehicle, rejecting the signal. However, Yamaguchi discloses that said method comprises: if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device ("determine whether the electronic portable key is located in an interior wireless communicatable area formed inside the vehicle or an exterior wireless communicatable area formed outside the vehicle" para [0008]) and if the signal does not originate from inside the vehicle, rejecting the signal ("The control unit limits the operations of the vehicle that can be performed in accordance with the communicable area in which the sub-key is located when determining that the sub-key is not in the lent state" para [0008]-[0009]). It would have been obvious to one having ordinary skill in the art to modify the system and method of Campbell so as that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, as disclosed by Yamaguchi, because Campbell and Yamaguchi are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, because such systems and methods provide a vehicle electronic portable key system that improves the level of security (Yamaguchi para [0007]).

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Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V. 2. Citations and explanations:

Regarding claim 41, Campbell discloses a method, comprising: receiving a signal at a vehicle communication system from a device (para [0069]); automatically determining if the signal originates from inside the vehicle (" determination is made as to whether there is a connection to the vehicle control system (step 1306) (e.g., a connection between the component to be trained and the vehicle control system). If so, a determination as to whether a connection may be made between the vehicle control system and a phone or other outside device is made (step 1308)" para [0088]); and receiving a message from a first device (para [0070]); and providing the message to a second device (para [0070]). Campbell does not expressly disclose that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device and verifying that the message originated from inside the vehicle and if the signal does not originate from inside the vehicle, rejecting the signal. However, Yamaguchi discloses that said method comprises: if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device ("determine whether the electronic portable key is located in an interior wireless communicatable area formed inside the vehicle or an exterior wireless communicatable area formed outside the vehicle" para [0008]) and if the signal does not originate from inside the vehicle, rejecting the signal ("The control unit limits the operations of the vehicle that can be performed in accordance with the communicable area in which the sub-key is located when determining that the sub-key is not in the lent state" para [0008]-[0009]). It would have been obvious to one having ordinary skill in the art to modify the system and method of Campbell so as that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, as disclosed by Yamaguchi, because Campbell and Yamaguchi are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, because such systems and methods provide a vehicle electronic portable key system that improves the level of security (Yamaguchi para [0007]).

Regarding claim 42, in the combination of Campbell and Yamaguchi, Campbell further discloses that the message is directed to the second device (para [0070]).

Regarding claim 43, in the combination of Campbell and Yamaguchi, Campbell further discloses further comprising accessing signal data in a signal data database to retrieve address information from the second device (para [0141]).

Regarding claim 44, in the combination of Campbell and Yamaguchi, Campbell further discloses further comprising accessing signal data in a signal data database to retrieve address information for the first device (para [0141]).

Regarding claim 45, in the combination of Campbell and Yamaguchi, Campbell further discloses further comprising comparing an address for the first device in the message with the retrieved address information (para [0070]).

Regarding claim 46, in the combination of Campbell and Yamaguchi, Campbell further discloses that if the address for the first device in the message is the same as the retrieved address information, the message is verified (para [0070]).

Regarding claim 47, in the combination of Campbell and Yamaguchi, Campbell further discloses that the message is sent through the vehicle communication system to the second device (para [0070]).

Regarding claim 49, in the combination of Campbell and Yamaguchi, Campbell further discloses that the vehicle communication system includes at least one wireless LAN component (para [0064]).

Regarding claim 50, in the combination of Campbell and Yamaguchi, Campbell further discloses that the first device communicates to the second device through the at least one wireless LAN component (para [0064]).

Regarding claim 56, Campbell discloses a computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a universal bus, the computer-executable instructions comprising: instructions to receive a message from a first device (para [0070]); and instructions to provide the message to a second device (para [0070]). Campbell does not expressly disclose that said computer-executable instructions comprise instructions to verify that the message originated from inside the vehicle. However, Yamaguchi discloses that said method comprises: if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device ("determine whether the electronic portable key is located in an interior wireless communicatable area formed inside the vehicle or an exterior wireless communicatable area formed outside the vehicle" para [0008]). It would have been obvious to one having ordinary skill in the art to modify the system and method of Campbell so as that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, as disclosed by Yamaguchi, because Campbell and Yamaguchi are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, because such systems and methods provide a vehicle electronic portable key system that improves the level of security (Yamaguchi para [0007]).

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Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V. 2. Citations and explanations:

Regarding claim 81, Campbell discloses a method, comprising: receiving a signal at a vehicle communication system from a device (para [0069]); automatically determining if the signal originates from inside the vehicle ((" determination is made as to whether there is a connection to the vehicle control system (step 1306) (e.g., a connection between the component to be trained and the vehicle control system). If so, a determination as to whether a connection may be made between the vehicle control system and a phone or other outside device is made (step 1308)" para [0088]); and providing access to a vehicle bus (para [0069]). determining one or more of available resources, available devices, and available sources (para [0137]); determining cloud services connected to the available resources, available devices, and available sources (para [0083]); receiving input on a user interface of the vehicle, wherein the input requests a cloud service (para [0131]); routing the input to a device (para [0131]); receiving, from the device, data from the cloud service (para [0083]); and providing the data on the display of the vehicle (para [0132]). Campbell does not expressly disclose that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, and if the signal does not originate from inside the vehicle, rejecting the signal. However, Yamaguchi discloses that said method comprises: if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device ("determine whether the electronic portable key is located in an interior wireless communicatable area formed inside the vehicle or an exterior wireless communicatable area formed outside the vehicle" para [0008]) and if the signal does not originate from inside the vehicle, rejecting the signal ("The control unit limits the operations of the vehicle that can be performed in accordance with the communicable area in which the sub-key is located when determining that the sub-key is not in the lent state" para [0008]-[0009]]). It would have been obvious to one having ordinary skill in the art to modify the system and method of Campbell so as that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, as disclosed by Yamaguchi, because Campbell and Yamaguchi are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, because such systems and methods provide a vehicle electronic portable key system that improves the level of security (Yamaguchi para [0007]).

Regarding claim 82, in the combination of Campbell and Yamaguchi, Campbell further discloses that a vehicle communication system sends signal data to a processor to determine the available resources, available devices, and available sources and the cloud services (para [0053]).

Regarding claim 83, in the combination of Campbell and Yamaguchi, Campbell further discloses that the vehicle communication system determines which cloud sources are available through the device (para [0083]).

Regarding claim 84, in the combination of Campbell and Yamaguchi, Campbell further discloses that the processor determines which cloud sources are available through a server (para [0083]).

Regarding claim 85, in the combination of Campbell and Yamaguchi, Campbell further discloses further comprising presenting the cloud services information on a touch sensitive display (para [0041]).

Regarding claim 86, in the combination of Campbell and Yamaguchi, Campbell further discloses that the device is a computing system (para [0116]).

Regarding claim 87, in the combination of Campbell and Yamaguchi, Campbell further discloses that the cloud service is for the provision of data or for the execution of an application (para [0083]).

Regarding claim 88, in the combination of Campbell and Yamaguchi, Campbell further discloses that the input is received on the touch sensitive display (para [0041]).

Regarding claim 89, in the combination of Campbell and Yamaguchi, Campbell further discloses that the input is analyzed to determine a correct source for the cloud service (para [0083]).

Regarding claim 90, in the combination of Campbell and Yamaguchi, Campbell further discloses that based on the analysis, the vehicle communication system routes the input to the correct device (para [0083]).

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Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V. 2. Citations and explanations:

Regarding claim 101, Campbell discloses a method, comprising: receiving a signal at a vehicle communication system from a device (para [0069]); automatically determining if the signal originates from inside the vehicle (" determination is made as to whether there is a connection to the vehicle control system (step 1306) (e.g., a connection between the component to be trained and the vehicle control system). If so, a determination as to whether a connection may be made between the vehicle control system and a phone or other outside device is made (step 1308)" para [0088]); determining one or more of available resources, available devices, and available sources (para [0137]); determining multimedia sources associated with the available resources, available devices, and available sources (para [0055]); receiving input on a user interface of the vehicle, wherein the input multimedia (para [0055]); routing the input to an available resource, available device, and available source (para [0087]); receiving a multimedia steam from an available resource, available device, and available source (para [0088]); and presenting the multimedia stream on an output of the vehicle (para [0070]). Campbell does not expressly disclose that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, and if the signal does not originate from inside the vehicle, rejecting the signal. However, Yamaguchi discloses that said method comprises: if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device ("determine whether the electronic portable key is located in an interior wireless communicatable area formed inside the vehicle or an exterior wireless communicatable area formed outside the vehicle" para [0008]) and if the signal does not originate from inside the vehicle, rejecting the signal ("The control unit limits the operations of the vehicle that can be performed in accordance with the communicable area in which the sub-key is located when determining that the sub-key is not in the lent state" para [0008]-[0009]]). It would have been obvious to one having ordinary skill in the art to modify the system and method of Campbell so as that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, as disclosed by Yamaguchi, because Campbell and Yamaguchi are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, because such systems and methods provide a vehicle electronic portable key system that improves the level of security (Yamaguchi para [0007]).

Regarding claim 102, in the combination of Campbell and Yamaguchi, Campbell further discloses further comprising caching the multimedia stream (para [0061]).

Regarding claim 103, in the combination of Campbell and Yamaguchi, Campbell further discloses that two or more multimedia streams are received from two or more sources (para [0064]).

Regarding claim 104, in the combination of Campbell and Yamaguchi, Campbell further discloses that all of the two or more multimedia streams are cached (para [0061]).

Regarding claim 105, in the combination of Campbell and Yamaguchi, Campbell further discloses that determining multimedia sources associated with the available resources, available devices, and available sources comprises canvassing the available resources, available devices, and available sources for multimedia available at those available resources, available devices, and available sources (para [0137]).

Regarding claim 106, in the combination of Campbell and Yamaguchi, Campbell further discloses further comprising:
consolidating the multimedia (para [0117]); and
presenting the multimedia on a vehicle touch sensitive display (para [0132]).

Regarding claim 107, in the combination of Campbell and Yamaguchi, Campbell further discloses further comprising determining if safety parameters are met for presentation of the multimedia stream (para [0099]).

Regarding claim 108, in the combination of Campbell and Yamaguchi, Campbell further discloses further comprising if safety parameters are met for presentation of the multimedia stream, presenting the multimedia stream (para [0099]).

Regarding claim 109, in the combination of Campbell and Yamaguchi, Campbell further discloses further comprising if safety parameters are not met for presentation of the multimedia stream, recording the multimedia stream (para [0099]).

Regarding claim 110, in the combination of Campbell and Yamaguchi, Campbell further discloses that the multimedia stream is recorded in local storage (para [0116]).

Claims 2-9, 11-15, 17-19, 48, 51-55, and 57-60 lack an inventive step under PCT Article 33(3) as being obvious over Campbell in view of Yamaguchi, and further in view of US 2010/0144284 A1 to Chutorash et al. (hereinafter Chutorash).

Regarding claim 2, Campbell and Yamaguchi disclose the method of claim 1.
Campbell and Yamaguchi do not expressly disclose that the vehicle communication system include a communication system in communication with two or more transceivers.
However, Chutorash discloses that the vehicle communication system include a communication system in communication with two or more transceivers (para [0053]).
It would have been obvious to one having ordinary skill in the art to modify the systems and methods of Campbell and Yamaguchi so as that the vehicle communication system include a communication system in communication with two or more transceivers, as disclosed by Chutorash, because Campbell, Yamaguchi, and Chutorash are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from the vehicle communication system include a communication system in communication with two or more transceivers, because such systems and methods configure a wireless control system of a vehicle (Chutorash para [0004]).

--Please See Continuation Sheet-

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V. 2. Citations and explanations:

Regarding claim 3, in the combination of Campbell, Yamaguchi, and Chutorash, Chutorash further discloses that two or more of the transceivers are BLUETOOTH transceivers (para [0045]).

Regarding claim 4, in the combination of Campbell, Yamaguchi, and Chutorash, Chutorash further discloses that two or more antennas for the vehicle communication system are separated but positioned within the vehicle (para [0033]).

Regarding claim 5, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the communication system analyzes the signal (para [0075]).

Regarding claim 6, in the combination of Campbell, Yamaguchi, and Chutorash, Chutorash further discloses that the analysis includes one or more of:
determining signal characteristics (para [0027]);
determining location information;
determining person information;
determining movement information (para [0062]); and
determining sensor information.

Regarding claim 7, in the combination of Campbell, Yamaguchi, and Chutorash, Chutorash further discloses that the communication system resolves the analysis to determine if the signal originated inside the vehicle (para [0060]).

Regarding claim 8, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the vehicle communication system includes at least one wireless LAN component (para [0064]).

Regarding claim 9, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the device communicates with the at least one wireless LAN component (para [0064]).

Regarding claim 11, Campbell discloses a vehicle communication system (para [0007]), comprising: a communication system (para [0040]) comprising: two or more communication modules (para [0065]); a signal processor (para [0053]); wherein the signal processor is operable to: receive a signal at the vehicle communication system from a device (para [0069]); automatically determine if the signal originates from inside the vehicle (" determination is made as to whether there is a connection to the vehicle control system (step 1306) (e.g., a connection between the component to be trained and the vehicle control system). If so, a determination as to whether a connection may be made between the vehicle control system and a phone or other outside device is made (step 1308)" para [0088]); and provide access to a vehicle bus (para [0069]). Campbell does not expressly disclose that said signal processor is operable to if the signal originates from inside the vehicle, communicatively connect the vehicle communication system to the device and if the signal does not originate from inside the vehicle, rejecting the signal. However, Yamaguchi discloses that said method comprises: if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device ("determine whether the electronic portable key is located in an interior wireless communicatable area formed inside the vehicle or an exterior wireless communicatable area formed outside the vehicle" para [0008]) and if the signal does not originate from inside the vehicle, rejecting the signal ("The control unit limits the operations of the vehicle that can be performed in accordance with the communicable area in which the sub-key is located when determining that the sub-key is not in the lent state" para [0008]-[0009]]). It would have been obvious to one having ordinary skill in the art to modify the system and method of Campbell so as that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, as disclosed by Yamaguchi, because Campbell and Yamaguchi are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, because such systems and methods provide a vehicle electronic portable key system that improves the level of security (Yamaguchi para [0007]). The combination of Campbell and Yamaguchi discloses the foregoing, but does not expressly disclose that said vehicle communication system comprises two or more BLUETOOTH transceivers. However, Chutorash discloses that said vehicle communication system comprises: two or more BLUETOOTH transceivers (para [0045], [0053]). It would have been obvious to one having ordinary skill in the art to modify the systems and methods of Campbell and Yamaguchi so as that said vehicle communication system comprises two or more BLUETOOTH transceivers, as disclosed by Chutorash, because Campbell, Yamaguchi, and Chutorash are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said vehicle communication system comprises two or more BLUETOOTH transceivers, because such systems and methods configure a wireless control system of a vehicle (Chutorash para [0004]).

Regarding claim 12, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the vehicle communication system includes at least one wireless LAN component (para [0064]), and wherein at least one device connects through the wireless LAN component (para [0064]).

Regarding claim 13, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the communication system further comprises a signal data database (para [0141]).

Regarding claim 14, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the communication system further comprises a translator (para [0120]).

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Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
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Box V. 2. Citations and explanations:

Regarding claim 15, in the combination of Campbell, Yamaguchi, and Chutorash, Chutorash further discloses that the signal processor is further operable to: determine signal characteristics (para [0027]); determine location information; determine person information; determine movement information (para [0062]); determine sensor information; and resolve the signal characteristics, location information, person information, movement information, and sensor information to determine if the signal originated inside the vehicle (para [0060]).

Regarding claim 17, in the combination of Campbell and Yamaguchi, Campbell further discloses that the vehicle communication system includes: at least one wireless LAN component (para [0064]), and wherein at least one device connects through the wireless LAN component (para [0064]); a communication system (para [0040]) comprising: two or more communication modules (para [0065]); a signal processor (para [0053]). Campbell and Yamaguchi do not expressly disclose that the vehicle communication system includes two or more BLUETOOTH transceivers. However, Chutorash discloses that the vehicle communication system includes: two or more BLUETOOTH transceivers (para [0045], [0053]). It would have been obvious to one having ordinary skill in the art to modify the systems and methods of Campbell and Yamaguchi so as that the vehicle communication system includes two or more BLUETOOTH transceivers, as disclosed by Chutorash, because Campbell, Yamaguchi, and Chutorash are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from the vehicle communication system includes two or more BLUETOOTH transceivers, because such systems and methods configure a wireless control system of a vehicle (Chutorash para [0004]).

Regarding claim 18, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the communication system further comprises: a signal data database (para [0141]); and a translator (para [0120]).

Regarding claim 19, in the combination of Campbell, Yamaguchi, and Chutorash, Chutorash further discloses that the signal processor executes instructions to: determine signal characteristics (para [0027]); determine location information; determine person information; determine movement information (para [0062]); determine sensor information; and resolve the signal characteristics, location information, person information, movement information, and sensor information to determine if the signal originated inside the vehicle (para [0060]).

Regarding claim 48, Campbell and Yamaguchi disclose the method of claim 41. Campbell and Yamaguchi do not expressly disclose that verifying the message comprises determining signal characteristics; determining location information; determining person information; determining movement information; determining sensor information; and resolving the signal characteristics, location information, person information, movement information, and sensor information to determine if the message originated inside the vehicle. However, Chutorash discloses that verifying the message comprises: determining signal characteristics (para [0027]); determining location information; determining person information; determining movement information (para [0062]); determining sensor information; and resolving the signal characteristics, location information, person information, movement information, and sensor information to determine if the message originated inside the vehicle (para [0060]). It would have been obvious to one having ordinary skill in the art to modify the systems and methods of Campbell and Yamaguchi so as that verifying the message comprises determining signal characteristics; determining location information; determining person information; determining movement information; determining sensor information; and resolving the signal characteristics, location information, person information, movement information, and sensor information to determine if the message originated inside the vehicle, as disclosed by Chutorash, because Campbell, Yamaguchi, and Chutorash are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from verifying the message comprises determining signal characteristics; determining location information; determining person information; determining movement information; determining sensor information; and resolving the signal characteristics, location information, person information, movement information, and sensor information to determine if the message originated inside the vehicle, because such systems and methods configure a wireless control system of a vehicle (Chutorash para [0004]).

Regarding claim 51, Campbell discloses a vehicle communication system (para [0007]), comprising: a communication system (para [0040]) comprising: two or more communication modules (para [0065]); a signal processor (para [0053]); wherein the signal processor is operable to: receiving a message from a first device (para [0070]); and providing the message to a second device (para [0070]). Campbell does not expressly disclose that the signal processor is operable to verifying that the message originated from inside the vehicle. However, Yamaguchi discloses that the signal processor is operable to: verifying that the message originated from inside the vehicle ("determine whether the electronic portable key is located in an interior wireless communicatable area formed inside the vehicle or an exterior wireless communicatable area formed outside the vehicle" para [0008]). It would have been obvious to one having ordinary skill in the art to modify the system and method of Campbell so as that the signal processor is operable to verifying that the message originated from inside the vehicle, as disclosed by Yamaguchi, because Campbell and Yamaguchi are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from the signal processor is operable to verifying that the message originated from inside the vehicle, because such systems and methods provide a vehicle electronic portable key system that improves the level of security (Yamaguchi para [0007]). The combination of Campbell and Yamaguchi discloses the foregoing, but does not expressly disclose that said vehicle communication system comprises two or more BLUETOOTH transceivers. However, Chutorash discloses that said vehicle communication system comprises: two or more BLUETOOTH transceivers (para [0045], [0053]). It would have been obvious to one having ordinary skill in the art to modify the systems and methods of Campbell and Yamaguchi so as that said vehicle communication system comprises two or more BLUETOOTH transceivers, as disclosed by Chutorash, because Campbell, Yamaguchi, and Chutorash are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said vehicle communication system comprises two or more BLUETOOTH transceivers, because such systems and methods configure a wireless control system of a vehicle (Chutorash para [0004]).

Regarding claim 52, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the message is directed to the second device (para [0070]).

Regarding claim 53, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses further comprising: accessing signal data in a signal data database to retrieve address information from the second device (para [0141]), and accessing signal data in a signal data database to retrieve address information for the first device (para [0141]).

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In case **the space in any of the preceding boxes is not sufficient.**
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Box V. 2. Citations and explanations:

Regarding claim 54, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses further comprising comparing an address for the first device in the message with the retrieved address information (para [0070]), wherein if the address for the first device in the message is the same as the retrieved address information, the message is verified (para [0070]).

Regarding claim 55, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the message is sent through the vehicle communication system to the second device (para [0070]).

Regarding claim 57, in the combination of Campbell and Yamaguchi, Campbell further discloses that the vehicle communication system includes: at least one wireless LAN component (para [0064]), and wherein at least one device connects through the wireless LAN component (para [0064]); a communication system (para [0040]) comprising: two or more communication modules (para [0065]); a signal processor (para [0053]). Campbell and Yamaguchi do not expressly disclose that the vehicle communication system includes two or more BLUETOOTH transceivers. However, Chutorash discloses that the vehicle communication system includes:
two or more BLUETOOTH transceivers (para [0045], [0053]). It would have been obvious to one having ordinary skill in the art to modify the systems and methods of Campbell and Yamaguchi so as that the vehicle communication system includes two or more BLUETOOTH transceivers, as disclosed by Chutorash, because Campbell, Yamaguchi, and Chutorash are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from the vehicle communication system includes two or more BLUETOOTH transceivers s, because such systems and methods configure a wireless control system of a vehicle (Chutorash para [0004]).

Regarding claim 58, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the communication system further comprises: a signal data database (para [0141]); and a translator (para [0120]).

Regarding claim 59, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses further comprising: instructions to access signal data in a signal data database to retrieve address information from the second device (para [0141]), instructions to access signal data in a signal data database to retrieve address information for the first device (para [0141]); and instructions to compare an address for the first device in the message with the retrieved address information (para [0070]), wherein if the address for the first device in the message is the same as the retrieved address information, the message is verified (para [0070]).

Regarding claim 60, in the combination of Campbell, Yamaguchi, and Chutorash, Campbell further discloses that the vehicle communication system includes at least one wireless LAN component (para [0064]), and wherein the first device communicates to the second device through the at least one wireless LAN component (para [0064]).

Claims 21-30 and 61-70 lack an inventive step under PCT Article 33(3) as being obvious over Campbell in view of Yamaguchi and US 2009/0278750 A1 to Man et al. (hereinafter Man).

Regarding claim 21, Campbell discloses a method, comprising: receiving a signal at a vehicle communication system from a device (para [0069]); automatically determining if the signal originates from inside the vehicle (" determination is made as to whether there is a connection to the vehicle control system (step 1306) (e.g., a connection between the component to be trained and the vehicle control system). If so, a determination as to whether a connection may be made between the vehicle control system and a phone or other outside device is made (step 1308)" para [0088]);receiving a request for a function (para [0090]); determining one or more of available resources, available devices, and available sources (para [0137]); selecting a device or source to provide the function (para [0068]); commanding the device or source to provide the function (para [0108]); and receiving the function (para [0109]).
Campbell does not expressly disclose that the method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, and if the signal does not originate from inside the vehicle, rejecting the signal. However, Yamaguchi discloses that said method comprises: if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device ("determine whether the electronic portable key is located in an interior wireless communicatable area formed inside the vehicle or an exterior wireless communicatable area formed outside the vehicle" para [0008]) and if the signal does not originate from inside the vehicle, rejecting the signal ("The control unit limits the operations of the vehicle that can be performed in accordance with the communicable area in which the sub-key is located when determining that the sub-key is not in the lent state" para [0008]-[0009]]). It would have been obvious to one having ordinary skill in the art to modify the system and method of Campbell so as that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, as disclosed by Yamaguchi, because Campbell and Yamaguchi are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, because such systems and methods provide a vehicle electronic portable key system that improves the level of security (Yamaguchi para [0007]).
The combination of Campbell and Yamaguchi discloses the foregoing, but does not expressly disclose that said method comprises determining load. However, Man discloses that said method comprises: determining load (para [0019]). It would have been obvious to one having ordinary skill in the art to modify the systems and methods of Campbell and Yamaguchi so as that said method comprises determining load, as disclosed by Man, because Campbell, Yamaguchi, and Man are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises determining load, because such systems and methods provide relatively high performance multi-band antennas for operation in EDGE, CODMA and/or WCDMA systems (Man para [0008]).

Regarding claim 22, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that the vehicle communication system includes a communication system in communication with one or more devices (para [0040]).

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Box V. 2. Citations and explanations:

Regarding claim 23, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that the device is a computing system (para [0116]).

Regarding claim 24, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that the function is one of playing of multimedia data (para [0055]), provisioning of access to the internet (para [0059]), or providing access to e-mail (para [0070]).

Regarding claim 25, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that determining the load comprises one of: determining a number of input/output messages sent between a device and vehicle communication system (para [0045]); or analyzing information sent to the vehicle communication system by the device (para [0070]).

Regarding claim 26, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that the selection of the device or source is based both on availability and load (para [0137]).

Regarding claim 27, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that a first device requests the function (para [0090]).

Regarding claim 28, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that a second device provides the function (para [0108]).

Regarding claim 29, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that the request for the function is received by the vehicle communication system (para [0090]).

Regarding claim 30, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that a device provides the function for the vehicle communication system (para [0090]).

Regarding claim 61, Campbell discloses a method, comprising: receiving a signal at a vehicle communication system from a device (para [0069]); automatically determining if the signal originates from inside the vehicle (" determination is made as to whether there is a connection to the vehicle control system (step 1306) (e.g., a connection between the component to be trained and the vehicle control system). If so, a determination as to whether a connection may be made between the vehicle control system and a phone or other outside device is made (step 1308)" para [0088]); receiving a request for an application (para [0083]); determining one or more of available resources, available devices, and available sources (para [0137]); activating function on a device or source to execute the application (para [0139]); receiving, from the device, application user interface information or data at the vehicle to be displayed on a display associated with the vehicle (para [0131]); and
displaying the application on the display (para [0132]).Campbell does not expressly disclose that the method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device,and if the signal does not originate from inside the vehicle, rejecting the signal. However, Yamaguchi discloses that said method comprises: if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device ("determine whether the electronic portable key is located in an interior wireless communicatable area formed inside the vehicle or an exterior wireless communicatable area formed outside the vehicle" para [0008]) and if the signal does not originate from inside the vehicle, rejecting the signal ("The control unit limits the operations of the vehicle that can be performed in accordance with the communicable area in which the sub-key is located when determining that the sub-key is not in the lent state" para [0008]-[0009]]). It would have been obvious to one having ordinary skill in the art to modify the system and method of Campbell so as that said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, as disclosed by Yamaguchi, because Campbell and Yamaguchi are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises if the signal originates from inside the vehicle, communicatively connecting the vehicle communication system to the device, because such systems and methods provide a vehicle electronic portable key system that improves the level of security (Yamaguchi para [0007]). The combination of Campbell and Yamaguchi discloses the foregoing, but does not expressly disclose that said method comprises determining load. However, Man discloses that said method comprises:determining load (para [0019]). It would have been obvious to one having ordinary skill in the art to modify the systems and methods of Campbell and Yamaguchi so as that said method comprises determining load, as disclosed by Man, because Campbell, Yamaguchi, and Man are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from said method comprises determining load, because such systems and methods provide relatively high performance multi-band antennas for operation in EDGE, CODMA and/or WCDMA systems (Man para [0008]).

Regarding claim 62, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses further comprising: commanding the vehicle communication system to perform functions for the application (para [0135]).

Regarding claim 63, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses further comprising receiving input on the display (para [0125]).

Regarding claim 64, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses further comprising based on the input received on the display, executing an application function on the device (para [0139]).

Regarding claim 65, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that the vehicle communication system includes a communication system in communication with one or more devices (para [0040]).

Regarding claim 66, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that the device is a computing system (para [0116]).

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In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
Box V. 2. Citations and explanations:

Regarding claim 67, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that determining the load comprises one of: determining a number of input/output messages sent between a device and vehicle communication system (para [0045]); or analyzing information sent to the vehicle communication system by the device (para [0070]).

Regarding claim 68, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that the selection of the device or source is based both on availability and load (para [0137]).

Regarding claim 69, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that the request for the application is received by the vehicle communication system (para [0083]).

Regarding claim 70, in the combination of Campbell, Yamaguchi, and Man, Campbell further discloses that a device provides the application for the vehicle communication system (para [0139]).

Claims 10 and 20 lack an inventive step under PCT Article 33(3) as being obvious over Campbell in view of Yamaguchi and Chutorash, and further in view of US 2011/0105097 A1 to Tadayon et al. (hereinafter Tadayon).

Regarding claim 10, Campbell, Yamaguchi, and Chutorash disclose the method of claim 9.
Campbell, Yamaguchi, and Chutorash do not expressly disclose that the analysis is weighted to resolve the determination of if the signal originated inside the vehicle. However, Tadayon discloses that the analysis is weighted to resolve the determination of if the signal originated inside the vehicle (para [0069]). It would have been obvious to one having ordinary skill in the art to modify the systems and methods of Campbell, Yamaguchi, and Chutorash so as that the analysis is weighted to resolve the determination of if the signal originated inside the vehicle, as disclosed by Tadayon, because Campbell, Yamaguchi, Chutorash, and Tadayon are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from the analysis is weighted to resolve the determination of if the signal originated inside the vehicle, because such systems and methods limit/disable the use of some of mobile device features which could cause distraction to the user when the user is engaged in another activity (Tadayon para [0010]).

Regarding claim 20, Campbell, Yamaguchi, and Chutorash disclose the computer readable medium of claim 19.
Campbell, Yamaguchi, and Chutorash do not expressly disclose that the signal characteristics, location information, person information, movement information, and sensor information is weighted to resolve the determination of if the signal originated inside the vehicle. However, Tadayon discloses that the signal characteristics, location information, person information, movement information, and sensor information is weighted to resolve the determination of if the signal originated inside the vehicle (para [0069]). It would have been obvious to one having ordinary skill in the art to modify the systems and methods of Campbell, Yamaguchi, and Chutorash so as that the signal characteristics, location information, person information, movement information, and sensor information is weighted to resolve the determination of if the signal originated inside the vehicle, as disclosed by Tadayon, because Campbell, Yamaguchi, Chutorash, and Tadayon are directed to systems and methods for vehicle communication. Furthermore, users of such systems and methods benefit from the signal characteristics, location information, person information, movement information, and sensor information is weighted to resolve the determination of if the signal originated inside the vehicle, because such systems and methods limit/disable the use of some of mobile device features which could cause distraction to the user when the user is engaged in another activity (Tadayon para [0010]).

Claims 1-30, 41-70, 81-90, and 101-110 have industrial applicability as defined by PCT Article 33(4), because the subject matter can be made or used in industry.

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	1	of	3	Attorney Docket Number	6583-318

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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Examiner Signature		Date Considered	

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(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	2	of	3	Attorney Docket Number	6583-318

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UNPUBLISHED U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Filing Date MM-DD-YYYY	Name of Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	45	13/963728	08/09/2013	Ricci	

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Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]; Number[4]; Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

NON-PATENT LITERATURE DOCUMENTS		
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	46	PURCHER "Apple Invents In-Vehicle Holistic ID for "iOS in the Car"," Patently Apple, Dec. 2013, 8 pages [retrieved on 12/12/2013 from: www.patentlyapple.com/patently-apple/2013/12/apple-invents-in-vehicle-holistic-id-for-ios-in-the-car.html]
	47	International Search Report and Written Opinion for International (PCT) Patent Application No. PCT/US12/65510, mailed May 06, 2013 (Attorney's Ref. No. 6583-244-PCT) 17 pages
	48	International Preliminary Report on Patentablity for International (PCT) Patent Application No. PCT/US12/65421, mailed Oct. 17, 2013 (Attorney's Ref. No. 6583-318-PCT) 33 pages

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Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	3	of	3	Attorney Docket Number	6583-318

	49	Official Action for U.S. Patent Application No. 13/462,593, mailed Dec. 19, 2013 (Attorney's Ref. No. 6583-226) 18 pages
	50	Official Action for U.S. Patent Application No. 13/679,234, mailed Jul. 12, 2013 (Attorney's Ref. No. 6583-229) 10 pages
	51	Official Action for U.S. Patent Application No. 13/679,234, mailed Dec. 03, 2013 (Attorney's Ref. No. 6583-229) 12 pages
	52	Official Action for U.S. Patent Application No. 13/679,441, mailed Sep. 05, 2013 (Attorney's Ref. No. 6583-244) 6 pages
	53	Official Action for U.S. Patent Application No. 13/679,441, mailed Jan. 16, 2014 (Attorney's Ref. No. 6583-244) 6 pages
	54	Official Action for U.S. Patent Application No. 13/420,240, mailed Dec. 17, 2013 (Attorney's Ref. No. 6583-256) 14 pages
	55	Official Action for U.S. Patent Application No. 13/679,350, mailed Nov. 13, 2013 (Attorney's Ref. No. 6583-412) 12 pages
	56	Official Action for U.S. Patent Application No. 13/679,350, mailed Jan. 22, 2014 (Attorney's Ref. No. 6583-412) 13 pages
	57	Official Action for U.S. Patent Application No. 13/679,358, mailed Jan. 27, 2014 (Attorney's Ref. No. 6583-413) 18 pages

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [2] Applicant's unique citation designation number (optional). [3] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [4] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [5] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [6] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [7] Applicant is to place a check mark here if English language Translation is attached.

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed	PTO/SB/25 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION**
Application Number	13679204
Filing Date	16-Nov-2012
First Named Inventor	Christopher Ricci
Attorney Docket Number	6583-318
Title of Invention	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
Flextronics AP, LLC	100%

The owner(s) of percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number(s)

13679441 filed on 11/16/2012

as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the reference application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term of any patent granted on said reference application, "as the term of any patent granted on said reference application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending reference application," in the event that any such patent granted on the pending reference application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○	I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

○ Small Entity

○ Micro Entity

◉ Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

◉ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Registration Number 55028

○ A sole inventor

○ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application

○ A joint inventor; all of whom are signing this request

Signature	/Timothy E. Buckley/
Name	Timothy Buckley

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Acknowledgement Receipt

EFS ID:	18195581
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Timothy Buckley
Filer Authorized By:	
Attorney Docket Number:	6583-318
Receipt Date:	13-FEB-2014
Filing Date:	16-NOV-2012
Time Stamp:	11:44:47
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$160
RAM confirmation Number	10713
Deposit Account	191970
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

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Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Electronic Terminal Disclaimer-Filed	eTerminal-Disclaimer.pdf	33983 59e83d7a9e3c030b3a33d9ae074e0913a689c26f	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30344 23f6dd538e63d34f56fb6e51698cedb5d8ee1060	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	64327		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 13679204

Filing Date: 16-Nov-2012

Applicant/Patent under Reexamination: Ricci et al.

Electronic Terminal Disclaimer filed on February 13, 2014

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Patent Application Fee Transmittal

Application Number:	13679204
Filing Date:	16-Nov-2012
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Filer:	Timothy Buckley
Attorney Docket Number:	6583-318

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Statutory or Terminal Disclaimer	1814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**160**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 3667
RICCI, Christopher P.	)	Examiner: MCDIEUNEL, MARC
Application No.: 13/679,204	)	Confirmation No.: 3693
Filed: November 16, 2012	)	
Atty. File No.: 6583-318	)	***Submitted Via EFS-Web***
For: "FEATURE RECOGNITION CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES"	)	

AMENDMENT AND RESPONSE

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Examiner McDieunel:

Applicant submits this Amendment and Response to address the Office Action having a mailing date of November 14, 2013. Although Applicant believes no fees are due in connection with the filing of this Amendment and Response, please charge any fees deemed necessary to Deposit Account No. 19-1970.

Please amend the above-identified patent application as follows:

Amendments to the Claims are shown in the listing of claims which begins on page **2** of this paper.

Remarks begin on page **5** of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method, comprising:

separating a vehicle into one or more zones;

automatically determining, by a processor, if a person is within said zone of[[a]] said vehicle;

~~automatically~~ identifying [[the]]said person within said zone of the vehicle;

determining, by a processor, if said identified person has corresponding settings ~~there is a setting to be stored for the person~~; and

configuring said zone of said vehicle based on said corresponding settings ~~storing the setting~~.

2. (Canceled)

3. (Currently Amended) The method of claim [[2]]1, further comprising: if the person cannot be identified, characterizing the person.

4. (Currently Amended) The method of claim 3, wherein automatically determining if a person is within [[a]]said zone of said vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle.

5. (Currently Amended) The method of claim 4, wherein ~~automatically~~ identifying [[the]]said person within said zone of the vehicle comprises:

comparing the sensor data to feature data in a data structure; and

determining if the sensor data is substantially similar to the feature data.

6. (Currently Amended) The method of claim 5, wherein determining if said identified person has corresponding settings ~~if there is a setting to be stored for the person~~ comprises determining if the person has made a setting.

7. (Currently Amended) The method of claim 6, wherein determining if said identified person has corresponding settings ~~there is a setting to be stored for the person~~ further comprises waiting a period of time to determine if the corresponding settings have achieved a steady state.

8. (Currently Amended) The method of claim 1, wherein [[the]]said corresponding settings is stored in cloud storage.

9. (Currently Amended) The method of claim 1, wherein the said corresponding setting is one of a position of a seat, a position of a mirror, a heat or cold setting, a configuration of a console, a configuration of a dash, a configuration of a heads up display, or a setting for a radio.

10. (Canceled)

11. (Currently Amended) A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive sensor data from the one or more sensors;

based on the sensor data, automatically determine if a person is within a zone of a vehicle;

based on the sensor data, automatically identify the person;

determine if the person has made a setting; and

~~store the setting~~based on the determination, configure said zone of said vehicle to said setting.

12. (Original) The device of claim 11, wherein the sensor data is an image of the person.

13. (Original) The device of claim 12, wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure.

14. (Original) The device of claim 11, wherein the sensor data is voice data from the person.

15. (Original) The device of claim 14, wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure.

16. (Currently Amended) A non-transitory computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine if a person is within a zone of a vehicle;

based on the sensor data, instructions to automatically identify the person;

instructions to retrieve one or more settings associated with the identified person; and

instructions to automatically configure the vehicle according to the retrieved settings.

17. (Canceled)

18. (Original) The computer readable medium of claim 17, wherein the settings retrieved are associated with the determined area or zone.

19. (Original) The computer readable medium of claim 18, wherein the settings are retrieved from a data structure.

20. (Original) The computer readable medium of claim 19, wherein the data structure is stored in cloud storage.

ARGUMENTS/REMARKS

Applicant submits this Amendment and Response to respond to the Office Action dated November 14, 2013 ("*Office Action*").

Claims 1, 3, 4-9, 11, and 16 have been amended without intending to abandon or to dedicate to the public any patentable subject matter. Claims 2, 10, and 17 have been canceled without prejudice. No new claims have been added.

Accordingly, claims 1, 3-9, 11-16, and 18-20 are currently pending.

Claim Rejections under 35 U.S.C. § 112

Claims 1-10 have been rejected under 35 U.S.C. § 112 as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Claim 2 has been canceled without prejudice. Claim 10 has been canceled without prejudice. Claim 3 now depends on amended claim 1 wherein the term automatically has been deleted from Claim 1 without prejudice. In addition, the term automatically has also been deleted from claim 5 without prejudice.

Applicant respectfully submits that the 35 U.S.C. § 112 rejection based on failing to particularly point out and distinctly claim the subject matter has been overcome.

Claim Rejection Under 35 U.S.C. § 101

Claim 1 is rejected under 35 U.S.C. § 101 as being based upon ineligible subject matter. Claims 3-9 stand rejected as being dependent upon rejected base Claim 1. Claim 1 has been amended to include the term "by a processor" as Examiner has suggested.

Claim 16 has been rejected as being directed to non-statutory subject matter. Claims 18-20 stand rejected as being dependent upon a rejected base claim 16. Claim 16 has been amended to include the term "non-transitory" as the Examiner has suggested.

Applicant respectfully submits that claim 1, and dependent claims 3-9, are now in a condition to overcome the 35 U.S.C. § 101 rejection based on ineligible subject matter. Applicant respectfully submits that claim 16, and dependent claims 18-20, are now in a condition to overcome the 35 U.S.C. §101 rejection based on non-statutory subject matter.

Claim Rejection Under 35 U.S.C. § 103

Claims 1-7, 9, and 11-15 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being obvious over Breed et al. U.S. 2008/0051957 ("Breed") in view of Kanevsky et al. U.S. 2006/0047386 ("Kanesky").

Claims 16-19 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being obvious over Breed in view of Cai et al. U.S. 2011/0234369 ("Cai").

Claim 8 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being obvious over Breed in view of Kanevsky and in further view of Khosravy et al. U.S. 2009/0319181 ("Khosravy").

Claim 10 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being obvious over Breed in view of Kanevsky and further in view of Cai.

Claim 20 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being obvious over Breed in view of Cai and in further view of Khosravy.

To establish a *prima facie* case of obviousness, all claim limitations must first be taught or suggested by the prior art. *See, e.g., DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006); 80 U.S.P.Q.2d 1641, 1645 (2006). "All words in a claim must be considered in judging the patentability of that claim against the prior art." MPEP § 2143.03 (citing *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). The Examiner must then provide an explicit analysis of the motivation for combining the references. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007); 82 U.S.P.Q.2d 1385, 1396 (2007) ("a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art . . . .").

While the Examiner can choose one of several exemplary rationales from the MPEP to support an obviousness rejection, all the rationales in the MPEP still require the Examiner to demonstrate that all the claim elements are shown in the prior art. *See* MPEP § 2143, Original Eighth Edition, August 2001, Latest Revision August 2012.

Claim 1 and Claim 11:

Claim 1:

Claim 1 includes elements not taught in the cited art. Notably, the elements highlighted below are not taught:

1. A method, comprising:

separating a vehicle into one or more zones;

automatically determining if a person is within said zone of said vehicle;

automatically identifying said person within said zone of the vehicle;

determining if said person has corresponding settings; and

configuring said zone of said vehicle based on said corresponding settings.

Claim 11:

Claim 11 includes elements not taught in the cited art. Notably, the elements highlighted below are not taught:

11. A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive sensor data from the one or more sensors;

based on the sensor data, automatically determine if a person is within a zone of a vehicle;

based on the sensor data, automatically identify the person;

determine if the person has made a setting; and based on the determination, configure said zone of said vehicle to said setting.

***Missing Limitation(s): "determining if said identified person has corresponding settings; and configuring said zone of said vehicle based on said corresponding settings." and* "determine if the person has made a setting; and based on the determination, configure said zone of said vehicle to said setting."**

Claim 1 includes "determining if said person has corresponding settings; and configuring said zone of said vehicle based on said corresponding settings." Claim 11 includes "determine if the person has made a setting; and based on the determination, configure said zone of said vehicle to said setting." The cited art does not teach these element(s).

The Office Action cites both Breed as disclosing settings used to control or configure the vehicle. The pertinent section of Breed cited by the Examiner is as follows:

> [0170] A section of the passenger compartment of an automobile is shown generally as 40 in FIGS. 8A-8D. A driver 30 of the vehicle sits on a seat 3 behind a steering wheel 42, which contains an airbag assembly 44. Airbag assembly 44 may be integrated into the steering wheel assembly or coupled to the steering wheel 42. Five transmitter and/or receiver assemblies 49, 50, 51, 52 and 54 are positioned at various places in the passenger compartment to determine the location of various parts of the driver, e.g., the head, chest and torso, relative to the airbag and to otherwise monitor the interior of the passenger compartment. Monitoring of the interior of the passenger compartment can entail detecting the presence or absence of the driver and passengers, differentiating between animate and inanimate objects, detecting the presence of occupied or unoccupied child seats, rear-facing or forward-facing, and identifying and ascertaining the identity of the occupying items in the passenger compartment, a similar system can be used for monitoring the interior of a truck, shipping container or other containers.

* * *

> [0277] The combination of a camera system with a microphone and speaker allows for a wide variety of options for the control of vehicle components. A sophisticated algorithm can interpret a gesture, for example, that may be in response to a question from the computer system. The driver may indicate by a gesture that he or she wants the temperature to change and the system can then interpret a "thumbs up" gesture for higher temperature and a "thumbs down" gesture for a lower temperature. When it is correct, the driver can signal by gesture that it is fine. A very large number of component control options exist that can be entirely executed by the combination of voice, speakers and a camera that can see gestures. When the system does not understand, it can ask to have the gesture repeated, for example, or it can ask for a confirmation. Note, the presence of an occupant in a seat can even be confirmed by a word spoken by the occupant, for example, which can use a technology known as voice print if it is desired to identify the particular occupant.

Breed, ¶ [0277].

The pertinent sections of Kanevsky cited by the Examiner are as follows:

> [0022] To generate commands in accordance with the invention, one or more touch sensitive pads 112 are mounted on the steering wheel 114 of vehicle 100. Preferably, each touch pad 112 is mounted proximate to the vehicle operator's hands, as the operator grasps the wheel, so that the operator can easily and conveniently touch each sensor surface with his fingers or thumb. Accordingly, by applying different discrete patterns of synchronized touch gestures to the respective touch pads 112, the operator 104 can readily produce different

> respectively corresponding patterns of control signals. Control signals may be coupled to computer control 102 by means of a wireless link 118, by providing suitable RF transceivers (not shown) in the steering wheel 114 and computer 102. Alternatively, signals may be transmitted over a wired path such as a conductive or optic fiber path (not shown) extending between the touch pads 112 and computer control 102.

Kanevsky, ¶ [0022].

> [0034] Interpretation module 308 is configured to interpret the information collectively provided by the touch pad signals and the speech and facial gestures of the operator. Module 308 creates a list of all commands that computer control system 102 can generate to operate various systems in vehicle 100, such as to open a window or turn on a radio. Interpretation module 308 combines the touch pad, speech and facial gesture information, and then selects a command from the list of commands 310 that is represented by the combination. Thus, interpretation module 308 serves as an integration system for speech, touch pad and facial gesture signals. A related integration system is described, for example, in U.S. Pat. No. 6,421,453, filed May 15, 1998 and entitled "Apparatus and Methods for User Recognition Employing Behavioral Passwords", incorporated herein by reference.
>
> * * *
>
> [0036] As an important feature, FIG. 3 shows computer control system 102 further provided with a training module 316, coupled to interpretation module 308. Training module 316 is adapted for use by an operator of vehicle 100, to enable the operator to select a particular pattern of touch pad gestures to define a command, possibly in combination with a selected vocal statement or facial gesture. The training module has an associated display 318 for displaying all possible commands. Thus, an operator using the training module 316 could select a command shown by the display. Using the touch pads 112, the operator would then enter a touch gesture pattern, or combination of synchronized touch gestures, to define the selected commands. Microphone 120 and video camera 122 would be used to enter respective associated statements and/or facial gestures, if desired. Training module 316 would also be used to enter the new command into the list of commands 310.

Kanevsky, ¶¶ [0034],[0036].

Breed teaches a gesture used to control temperature where the gestures are recognized by a combination of a camera system with a microphone and speaker, and an algorithm is used to interpret the gesture. (See *Breed*, par. [0027].) However, there is no teaching in Breed that describes separating a vehicle into one or more zones and configuring the zone of the vehicle

based on a person's corresponding settings within the zone as in claims 1 and 11. Indeed, the claim teaches something different from Breed. In Breed, gestures are used to change the temperature in the entire vehicle (See *Breed*, par. [0027]). In Claims 1 and 11, unlike the invention in Breed, no gestures are required to configure the zones of the vehicle. Summarily, a person simply enters a zone of the vehicle, and the vehicle configures the zone of the vehicle to the person. (See claims 1 and 11.)

Examiners cites paragraph [0170] as disclosing determining that a person is within the driver zone (par. 170) (See Office Action, pg. 12). However, paragraph [0170] simply refers to "monitoring the interior of a passenger department to detect the presence or absence of drivers." It does not describe, separating the vehicle into zones and determining if said person (a person within the zone) has corresponding settings, and configuring said zone of said vehicle based on said corresponding settings as described similarly in claim 1 or claim 11.

Kanevsky does not overcome the deficiencies of Breed.

Examiner (on Office Action, pg. 7) states that Kanevsky discloses, "in a vehicle control system and method using setting-based controls, allowing the driver to make or create a setting via a touch sensitive display, and storing the created setting." However, Kanevsky does not teach or suggest "determining if said identified person has corresponding settings; and configuring said zone of said vehicle based on said corresponding settings" or "determine if the person has made a setting; and based on the determination, configure said zone of said vehicle to said setting" as in claim 1 or claim 11. That is, while Kanevsky describes gestures or inputs using a touch pad, a camera, or a microphone, there is no description of separating a vehicle into zones and configuring each zone of a vehicle based on settings of the individual in the corresponding zone as described in claims 1 and 11.

Thus, neither Breed nor Kanevsky teach the type of the configuration of a zone of the vehicle based on corresponding settings claimed.

For at least these reasons, the combination of Breed and Kanevsky fails to teach all the claim elements of the present claim. Therefore, the Office Action has failed to show a *prima facie* case of obviousness, and the claim should be allowed.

The Office Action states that both Breed and Kanevsky fail to teach "the settings associated with the particular person in the driver zone" and that Cai discloses "in a device

providing settings for each particular person in a memory, and retrieving those settings when the person is identified as the user (par. 42)" (See Office Action, pg. 10).

The pertinent section of Cai cited by the Examiner is as follows:

> [0042] Furthermore, the system (which generally includes the displacement controller, HIM, SSM, and host system) may include a non-volatile memory and a display device, and may support control of a given DUC by a plurality of users, each having his/her own set of motions and gestures. In particular embodiments, the non-volatile memory is located either in the displacement controller, the HIM, or both. The calibration motions and gestures for each user may be stored in the non-volatile memory, and retrieved for use by the system in accordance with a user logging on to the system or selecting his/her name from a list of users displayed on the display device by the system. In an embodiment, the system may also include a device for signaling to the user when the user executes a motion or gesture outside the range of calibrated motions

Cai, ¶ [0042].

The Examiner states that "it would have been obvious to further modify Breed to have the person occupying an area or zone within the vehicle, and the setting associated with the person in the area or zone, for the advantage of personalizing the settings." (See Office Action, pg. 11.) However, as stated previously, Breed does not teach or suggest separating the vehicle into zones and determining if said person (a person within the zone) has corresponding settings, and configuring said zone of said vehicle based on said corresponding settings as described in claim 1 or 11. Nor would it have been obvious to do so because Breed details using gestures to control settings like the temperature ("The driver may indicate by a gesture that he or she wants the temperature to change and the system can then interpret a 'thumbs up' gesture for higher temperature and a 'thumbs down'", See *Breed*, par. [0027]), not configuring the zone of the vehicle based on corresponding settings of the person as in claims 1 and 11.

No cited reference describes zones within the vehicle.

For at least these reasons, the combination of Breed, Kanevsky, and Cai fails to teach all the claim elements of the present claim.

Therefore, the Office Action has failed to show a *prima facie* case of obviousness, and the claim should be allowed.

Claim 16:

Claim 16 includes elements that are the same as, or similar to, claim 1 and claim 11. As such, for the same or similar reasons, claim 16 is also allowable over the cited art. Notably, the elements highlighted below are not taught by the cited art:

16. A non-transitory computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from the one or more sensors;

based on the sensor data, instructions to automatically determine if a person is within a zone of a vehicle;

based on the sensor data, instructions to automatically identify the person;

instructions to retrieve one or more settings associated with the identified person; and

instructions to automatically configure the vehicle according to the retrieved settings.

Claims 3-9, 12-15, and 18-20:

Claims 3-9, 12-15, and 18-20 each depend, either directly or indirectly, from allowable base claims 1, 11, or 16. Due, at least in part, to this dependence on an allowable base claim, claims 3-9, 12-15, and 18-20 are also allowable over the cited art.

Claim Rejection Under Nonstatutory Double Patenting

Claims 1, 3-9,11-16, and 18-20 stand provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-20 of copending U.S. Application No. 13/679, 441.

Claims 1, 3-9,11-16, and 18-20 stand provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-20 of copending U.S. Application No. 13/679, 234.

Applicant has filed a Non-Terminal Disclaimer to overcome the Nonstatutory Double Patenting rejection.

CONCLUSION

For at least the reasons set forth above, Applicant submits that the rejections of the claims should be reconsidered and withdrawn.

Based on the foregoing, Applicant believes all pending claims are in condition for allowance and such disposition is respectfully requested. In the event a telephone conversation would further prosecution and/or expedite allowance, the Examiner is invited to contact the undersigned.

The Commissioner is hereby authorized to charge to deposit account number 19-1970 any fees under 37 CFR § 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby Petitioned.

Respectfully submitted,

SHERIDAN ROSS P.C.

Date: February 13, 2013

By: /Timothy E. Buckley/

Timothy E. Buckley
Reg. No. 55,028
1560 Broadway, Suite 1200
Denver, CO 80202
Telephone: 303-764-3008

Electronic Acknowledgement Receipt

EFS ID:	18196497
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Timothy Buckley/Lynn Tumey
Filer Authorized By:	Timothy Buckley
Attorney Docket Number:	6583-318
Receipt Date:	13-FEB-2014
Filing Date:	16-NOV-2012
Time Stamp:	13:02:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		02-14-2014_-_AMEND_RESP_NFOA_-_6583-318.pdf	172474 213ac9730c30c95e0bb67a74bf1f24dcc83fe209	yes	13

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	4
	Applicant Arguments/Remarks Made in an Amendment	5	13
Warnings:			
Information:			
	Total Files Size (in bytes):	172474	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/679,204	Filing Date 11/16/2012	☐ To be Mailed

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)		
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

		(Column 1)		(Column 2)	(Column 3)		
	02/13/2014	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
AMENDMENT	Total (37 CFR 1.16(i))	* 17	Minus	** 20	= 0	X $80 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $420 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)		
		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
AMENDMENT	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/BONNIE COLE/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	1	of	3	Attorney Docket Number	6583-318

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	5949345	09/07/1999	Beckert et al.	
	2	D429684	08/22/2000	Johnson	
	3	6202008	03/13/2001	Beckert et al.	
	4	6724920	04/20/2004	Berenz et al.	
	5	6785531	08/31/2004	Lepley et al.	
	6	7021691	04/04/2006	Schmidt et al.	
	7	7187947	03/06/2007	White et al.	
	8	7548815	06/16/2009	Watkins et al.	
	9	7566083	07/28/2009	Vitito	
	10	7683771	03/23/2010	Loeb	
	11	RE41449	07/20/2010	Krahnstoever et al.	
	12	7802832	09/28/2010	Carnevali	
	13	7969290	06/28/2011	Wwaeller et al.	
	14	8447598	05/21/2013	Chutorash et al.	
	15	2001/0010516	08/02/2001	Roh et al.	
	16	2002/0169551	11/14/2002	Inoue et al.	
	17	2005/0085215	04/21/2005	Kokko et al.	
	18	2006/0125631	06/15/2006	Sharony	
	19	2006/0288382	12/21/2006	Vitito	
	20	2007/0213090	09/13/2007	Holmberg	
	21	2008/0148374	06/19/2008	Spaur et al.	
	22	2008/0253613	10/16/2008	Jones et al.	
	23	2009/0168974	07/02/2009	McCormik	
	24	2009/0189373	07/30/2009	Schramm et al.	
	25	2009/0241883	10/01/2009	Nagoshi et al.	
	26	2009/0247132	10/01/2009	Sumcad et al.	
	27	2009/0278750	11/12/2009	Man et al.	
	28	2010/0076764	03/25/2010	Chengalvarayan	
	29	2010/0082559	04/01/2010	Sumcad et al.	
	30	2010/0090817	04/15/2010	Yamaguchi et al.	
	31	2010/0097239	04/22/2010	Campbell et al.	
	32	2010/0144284	06/10/2010	Chutorash et al.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.M

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	2	of	3	Attorney Docket Number	6583-318

	33	2010/0167727	07/01/2010	Madhavan et al.	
	34	2010/0167737	07/01/2010	Madhavan et al.	
	35	2010/0185341	07/22/2010	Wilson et al.	
	36	2010/0256903	10/07/2010	Johnson	
	37	2010/0295676	11/25/2010	Khachaturov et al.	
	38	2011/0105097	05/05/2011	Tadayon et al.	
	39	2011/0112969	05/12/2011	Zaid et al.	
	40	2011/0117933	05/19/2011	Andersson	
	41	2011/0225527	09/15/2011	Law et al.	
	42	2012/0029852	02/02/2012	Goff et al.	
	43	2012/0065996	03/15/2012	Daoud et al.	
	44	2012/0252364	10/04/2012	Inabathuni et al.	

UNPUBLISHED U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Filing Date MM-DD-YYYY	Name of Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	45	13/963728	08/09/2013	Ricci	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]; Number[4]; Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	46	PURCHER "Apple Invents In-Vehicle Holistic ID for "iOS in the Car"," Patently Apple, Dec. 2013, 8 pages [retrieved on 12/12/2013 from: www.patentlyapple.com/patently-apple/2013/12/apple-invents-in-vehicle-holistic-id-for-ios-in-the-car.html]
	47	International Search Report and Written Opinion for International (PCT) Patent Application No. PCT/US12/65510, mailed May 06, 2013 (Attorney's Ref. No. 6583-244-PCT) 17 pages
	48	International Preliminary Report on Patentablity for International (PCT) Patent Application No. PCT/US12/65421, mailed Oct. 17, 2013 (Attorney's Ref. No. 6583-318-PCT) 33 pages

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.M

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
(Use as many sheets as necessary)				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	3	of	3	Attorney Docket Number	6583-318

	49	Official Action for U.S. Patent Application No. 13/462,593, mailed Dec. 19, 2013 (Attorney's Ref. No. 6583-226) 18 pages
	50	Official Action for U.S. Patent Application No. 13/679,234, mailed Jul. 12, 2013 (Attorney's Ref. No. 6583-229) 10 pages
	51	Official Action for U.S. Patent Application No. 13/679,234, mailed Dec. 03, 2013 (Attorney's Ref. No. 6583-229) 12 pages
	52	Official Action for U.S. Patent Application No. 13/679,441, mailed Sep. 05, 2013 (Attorney's Ref. No. 6583-244) 6 pages
	53	Official Action for U.S. Patent Application No. 13/679,441, mailed Jan. 16, 2014 (Attorney's Ref. No. 6583-244) 6 pages
	54	Official Action for U.S. Patent Application No. 13/420,240, mailed Dec. 17, 2013 (Attorney's Ref. No. 6583-256) 14 pages
	55	Official Action for U.S. Patent Application No. 13/679,350, mailed Nov. 13, 2013 (Attorney's Ref. No. 6583-412) 12 pages
	56	Official Action for U.S. Patent Application No. 13/679,350, mailed Jan. 22, 2014 (Attorney's Ref. No. 6583-412) 13 pages
	57	Official Action for U.S. Patent Application No. 13/679,358, mailed Jan. 27, 2014 (Attorney's Ref. No. 6583-413) 18 pages

Examiner Signature	/McDieunel Marc/ (02/26/2014)	Date Considered	02/26/2014

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [2] Applicant's unique citation designation number (optional). [3] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [4] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [5] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [6] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [7] Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.M

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13679204	RICCI, CHRISTOPHER P.
	Examiner	**Art Unit**
	MCDIEUNEL MARC	3667

CPC						
Symbol					**Type**	**Version**
B60R		7	/	04	F	20130101
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CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	17	
/MCDIEUNEL MARC/ Primary Examiner.Art Unit 3667	02/26/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	9

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13679204	RICCI, CHRISTOPHER P.
	Examiner	**Art Unit**
	MCDIEUNEL MARC	3667

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION	
CLASS	SUBCLASS	CLAIMED	NON-CLAIMED
701	1	G 0 6 F 7 / 00 (2006.01.01)	

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
707	758				
342	59	70	71	72	159
192	35	48.2	54.52	84.1	
363	41				
343	713				

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	17	
/MCDIEUNEL MARC/ Primary Examiner.Art Unit 3667	02/26/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	9

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13679204	RICCI, CHRISTOPHER P.
	Examiner	**Art Unit**
	MCDIEUNEL MARC	3667

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1		17												
	2	15	18												
2	3	16	19												
3	4	17	20												
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	10														
9	11														
10	12														
11	13														
12	14														
13	15														
14	16														

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 17	
/MCDIEUNEL MARC/ Primary Examiner.Art Unit 3667 (Primary Examiner)	02/26/2014 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 9

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Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

111285 7590 03/18/2014

Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

EXAMINER	
MARC, MCDIEUNEL	
ART UNIT	PAPER NUMBER
3667	

DATE MAILED: 03/18/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/679,204	11/16/2012	Christopher P. Ricci	6583-318	3693

TITLE OF INVENTION: FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	06/18/2014

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

111285 7590 03/18/2014
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/679,204	11/16/2012	Christopher P. Ricci	6583-318	3693

TITLE OF INVENTION: FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	06/18/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
MARC, MCDIEUNEL	3667	701-001000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
❑ Issue Fee
❑ Publication Fee (No small entity discount permitted)
❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
❑ A check is enclosed.
❑ Payment by credit card. Form PTO-2038 is attached.
❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
❑ Applicant certifying micro entity status. See 37 CFR 1.29
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
❑ Applicant asserting small entity status. See 37 CFR 1.27
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
❑ Applicant changing to regular undiscounted fee status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/679,204	11/16/2012	Christopher P. Ricci	6583-318	3693

111285 7590 03/18/2014

Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

EXAMINER	
MARC, MCDIEUNEL	
ART UNIT	PAPER NUMBER
3667	

DATE MAILED: 03/18/2014

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 13/679,204	Applicant(s) RICCI, CHRISTOPHER P.	
	Examiner MCDIEUNEL MARC	Art Unit 3667	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *02/13/2014*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ 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.
3. ☒ The allowed claim(s) is/are *1,3-9,11-16 and 18-20*. As a result of the allowed claim(s), 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 or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ 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)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MCDIEUNEL MARC/
Primary Examiner, Art Unit 3667

Allowable Subject Matter

1. Claims 1, 3-9, 11-16 and 18-20 are allowed in light of the terminal disclaimer filed on 02/13/2014.

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to McDieunel Marc whose telephone number is (571) 272-6964. The examiner can normally be reached on Mon. - Thu..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell can be reached on (571) 272-6712. 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.

/McDieunel Marc/
Primary Examiner, Art Unit 3667

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	27	US-6583318-$.DID. OR US-5949345-$.DID. OR US-D429684-$.DID. OR US-6202008-$.DID. OR US-6724920-$.DID. OR US-6785531-$.DID. OR US-7021691-$.DID. OR US-7187947-$.DID. OR US-7548815-$.DID. OR US-7566083-$.DID. OR US-7683771-$.DID. OR US-7802832-$.DID. OR US-7969290-$.DID. OR US-8447598-$.DID. OR US-20010010516-$.DID. OR US-20020169551-$.DID. OR US-20050085215-$.DID. OR US-20060125631-$.DID. OR US-20060288382-$.DID. OR US-20070213090-$.DID. OR US-20080148374-$.DID. OR US-20080253613-$.DID. OR US-20090168974-$.DID. OR US-20090189373-$.DID. OR US-20090241883-$.DID. OR US-20090247132-$.DID. OR US-20090278750-$.DID.	US-PGPUB; USPAT; USOCR	OR	ON	2014/02/26 08:23
L2	1	"13679204"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/02/26 09:24
S2	15	US-6583318-$.DID. OR US-4875391-$.DID. OR US-5847661-$.DID. OR US-6157321-$.DID. OR US-6339826-$.DID. OR US-6662077-$.DID. OR US-6690260-$.DID. OR US-6816783-$.DID. OR US-7738462-$.DID. OR US-7881703-$.DID. OR US-20020126876-$.DID. OR US-20050144156-$.DID. OR US-20070194902-$.DID. OR US-20070195997-$.DID. OR US-20080143085-$.DID.	US-PGPUB; USPAT; USOCR	OR	ON	2013/10/30 19:12
S3	17557	(701/1 342/59,70,71,72,159 192/48.2,54.52,84.1,40,48.92 363/41 192/35 343/713).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 19:22
S4	103	("4522607" "4785920" "4994798" "5462496" "5463294" "5465820" "5469124" "5475581" "5481194" "5485904" "5494021" "5504655" "5510725" "5519269" "5529114"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2013/10/30 20:19

		"5579858" "5581171" "5609940" "5620172" "5627758" "5634262" "5642106" "5644826" "5664863" "5692827" "5734971" "5765886" "5787636" "5815087" "5833321" "5833317" "5938717" "5953960" "6003307" RE36502 "6027163" "6286787" "7010682" "20030010868" "20030117328" "20050221821" "20050264891" "20070001914" "20070152869" "20070152870" "20070152873" "20070152874" "20070265769" "20070271030" "20080167804").pn.	DERWENT; IBM_TDB			
S5	53	automatically with person with within near3 vehicle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:39
S6	3111713	sensors	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:39
S7	2297115	processor	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:40
S8	3660433	memory	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:40
S9	98316	sensor near0 data	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:40
S10	7	S5 and S6 and S7 and S8 and S9	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/30 20:41
S11	2	"20090180668"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2013/10/30 22:28

			IBM_TDB			
S12	23474	(701/1,2,36,436,450,487,788 342/59,70,71,72,159 192/48.2,54.52,84.1,40,48.92 363/41 192/35 343/713).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:17
S13	53	automatically with person with within near3 vehicle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:24
S14	7	S13 and S12	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:24
S15	299605	setting with stor$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:33
S16	9	S13 and S15	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:33
S17	23493	(701/1,2,36,436,450,487,488 342/59,70,71,72,159 192/48.2,54.52,84.1,40,48.92 363/41 192/35 343/713).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:43
S18	7	S13 and S17	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/10/31 00:44
S19	20	2008/0051957 or 2006/0047386 or 2009/0319181 or 2011/0234369	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/11/01 19:43
S21	12	"20080051957" or "20060047386" or "20090319181" or "20110234369"	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2013/11/01 19:46

			EPO; JPO; DERWENT; IBM_TDB			

2/ 26/ 2014 9:39:46 AM
C:\ Users\ mmarc\ Documents\ EAST\ Workspaces\ 13679204.wsp

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13679204	RICCI, CHRISTOPHER P.
	Examiner	Art Unit
	MCDIEUNEL MARC	3667

CPC- SEARCHED		
Symbol	Date	Examiner
B60R 7/04	2/26/2014	MM
G06F 13/14	2/26/2014	MM
G06F 13/364	2/26/2014	MM
G06F 17/00	2/26/2014	MM
G06F 17/30386	2/26/2014	MM

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
701	1,758	10/30/2013	MM
342	59,70,71,72,159	10/30/2013	MM
192	35,48.2,54.52,84.1,40,48.92	10/30/2013	MM
363	41	10/30/2013	MM
343	713	10/30/2013	MM

SEARCH NOTES		
Search Notes	Date	Examiner
Palm inventor searc	10/30/2013	MM
US-PGPUB;USPAT;USOCR;FPRS;DERWENT;EPO;JPO;IBM_TDB, see attached listings	10/30/2013	MM
PLUS search	10/30/2013	MM

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
342	59	2/26/2014	MM

	/MCDIEUNEL MARC/ Primary Examiner.Art Unit 3667

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 3693

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
13/679,204	11/16/2012	701	3667	6583-318

APPLICANTS
FLEXTRONICS AP, LLC, Milpitas, CA

INVENTORS
Christopher P. Ricci, Saratoga, CA;

**** CONTINUING DATA ***************************
This appln claims benefit of 61/560,509 11/16/2011
and claims benefit of 61/637,164 04/23/2012
and claims benefit of 61/646,747 05/14/2012
and claims benefit of 61/653,275 05/30/2012
and claims benefit of 61/653,264 05/30/2012
and claims benefit of 61/653,563 05/31/2012
and claims benefit of 61/663,335 06/22/2012
and claims benefit of 61/672,483 07/17/2012
and claims benefit of 61/714,016 10/15/2012
and claims benefit of 61/715,699 10/18/2012

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
12/10/2012

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /MCDIEUNEL MARC/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		CA	17	~~20~~ 17	3

ADDRESS
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
UNITED STATES

TITLE
FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

FILING FEE RECEIVED		
1390	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13679204	RICCI, CHRISTOPHER P.
	Examiner	Art Unit
	MCDIEUNEL MARC	3667

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	10/30/2013	02/26/2014							
1	1	✓	=							
	2	✓	-							
2	3	✓	=							
3	4	✓	=							
4	5	✓	=							
5	6	✓	=							
6	7	✓	=							
7	8	✓	=							
8	9	✓	=							
	10	✓	-							
9	11	✓	=							
10	12	✓	=							
11	13	✓	=							
12	14	✓	=							
13	15	✓	=							
14	16	✓	=							
	17	✓	-							
15	18	✓	=							
16	19	✓	=							
17	20	✓	=							

Electronic Acknowledgement Receipt

EFS ID:	19112440
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Douglas W. Swartz/David Voegtle
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-318
Receipt Date:	23-MAY-2014
Filing Date:	16-NOV-2012
Time Stamp:	11:17:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	A8_Technology_as_standard.pdf	98967 53a8b41db45ed2ae5b060182792d6961e7f2da1c	no	1

Warnings:	
Information:	

2	Non Patent Literature	Audi_A8_MMI_Touch.pdf	516587 1f17a58db7a87e9f856f17dfeb2a6b8c697f123b	no	2
Warnings:					
Information:					
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Warnings:					
Information:					
4	Non Patent Literature	6583-229_NOA_02-20-2014.pdf	351603 07abc89638ec5ec996bcb69f8d74f63469b33115	no	6
Warnings:					
Information:					
5		IDS_04.pdf	263230 a9147d53d921401d3168ead18cebb3464c743203	yes	3

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	2
	Information Disclosure Statement (IDS) Form (SB08)	3	3

Warnings:	
Information:	
Total Files Size (in bytes):	2624252

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 3667
Christopher Ricci	)	Confirmation No.: 3693
Serial No.: 13/679,204	)	Examiner: Marc McDieunel
Filed: November 16, 2012	)	SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
Atty. File No.: 6583-318	)	
Entitled: "Feature Recognition for Configuring a Vehicle Console and Associated Devices"	)	*Electronically Submitted*

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.

☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.

☒ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).

☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.

☐ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.

☐ Examiner's attention is drawn to the following related applications:

Serial No. _____ filed _____ (Attorney Ref. No. _____)

Serial No. _____ filed _____ (Attorney Ref. No. _____)

☐ Other:_____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence

of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

Respectfully submitted,

SHERIDAN ROSS P.C.

DWS

By: /Douglas W. Swartz/
Douglas W. Swartz
Registration No. 37739
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: May 21, 2014

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	1	of	1	Attorney Docket Number	6583-318

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	2009/0278806	11/12/2009	Duarte et al.	
	2	2013/0099940	04/25/2013	Protopapas	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]; Number[4]; Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	3	"A8: Technology as standard," Screen-shots from Audi.co.uk, 2014 [retrieved on 4/16/2014], 1 page. Retrieved from: www.audi.co.uk/new-cars/a8/a8/technology-as-standard/mmi-touch.html
	4	"Audi A8 MMI Touch," Audi of America, Jan. 7, 2011, [retrieved on 4/16/2014], 2 pages. Retrieved from: www.youtube.com/watch?v=O2nZ-WHo9IA
	5	DIAZ, "Audi New MMI Touch Input System Makes Perfect Sense," Gizmodo.com, Dec. 1, 2009 [retrieved on 4/16/2014], 12 pages. Retrieved from: http://gizmodo.com/5416342/audi-new-mmi-touch-input-system-makes-perfect-sense
	6	Notice of Allowance for U.S. Patent Application No. 13/679,234, mailed Feb. 20, 2014 (Attorney Ref. No. 6583-229) 6 pages

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Electronic Patent Application Fee Transmittal

Application Number:	13679204
Filing Date:	16-Nov-2012
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Filer:	Douglas W. Swartz/David Voegtle
Attorney Docket Number:	6583-318

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 3667
Christopher Ricci	)	Confirmation No.: 3693
Serial No.: 13/679,204	)	Examiner: Marc McDieunel
Filed: November 16, 2012	)	SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
Atty. File No.: 6583-318	)	
Entitled: "Feature Recognition for Configuring a Vehicle Console and Associated Devices"	)	*Electronically Submitted*

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.

☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.

☒ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).

☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.

☐ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.

☐ Examiner's attention is drawn to the following related applications:

Serial No. _____ filed _____ (Attorney Ref. No. _____)

Serial No. _____ filed _____ (Attorney Ref. No. _____)

☐ Other:_____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence

of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☐	**37 CFR 1.97(b)**: No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☐ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☐	**37 CFR 1.97(c)**: The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☐ Please charge Deposit Account 19-1970 in the amount of $180.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☒	**37 CFR 1.97(d)**: This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☒ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☒ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of $180.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

☒ The undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement submitted herewith was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).

☐ A copy of the communication from the foreign patent office is enclosed.

OR

☒ No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

DWS

By: /Douglas W. Swartz/
Douglas W. Swartz
Registration No. 37739
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: May 21, 2014

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	1	of	1	Attorney Docket Number	6583-318

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	2004/0260438	12/23/2004	Chernetsky et al.	
	2	2006/0200587	09/07/2006	Hindman	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]; Number[4]; Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	3	Official Action for U.S. Patent Application No. 13/679,441, mailed May 9, 2014 (Attorney's Ref. No. 6583-244) 6 pages
	4	Official Action for U.S. Patent Application No. 13/679,350, mailed May 6, 2014 (Attorney's Ref. No. 6583-412), 14 pages.

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Electronic Acknowledgement Receipt

EFS ID:	19112329
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Douglas W. Swartz/David Voegtle
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-318
Receipt Date:	23-MAY-2014
Filing Date:	16-NOV-2012
Time Stamp:	11:11:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$180
RAM confirmation Number	7626
Deposit Account	191970
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	6583-244_OA_05-09-2014.pdf	205767 61a57b32f680bc04eb637a25e3dfeedaf16ba3e4	no	6
Warnings:					
Information:					
2	Non Patent Literature	6583-412_OA_05-06-2014.pdf	494550 f20d598f3feb8916638855dad7a7cfb65cf5ae69	no	14
Warnings:					
Information:					
3		IDS_03.pdf	357353 3c2f3d14cbbde7f53dff360de00c44d4621ea40a	yes	4

Multipart Description/PDF files in .zip description

Document Description	Start	End
Transmittal Letter	1	3
Information Disclosure Statement (IDS) Form (SB08)	4	4

Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30662 8b14d0e2318565c592163e3c388f3a836212029e	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	1088332	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

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National Stage of an International Application under 35 U.S.C. 371
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New International Application Filed with the USPTO as a Receiving Office
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Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	1	of	1	Attorney Docket Number	6583-318

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	2004/0260438	12/23/2004	Chernetsky et al.	
	2	2006/0200587	09/07/2006	Hindman	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]; Number[4]; Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	3	Official Action for U.S. Patent Application No. 13/679,441, mailed May 9, 2014 (Attorney's Ref. No. 6583-244) 6 pages
	4	Official Action for U.S. Patent Application No. 13/679,350, mailed May 6, 2014 (Attorney's Ref. No. 6583-412), 14 pages.

Examiner Signature	/McDieunel Marc/ (06/06/2014)	Date Considered	06/06/2014

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/679,204	11/16/2012	Christopher P. Ricci	6583-318	3693

111285 7590 06/12/2014

Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

EXAMINER
MARC, MCDIEUNEL

ART UNIT	PAPER NUMBER
3667	

NOTIFICATION DATE	DELIVERY MODE
06/12/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

flexpatents@sheridanross.com

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	13/679,204	RICCI, CHRISTOPHER P.	
	Examiner	Art Unit	
	MCDIEUNEL MARC	3667	

All participants (applicant, applicant's representative, PTO personnel):

(1) *MCDIEUNEL MARC*. (3)_____.

(2) *DOUGLAS W. SWARTZ, Reg., No.: 37,739*. (4)_____.

Date of Interview: *06 June 2014*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☒ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☒Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *18*.

Identification of prior art discussed: *None*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

See attached listings.

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/MCDIEUNEL MARC/ Primary Examiner, Art Unit 3667	/MCDIEUNEL MARC/ Primary Examiner, Art Unit 3667

Corrected Notice of Allowability	Application No. 13/679,204	Applicant(s) RICCI, CHRISTOPHER P.	
	Examiner MCDIEUNEL MARC	Art Unit 3667	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *02/13/2014*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ 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.
3. ☒ The allowed claim(s) is/are *1,3-9,11-16 and 18-20*. As a result of the allowed claim(s), 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 or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ 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)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☒ Interview Summary (PTO-413), Paper No./Mail Date *06/06/* .
5. ☐ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MCDIEUNEL MARC/
Primary Examiner, Art Unit 3667

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Douglas W. Swartz, Reg. No.: 37,739 on 06/06/2014.

The application has been amended as follows:

In claim 17, filed on 02/13/2014, line 1, replaced [17], -- 16 --.

Allowable Subject Matter

2. Claims 1, 3-9, 11-16 and 18-20 are allowed in light of the terminal disclaimer filed on 02/13/2014.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MCDIEUNEL MARC whose telephone number is (571)272-6964. The examiner can normally be reached on Mon. - Thu..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell can be reached on (571) 272-6712. 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.

/McDieunel Marc/
Primary Examiner, Art Unit 3667

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	13/679,204	RICCI, CHRISTOPHER P.	
	Examiner	Art Unit	
	MCDIEUNEL MARC	3667	

All participants (applicant, applicant's representative, PTO personnel):

(1) *MCDIEUNEL MARC*. (3)_____.

(2) *DOUGLAS W. SWARTZ, Reg., No.: 37,739*. (4)_____.

Date of Interview: *06 June 2014*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☒ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☒Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *18*.

Identification of prior art discussed: *None*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

See attached listings.

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/MCDIEUNEL MARC/ Primary Examiner, Art Unit 3667	/MCDIEUNEL MARC/ Primary Examiner, Art Unit 3667

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	13/679,204
				Filing Date	November 16, 2012
				First Named Inventor	Christopher Ricci
				Art Unit	3667
				Examiner Name	Marc McDieunel
Sheet	1	of	1	Attorney Docket Number	6583-318

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	2009/0278806	11/12/2009	Duarte et al.	
	2	2013/0099940	04/25/2013	Protopapas	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]; Number[4]; Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

NON-PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	3	"A8: Technology as standard," Screen-shots from Audi.co.uk, 2014 [retrieved on 4/16/2014], 1 page. Retrieved from: www.audi.co.uk/new-cars/a8/a8/technology-as-standard/mmi-touch.html
	4	"Audi A8 MMI Touch," Audi of America, Jan. 7, 2011, [retrieved on 4/16/2014], 2 pages. Retrieved from: www.youtube.com/watch?v=O2nZ-WHo9IA
	5	DIAZ, "Audi New MMI Touch Input System Makes Perfect Sense," Gizmodo.com, Dec. 1, 2009 [retrieved on 4/16/2014], 12 pages. Retrieved from: http://gizmodo.com/5416342/audi-new-mmi-touch-input-system-makes-perfect-sense
	6	Notice of Allowance for U.S. Patent Application No. 13/679,234, mailed Feb. 20, 2014 (Attorney Ref. No. 6583-229) 6 pages

Examiner Signature	/McDieunel Marc/ (06/06/2014)	Date Considered	06/06/2014

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method, comprising:

separating a vehicle into one or more zones;

automatically determining, by a processor, if a person is within ~~said~~ a zone of said vehicle;

identifying said person within said zone of the vehicle;

determining, by a processor, if said identified person has corresponding settings; and

configuring said zone of said vehicle based on said corresponding settings .

2. (Canceled)

3. (Previously Presented) The method of claim 1, further comprising: if the person cannot be identified, characterizing the person.

4. (Previously Presented) The method of claim 3, wherein automatically determining if a person is within said zone of said vehicle comprises receiving sensor data from at least one sensor that indicates the person is within the vehicle.

5. (Previously Presented) The method of claim 4, wherein identifying said person within said zone of the vehicle comprises:

comparing the sensor data to feature data in a data structure; and

determining if the sensor data is substantially similar to the feature data.

6. (Previously Presented) The method of claim 5, wherein determining if said identified person has corresponding settings comprises determining if the person has made a setting.

7. (Previously Presented) The method of claim 6, wherein determining if said identified person has corresponding settings further comprises waiting a period of time to determine if the corresponding settings have achieved a steady state.

8. (Previously Presented) The method of claim 1, wherein said corresponding settings is stored in cloud storage.

9. (Previously Presented) The method of claim 1, wherein the said corresponding setting is one of a position of a seat, a position of a mirror, a heat or cold setting, a configuration of a console, a configuration of a dash, a configuration of a heads up display, or a setting for a radio.

10. (Canceled)

11. (Currently Amended) A vehicle system, comprising:

one or more sensors;

a vehicle control system comprising:

a processor;

a memory;

wherein the processor is operable to:

receive sensor data from the one or more sensors;

based on the received sensor data, automatically determine if a person is within a zone of a vehicle;

based on the received sensor data, automatically identify the person;

determine if the person has made a setting; and

based on the determination, configure said zone of said vehicle to said setting.

12. (Original) The device of claim 11, wherein the sensor data is an image of the person.

13. (Original) The device of claim 12, wherein in automatically identifying the person the processor is operable to match the image to a stored image in a data structure.

14. (Original) The device of claim 11, wherein the sensor data is voice data from the person.

15. (Original) The device of claim 14, wherein in automatically identifying the person the processor is operable to match the voice data to stored voice data in a data structure.

16. (Currently Amended) A non-transitory computer readable medium having stored thereon computer-executable instructions, the computer executable instructions causing a processor to execute a method for providing a unified desktop, the computer-executable instructions comprising:

instructions to receive sensor data from ~~the~~ one or more sensors;

based on the received sensor data, instructions to automatically determine if a person is within a zone of a vehicle;

based on the received sensor data, instructions to automatically identify the person;

instructions to retrieve one or more settings associated with the identified person; and

instructions to automatically configure the vehicle according to the retrieved settings.

17. (Canceled)

18. (Original) The computer readable medium of claim 17, wherein the settings retrieved are associated with the determined area or zone.

19. (Original) The computer readable medium of claim 18, wherein the settings are retrieved from a data structure.

20. (Original) The computer readable medium of claim 19, wherein the data structure is stored in cloud storage.

Electronic Acknowledgement Receipt

EFS ID:	19298622
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Douglas W. Swartz/Christine Jacquet
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-318
Receipt Date:	13-JUN-2014
Filing Date:	16-NOV-2012
Time Stamp:	13:27:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Rule312Amendment.pdf	94114 fc09bff8b73aa861731655f2727c2f4a027d4029	yes	5

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment after Notice of Allowance (Rule 312)	1	1
	Claims	2	4
	Applicant Arguments/Remarks Made in an Amendment	5	5
Warnings:			
Information:			
	Total Files Size (in bytes):	94114	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

REMARKS/ARGUMENTS

The claim amendments require no additional search or examination, and the claims as amended are patentable for the same reasons as the independent claims from which they depend. The amendment is requested to further clarify any potential ambiguity in the claims. The claims have not been earlier amended as the need for the amendments was not appreciated when the Amendment and Response was filed. Please charge any deficiency or credit any overpayment to Deposit Account 19-1970.

Accordingly, Applicant believes that the requirements of 37CFR§1.312 and MPEP§714.16 have been satisfied and entry of this amendment is respectfully requested.

Respectfully submitted,

SHERIDAN ROSS P.C.

Date: June 13, 2014

By: /Douglas W. Swartz/

Douglas W. Swartz
Reg. No. 37,739
1560 Broadway, Suite 1200
Denver, Colorado 80202
Telephone: 303-863-9700

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:	13/679,204	Confirmation No.:	**3693**
Applicant:	Christopher P. Ricci	TC/A.U.	3667
Filed:	11/16/2012	Examiner:	Marc
Docket No.:	6583-318		
For:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AFTER ALLOWANCE PURSUANT TO 37 CFR § 1.312

Dear Sir:

Applicant(s) submit this Amendment After Allowance pursuant to 37 CFR § 1.312 in response to the Notice of Allowance and Fee(s) Due having a mailing date of March 18, 2014. An amendment may be entered after the mailing of a Notice of Allowance but prior to payment of the issue fee upon the recommendation of the primary examiner. Therefore, it is respectfully requested that the above-referenced application be amended as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page **2** of this paper.

Remarks/Arguments begin on page **5** of this paper.

Electronic Acknowledgement Receipt

EFS ID:	19320410
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Douglas W. Swartz/Amy Duarte
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-318
Receipt Date:	16-JUN-2014
Filing Date:	16-NOV-2012
Time Stamp:	19:06:34
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$960
RAM confirmation Number	5939
Deposit Account	191970
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Issue Fee Payment (PTO-85B)	Issue-Fee-Transmittal.pdf	100590 eb6b8ff82d3f7e4a1b0b633342d868240521c67e	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30589 0e3dda13e7bd994cd2743ce40229da824182391a	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	131179	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
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National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

111285 7590 03/18/2014
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/679,204	11/16/2012	Christopher P. Ricci	6583-318	3693

TITLE OF INVENTION: FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	06/18/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
MARC, MCDIEUNEL	3667	701-001000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Sheridan Ross P.C.
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Flextronics AP, LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): San Jose, CA

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 19-1970 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
  NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
  NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ☐ Applicant changing to regular undiscounted fee status.
  NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Douglas W. Swartz/ Date June 16, 2014

Typed or printed name Douglas W. Swartz Registration No. 37,739

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Electronic Patent Application Fee Transmittal

Application Number:	13679204
Filing Date:	16-Nov-2012
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Filer:	Douglas W. Swartz/Amy Duarte
Attorney Docket Number:	6583-318

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	1501	1	960	960
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**960**

APPROVED
By McDieunel Marc at 10:01 pm, Jun 18, 2014

OK TO ENTER.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:	13/679,204	Confirmation No.:	**3693**
Applicant:	Christopher P. Ricci	TC/A.U.	3667
Filed:	11/16/2012	Examiner:	Marc
Docket No.:	6583-318		
For:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AFTER ALLOWANCE PURSUANT TO 37 CFR § 1.312

Dear Sir:

Applicant(s) submit this Amendment After Allowance pursuant to 37 CFR § 1.312 in response to the Notice of Allowance and Fee(s) Due having a mailing date of March 18, 2014. An amendment may be entered after the mailing of a Notice of Allowance but prior to payment of the issue fee upon the recommendation of the primary examiner. Therefore, it is respectfully requested that the above-referenced application be amended as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page **2** of this paper.

Remarks/Arguments begin on page **5** of this paper.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/679,204	11/16/2012	Christopher P. Ricci	6583-318	3693

111285 7590 06/26/2014

Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

EXAMINER	
MARC, MCDIEUNEL	
ART UNIT	PAPER NUMBER
3667	

NOTIFICATION DATE	DELIVERY MODE
06/26/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

flexpatents@sheridanross.com

Response to Rule 312 Communication	Application No.	Applicant(s)
	13/679,204	RICCI, CHRISTOPHER P.
	Examiner	Art Unit
	MCDIEUNEL MARC	3667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

1. ☒ The amendment filed on *13 June 2014* under 37 CFR 1.312 has been considered, and has been:

a) ☒ entered.

b) ☒ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.

/MCDIEUNEL MARC/
Primary Examiner, Art Unit 3667

6583-235); 13/678,691, filed on November 16, 2012, entitled "Law Breaking/Behavior Sensor" (Attorney Docket No. 6583-236); 13/678,699, filed on November 16, 2012, entitled "Etiquette Suggestion" (Attorney Docket No. 6583-237); 13/678,710, filed on November 16, 2012, entitled "Parking Space Finder Based on Parking Meter Data" (Attorney Docket No. 6583-238); 13/678,722, filed on November 16, 2012, entitled "Parking Meter Expired Alert" (Attorney Docket No. 6583-239); 13/678,726, filed on November 16, 2012, entitled "Object Sensing (Pedestrian Avoidance/Accident Avoidance)" (Attorney Docket No. 6583-240); 13/678,735, filed on November 16, 2012, entitled "Proximity Warning Relative to Other Cars" (Attorney Docket No. 6583-241); 13/678,745, filed on November 16, 2012, entitled "Street Side Sensors" (Attorney Docket No. 6583-242); 13/678,753, filed on November 16, 2012, entitled "Car Location" (Attorney Docket No. 6583-234); 13/679,441, filed on November 16, 2012, entitled "Universal Bus in the Car" (Attorney Docket No. 6583-244); 13/679,864, filed on November 16, 2012, entitled "Mobile Hot Spot/Router/Application Share Site or Network" (Attorney Docket No. 6583-245); 13/679,815, filed on November 16, 2012, entitled "Universal Console Chassis for the Car" (Attorney Docket No. 6583-246); 13/679,476, filed on November 16, 2012, entitled "Vehicle Middleware" (Attorney Docket No. 6583-247); 13/679,306, filed on November 16, 2012, entitled "Method and System for Vehicle Data Collection Regarding Traffic" (Attorney Docket No. 6583-248); 13/679,369, filed on November 16, 2012, entitled "Method and System for Vehicle Data Collection" (Attorney Docket No. 6583-249); 13/679,680, filed on November 16, 2012, entitled "Communications Based on Vehicle Diagnostics and Indications" (Attorney Docket No. 6583-250); 13/679,443, filed on November 16, 2012, entitled "Method and System for Maintaining and Reporting Vehicle Occupant Information" (Attorney Docket No. 6583-251); 13/678,762, filed on November 16, 2012, entitled "Behavioral Tracking and Vehicle Applications" (Attorney Docket No. 6583-252); 13/679,292, filed November 16, 2012, entitled "Branding of Electrically Propelled Vehicles Via the Generation of Specific Operating Output" (Attorney Docket No. 6583-258); 13/679,400, filed November 16, 2012, entitled "Vehicle Climate Control" (Attorney Docket No. 6583-313); 13/840,240, filed on November 16, 2012, entitled "Improvements to Controller Area Network Bus" (Attorney Docket No. 6583-314); 13/678,773, filed on November 16, 2012, entitled "Location Information Exchange Between Vehicle and Device" (Attorney Docket No. 6583-315); 13/679,887, filed on November 16, 2012, entitled "In Car Communication Between Devices" (Attorney Docket No. 6583-316);

Change(s) applied
to document,
/M.I.G./
6/5/2014

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/679,204	07/29/2014	8793034	6583-318	3693

111285 7590 07/09/2014

Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Christopher P. Ricci, Saratoga, CA;
FLEXTRONICS AP, LLC, Milpitas, CA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

Electronic Acknowledgement Receipt

EFS ID:	29542559
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Robert G. Crouch/Lori Gerow
Filer Authorized By:	Robert G. Crouch
Attorney Docket Number:	8283-318
Receipt Date:	19-JUN-2017
Filing Date:	16-NOV-2012
Time Stamp:	18:26:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	POA_Signed_51263-00111.pdf	259758 1deb1394f5e6aa3e9ed56005817babb04688ff9c	no	2

Warnings:

Information:	
Total Files Size (in bytes):	259758

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/AIA/81A (02-15)
Approved for use through 01/31/2018. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Patent Number	8,793,034
Issue Date	July 29, 2014
First Named Inventor	Christopher P. Ricci
Title	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
Attorney Docket No.	51263-00111

I hereby revoke all previous powers of attorney given in the above-identified patent.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the Customer Number identified in the box at right as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith: 25231

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified patent to:

☐ The address associated with the above-identified Customer Number.

OR

☒ The address associated with the Customer Number identified in the box at right: 25231

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the:

☒ Applicant.

OR

☐ Patent owner.

Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____.

SIGNATURE of Applicant or Patent Owner

Signature		Date	
Name	Gregg S. Hershenson	Telephone	
Title and Company	CEO - AutoConnect Holdings LLC		

NOTE: Signatures of all the applicants or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

☑ A total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/679,204	11/16/2012	Christopher P. Ricci	8283-318

CONFIRMATION NO. 3693

OC000000092347348

111285
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

Cc: MARSH, FISCHMANN & BREYFOGLE LLP
8055 EAST TUFTS AVENUE
SUITE 450
DENVER, CO 80237

Date Mailed: 06/26/2017

DENIAL OF REQUEST FOR POWER OF ATTORNEY

The request for Power of Attorney filed 06/19/2017 is acknowledged. However, the request cannot be granted at this time for the reason stated below.

- ☐ The Power of Attorney you provided did not comply with the new Power of Attorney rules that became effective on June 25, 2004. See 37 CFR 1.32.
- ☐ The revocation is not signed by the applicant, the assignee of the entire interest, or one particular principal attorney having the authority to revoke.
- ☒ The Power of Attorney is from an assignee and the Certificate required by 37 CFR 3.73 has not been received.
- ☐ The person signing for the assignee has omitted their empowerment to sign on behalf of the assignee.
- ☐ The inventor(s) is without authority to appoint attorneys since the assignee has intervened as provided by 37 CFR 3.71.
- ☐ The signature(s) of , co-inventors in this application, has been omitted. The Power of Attorney will be entered upon receipt of confirmation signed by said co-inventor(s).
- ☐ The person(s) appointed in the Power of Attorney is not registered to practice before the U.S. Patent and Trademark Office.
- ☐ Only one Customer Number can be designated for the Power of Attorney in an application. The Customer Number that was captured is the first Customer Number provided on the Power of Attorney document.

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- ☐ A request under 37 CFR 1.48 to add an inventor was granted in this application, however, no power of attorney consistent with the power of attorney granted by the originally named inventive entity has been received. Thus, the addition of the inventor has resulted in the loss of power of attorney in the application. See 37 CFR 1.32(e).

- ☐ The power of attorney has not been accepted because the party who is giving power of attorney has not been identified. Power of attorney may only be signed by the applicant for patent (37 CFR 1.42) or the patent owner. A patent owner who was not the applicant must appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. See 37 CFR 1.32(b)(4).

- ☐ The power of attorney from the inventors has not been accepted because it is a copy from a prior national application for which benefit is claimed and the continuing application names an inventor who was not named as an inventor in the prior application.

- ☐ The power of attorney from the inventors has not been accepted because the power of attorney must be signed by the applicant for patent. See 37 CFR 1.32(b)(4).

- ☐ Any request to correct or update the name of the applicant must include an application data sheet (ADS) in compliance with 37 CFR 1.76 specifying the correct or updated name of the applicant in the applicant information section. Any request to change the applicant after an original applicant has been specified under 37 CFR 1.46(b) must include a new ADS in compliance with 37 CFR 1.76 specifying the applicant in the applicant information section and comply with 37 CFR 3.71 and 3.73. See 37 CFR 1.46(c).

Any inquiries regarding this notice should be directed to the Application Assistance Unit at 571-272-4200.

/K/

Application Assistance Unit
571-272-4200

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P.O. Box 1450
Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/679,204	11/16/2012	Christopher P. Ricci	8283-318

CONFIRMATION NO. 3693

MISCELLANEOUS NOTICE

111285
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202



Date Mailed: 06/27/2017

A communication which cannot be delivered in electronic form has been mailed to the applicant.

Electronic Acknowledgement Receipt

EFS ID:	29709404
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	111285
Filer:	Robert G. Crouch/Lori Gerow
Filer Authorized By:	Robert G. Crouch
Attorney Docket Number:	8283-318
Receipt Date:	06-JUL-2017
Filing Date:	16-NOV-2012
Time Stamp:	18:23:12
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Assignee showing of ownership per 37 CFR 3.73	373c_aia0096_51263-00111.pdf	120866 73f3775d9ce1696c94ecdec0acae7df7b58a17de	no	3

Warnings:

Information:					
2	Power of Attorney	Corrected_POA_51263-00111.pdf	167434 7cd797a4fbe31d2f28406ad1696980b6bede2a07	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	288300	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/AIA/96 (08-12)
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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: AUTOCONNECT HOLDINGS LLC

Application No./Patent No.: 8,793,034 Filed/Issue Date: July 29, 2014

Titled: FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES

AUTOCONNECT HOLDINGS LLC, a CORPORATION

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☑ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: CHRISTOPHER P. RICCI To: FLEXTRONICS AP, LLC

   The document was recorded in the United States Patent and Trademark Office at

   Reel 030063, Frame 0556, or for which a copy thereof is attached.

2. From: FLEXTRONICS AP, LLC To: AUTOCONNECT HOLDINGS LLC

   The document was recorded in the United States Patent and Trademark Office at

   Reel 036503, Frame 0062, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/96 (08-12)
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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☑ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/ROBERT G. CROUCH/	July 6, 2017
Signature	Date
ROBERT G. CROUCH	34,806
Printed or Typed Name	Title or Registration Number

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/AIA/81A (02-15)
Approved for use through 01/31/2018. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

PATENT - POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Patent Number	8,793,034
Issue Date	July 29, 2014
First Named Inventor	Christopher P. Ricci
Title	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
Attorney Docket No.	51263-00111

I hereby revoke all previous powers of attorney given in the above-identified patent.

☐ A Power of Attorney is submitted herewith.

OR

☒ I hereby appoint Practitioner(s) associated with the Customer Number identified in the box at right as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith: 25231

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) with respect to the patent identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified patent to:

☐ The address associated with the above-identified Customer Number.

OR

☒ The address associated with the Customer Number identified in the box at right: 25231

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the:

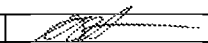
☐ Applicant.

OR

☒ Patent owner.

Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) submitted herewith or filed on _____.

SIGNATURE of Applicant or Patent Owner

Signature		Date	
Name	Gregg S. Hershenson	Telephone	
Title and Company	CEO - AutoConnect Holdings LLC		

NOTE: Signatures of all the applicants or patent owners of the entire interest or their representative(s) are required. If more than one signature is required, submit multiple forms, check the box below, and identify the total number of forms submitted in the blank below.

☑ A total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public, which is to update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/679,204	11/16/2012	Christopher P. Ricci	51263-00111

CONFIRMATION NO. 3693

25231
MARSH, FISCHMANN & BREYFOGLE LLP
8055 East Tufts Avenue
Suite 450
Denver, CO 80237

POA ACCEPTANCE LETTER

OC000000092702772

Date Mailed: 07/12/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/06/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/qnguyen/

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/679,204	11/16/2012	Christopher P. Ricci	8283-318

CONFIRMATION NO. 3693

POWER OF ATTORNEY NOTICE

111285
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

OC00000092702768

Date Mailed: 07/12/2017

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/06/2017.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/qnguyen/

Small Entity Declaration

PATENT
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number: 13/679,204 **Current Date:** October 12, 2017

Filing Date: November 16, 2012

Patent Number: 8,793,034

Issue Date: July 29, 2014

ASSERTION OF SMALL ENTITY STATUS
PURSUANT TO 37 C.F.R. §1.27 (c)(1)

Commissioner for Patents
Mail Stop M Correspondence
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This communication hereby asserts that the above-identified patent is entitled to small entity status.

Respectfully submitted,

COMPANY or FIRM NAME AND ADDRESS:

Marsh Fischmann & Breyfogle LLP
8055 East Tufts Avenue, Suite 450
Denver, Colorado 80237

/Robert G. Crouch/
Signature
Robert G. Crouch
Printed Name

Title

OR

Reg. # if US Attorney: 34,806

PTO/AIA/80 (07-12)
Approved for use through 11/30/2014. OMB 0651-0035
U.S. Patent and Trademark Office; U.S DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:

☒ Practitioners associated with Customer Number: 153965

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:

☒ The address associated with Customer Number: 153965

OR

☐

Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address: AutoConnect Holdings LLC
75 High Road
Newbury, MA 01951

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/AIA/96 or equivalent) is required to be Filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	2-28-2019
Name	Gregg Hershenson	Telephone	978.462.1287
Title	CEO		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	35822849
Application Number:	13679204
International Application Number:	
Confirmation Number:	3693
Title of Invention:	FEATURE RECOGNITION FOR CONFIGURING A VEHICLE CONSOLE AND ASSOCIATED DEVICES
First Named Inventor/Applicant Name:	Christopher P. Ricci
Customer Number:	25231
Filer:	Unisha Patel
Filer Authorized By:	
Attorney Docket Number:	51263-00111
Receipt Date:	24-APR-2019
Filing Date:	16-NOV-2012
Time Stamp:	18:02:31
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	POASigned.pdf	74574 10a88179b84bc774445edb87cb7742f6cbad0cc4	no	2

Warnings:

Information:	
Total Files Size (in bytes):	74574

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/679,204	11/16/2012	Christopher P. Ricci	51263-00111

CONFIRMATION NO. 3693

153965
Patent Ventures, LLC
700 Uccelli Drive
7204
Redwood City, CA 94063

POA ACCEPTANCE LETTER

OC000000107728468

Date Mailed: 04/29/2019

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/24/2019.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/mabebe/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/679,204	11/16/2012	Christopher P. Ricci	51263-00111

CONFIRMATION NO. 3693

POWER OF ATTORNEY NOTICE

25231
Marsh Fischmann & Breyfogle LLP
8055 East Tufts Avenue, Suite 450
Denver, CO 80237

OC000000107728439

Date Mailed: 04/29/2019

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/24/2019.

- The Power of Attorney to you in this application has been revoked by the applicant. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/mabebe/