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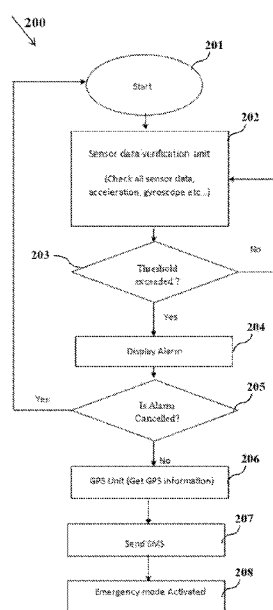


Fig. 3

(57) Abstract: The present invention relates to a vehicle safety system and a method thereof. The vehicle safety system (150) comprising one or more modules (100, 600, and 700) configured to detect and provide vehicular safety conditions. The or more modules (100, 600, and 700) includes an accident detection module (301) for detecting (502) one or more unsafe events, a mode detection module for enabling emergency mode, and said at least one of the one or more modules (100, 600, and 700) enables of one or more vehicle safety modules based on at least one of one or more user inputs and one or more critical vehicular inputs related to state of a vehicle.

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VEHICLE SAFETY SYSTEM AND A METHOD THEREOF

TECHNICAL FIELD

[0001] The present invention generally relates to a safety system, and in particular, to a vehicle safety system and a method thereof.

BACKGROUND

[0002] Generally, users of vehicles, for example, two-or-three-wheeled vehicles, are aware of safety requirements of the vehicle. Some of the critical safety aspects of the vehicle are made mandatory by the regulatory authority. For instance, any vehicle requires complying with mandatory safety features such as turn signal indicators, its colors, horns, reflectors, rear view mirrors, hazard lamps, saree guard and so on. However, in spite of complying with these safety requirements, there has been a constant raise in the number of safety related accidents that occur on our roads. Though, the major reason for such accidents could be considered as the negligence of the rider, there are various other external factors that play their role in such accidents, which could be controlled. There have been constant study and research in addressing the needs for handling such controllable factors in order to prevent the raise of number of accidents. In the recent past, there have been several devices and systems that have been installed in the vehicles to detect and act upon safety measures of the vehicle. For example, in the recent past, there has been prevalent use of vehicle speed limiter, and navigation tools to monitor and control the speed and pattern of driving in order to prevent fatal accidents. However, such safety systems that are known in the state of the art are complex and expensive, which may not be suitable for implementation in small sized vehicles such as two-or-three-wheelers.

[0003] Typically, recent studies have suggested that rider of a two-or a three-wheeled vehicle in India and other developing countries, tends to neglect safety aspects, when they are not part of the mandatory requirements. One typical example could be usage of safety head gears are prominent in states where there is a legal requirement, as compared to the states where there is no such legal requirement. Thus, there is a need to provide a system that enable auxiliary safety features other than the mandatory requirements, which are simple, and cost effective, and which could be readily used by riders of small sized vehicles, such as two-or three-wheeled vehicles in India.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] The detailed description is described with reference to the accompanying figures. The same numbers are used throughout the drawings to reference like features and components.

[0005] **Fig. 1** illustrates a block diagram of a vehicle safety system including one or more modules.

[0006] **Fig. 2** illustrates an accident detection module of the vehicle safety system.

[0007] **Fig. 3** shows a flow diagram illustrating a functionality of accident detection module of the vehicle safety system.

[0008] **Fig. 4** illustrates a flow diagram depicting functionality of a vehicle location detection module of a vehicle safety system.

[0009] **Fig. 5** illustrates a flow diagram depicting functionality of a vehicle mode detection module of a vehicle safety system.

[0010] **Fig. 6** illustrates a flow diagram depicting accident detection module of the vehicle safety system according to another embodiment of the present invention.

[0011] **Fig. 7** illustrates a vehicle location detection module of a vehicle safety system.

[0012] **Fig. 8** illustrates a riding environment detection module of the vehicle safety system according to an embodiment of the present invention.

[0013] **Fig. 9** illustrates a flow diagram depicting the functionality of the riding environment detection module of the vehicle safety system.

[0014] **Fig. 10** illustrates a flow diagram depicting a functionality of a driving pattern detection and analysis module of the safety system of a vehicle.

[0015] **Fig. 11** illustrates a flow diagram depicting functionality of the SOS module.

DETAILED DESCRIPTION

[0016] The present invention provides a vehicle safety system that is simple, convenient, reducing manual intervention, and cost effective. More particularly, the present invention provides a safety system for a small sized vehicle such as a two-or-three-wheeled vehicle. In an embodiment, the safety system of the present invention is capable of being integrated to an external electronic device, such as a mobile phone. In one embodiment, the safety system of the present invention is also capable of being integrated to a speedometer cluster of the vehicle. The safety system of the present invention includes a mode detection module, which enables detection of the current state of the vehicle, for example, the mode detection module

is capable of receiving one or more inputs that communicates the current state of the vehicle. In one example, the mode detection module is integrated with a global positioning system, which continuously monitor the current position of the vehicle and communicates any change in the current position of the vehicle. The mode detection module detects the vehicle to be in an idling or stationary state if the current position of the vehicle remains constant beyond a predetermined time. The mode detection module detects the vehicle to be in a driving state if the current position of the vehicle changes from its initial position after a predetermined time. In an alternative embodiment, the mode detection module is capable of receiving one or more signals from a throttle position sensor of the vehicle, and depending upon the one or more signals received from the throttle position sensor, the mode detection module determines whether the vehicle is in the idling state or driving state.

[00017] In an embodiment, the vehicle safety system of the present invention includes a driving pattern detection and analysis (DPDA) module. In an embodiment, the DPDA module of the present invention is capable of interacting with one or more devices of the vehicle and/or the mobile phone to detect and analyze the driving pattern of the rider of the vehicle. For instance, the DPDA module is capable of receiving inputs from the global positioning system regarding the path traversed by the rider, when the vehicle is in the driving mode. In an embodiment, the DPDA module is capable of receiving continuous inputs from an accelerometer of the mobile phone or the speed sensor of the vehicle regarding the speed at which the vehicle travels for the particular path traversed. This enables the DPDA module to continuously monitor the top speed reached by the vehicle in the given path traversed. In an embodiment, the DPDA module is also capable of detecting the overall distance travelled during the given trip, which in turn could enable computation of speed at which the particular distance is covered and the time taken for reaching the given distance. This can also enable computation of fuel consumption over the given distance. In an embodiment, the DPDA module records one or more aspects such as distance travelled, top speed reached, and vehicle riding patterns such as braking pattern, use of pass-by switches etc. and create a trip record for the given trip. Such trip records created by the DPDA module enable the rider to monitor his/her driving patterns and control a particular aspect of his/her driving, for example excessive braking, or very high top speed reached, thereby ensuring maximum safety for the rider in the following trips. In an embodiment, the DPDA module is also capable of communicating such trip records to others, for example, the people in the rider's riding community, traffic control authorities to assess the driving pattern of similar riders in a

particular location, which could enable the traffic control authorities to assess and improve infrastructure to prevent accidents.

[00018] In an embodiment, the vehicle safety system of the present invention includes riding environment detection (RED) module that constantly communicates with one or more external systems, for example, global positioning system, and a central weather server. In an embodiment, the RED module communicates with the global positioning system and detects upcoming barriers in the particular trip of the rider. For example, traffic congestion in the path traversed by the rider is detected and communicated to the rider. The RED module also provides alternative route options for the rider to reach the destination. In another example, the RED module detects a road blockage, road accident, or road repair work in the path traversed by the rider, enabling the rider to choose an alternative route to reach the destination. In another embodiment, the RED module is also capable of interacting with the central weather server to determine the climatic conditions in the path traversed by the rider and constantly keep the rider updated of any harsh climatic conditions, such as a heavy rain, thunderstorm, snowfall etc. In an alternative embodiment, the RED module is also capable of wirelessly communicating with the vehicle safety systems of the nearby vehicles, for example, the vehicles that are coming from the opposite direction to determine the climatic conditions in the path traversed by the vehicle.

[00019] In an embodiment, the vehicle safety system of the present invention also includes an accident detection module that is capable of interacting with one or more sensors that are mounted on the vehicle or the mobile phone. For example, the accident detection module interacts with the accelerometer sensor and determines if there is a sudden change in the acceleration of the vehicle. In an embodiment, the accident detection module also interacts with the gyroscope to determine any sudden change in orientation of the vehicle. Upon detection of any such parameters, the accident detection module is capable of communicating with one or more devices at the user end. For example, the one or more devices can be a mobile phone of one or more emergency contact persons, nearby hospitals and/or ambulance services, nearby police stations, and nearby road assistance services. The accident detection module detects the current position and location of the vehicle and communicates to the above said one or more devices in one or more ways. For example, in the form of a short message service, or a phone call. In an embodiment, the accident detection module is capable of triggering a vehicle emergency mode upon detection of any one of the above said changes in parameters. In the emergency mode, the vehicle horn is triggered to alarm the nearby passerbys. It can also trigger the hazard lamps on to visually indicate the emergency mode of

the vehicle. In an embodiment, the accident detection module, upon activation of the emergency mode, is capable of shutting off fuel outlets of the vehicle, in order to prevent any leakage of fuel, which could be fatal.

[00020] In an embodiment, the vehicle safety system further includes a location detection module. The location detection module is capable of detecting nearby locations in the path traversed by the vehicle. For example, any nearby hospitals, service stations, and petrol stations can be detected by means of receiving coordinates of the nearby locations from the global positioning system, which in case of emergency situations, such as an emergency health condition of the rider or the co-rider, or a passerby, and a vehicle irregularity, for example, a flat tire could ensure safety of the rider. In an embodiment, the location detection module further includes a vehicle finder sub-module, which enables tracking the vehicle's position using the coordinates of the vehicle in its last idling state. The vehicle finder sub-module enables locating the vehicle in crowded parking area. In an embodiment, the vehicle finder sub-module of the vehicle safety system is capable of being integrated with the mobile phone of the rider, which eliminates the need for a separate vehicle location detection transceivers and special keys that include vehicle location detection algorithms.

[00021] These and other advantages of the present subject matter would be described in greater detail in conjunction with the figures in the following description.

[00022] **Fig. 1** illustrates a vehicle safety system. The vehicle safety system **150** includes one or more modules **100**, **600**, **300**. The one or more modules includes an accident detection module **100** configured to detect and communicate regarding an unsafe event, a location detection module **600** configured to find a desired place including a parking place, a restaurant and any other desired location. The parking detection module **300** particularly finds an available parking space in a parking lot and provides desired inputs about the parking location to the user.

[00023] **Fig. 2** illustrates an accident detection module of the vehicle safety system. The mobile device or a hand held device **101** at the user end includes an accident detection module **100**. The accident detection module comprises various features including an alarm unit capable of sending an instant message or making phone calls to important contacts and nearby hospitals as indicated by sub-module **102**. The accident detection module further comprises a user interface comprising another sub-module **103** importing contacts from the user's database during emergency conditions. Furthermore, the accident detection module includes some of the internal units comprising gyroscopic sensor, accelerometer sensor, a

global positioning system unit, and a GSM module. All or most of the internal units present in the mobile device receive inputs through the various satellite signals. Finally, depending upon the inputs received by the internal units and the user, the accident detection module detects that there is an emergency and the vehicle enters the emergency mode **104**.

[00024] **Fig. 3** shows a flow diagram illustrating a functionality of accident detection module of the vehicle safety system. The accident detection module begins in step **201**. The accident detection module **100** interacts with various sensors and determines if there is a sudden change in the acceleration of the vehicle as indicated in step **202**, accident detection module also interacts with the gyroscope to determine any sudden change in orientation of the vehicle as indicated in step **202**. Further in step **203**, a check is undertaken if the threshold value is exceeded. If the threshold value is exceeded, then an alarm is raised by the accident detection module **100** as indicated in step **204**. If the threshold value is not exceeded, then the accident detection module continuously checks for any sensor data as indicated in step **202**.

[00025] Further, after the alarm is displayed to the user by the accident detection module at step **204**, it is checked if the alarm is cancelled in step **205**. If the alarm is cancelled, then the accident detection module starts functioning afresh from step **201**, else if the alarm is not cancelled, then information regarding the vehicle and user is obtained from the GPS unit as indicated in step **206**, and the emergency mode is activated as indicated in step **208**.

[00026] **Fig. 4** illustrates a flow diagram depicting functionality of a vehicle location detection module of a vehicle safety system. The vehicle location detection module **301** checks if a parking space is available as indicated in step **302**. If any parking space is available, then parking space availability is displayed in the display unit as indicated in step **303**. If a parking space is not available, then the location detection module is initiated from the step **301**.

[00027] Further, after displaying the available parking space in the display unit to the user as indicated in step **303**, the user has to select desired parking position as indicated in step **304**. If the user has selected desired parking position, then the input from the user is sent into a processor as indicated by **305**, the processor sub-module includes a GPS unit and a distance calculator. The GPS unit obtains location of the selected parking position and the distance of the selected parking position is calculated by the distance calculator for reference of the user.

[00028] Finally, the parking position with all the details calculated and inputs from the GPS unit is displayed in the display unit as indicated in the step **306** for reference by the user.

[00029] If a parking space is not selected by the user, then the location detection module is again initiated and the functionality begins from step 301.

[00030] Fig. 5 illustrates a flow diagram depicting functionality of a vehicle mode detection module of a vehicle safety system. The mode detection module is integrated with a global positioning system, which continuously monitor the current position of the vehicle and communicates any change in the current position of the vehicle as indicated in step 402. Further, in step 403 speed of the vehicle is detected. If the speed of the vehicle is greater than a threshold speed $\lceil x \rceil$, then the vehicle is in driving mode 405, else if the vehicle speed is not greater than the threshold speed $\lceil x \rceil$, then the vehicle is in idling mode as indicated in step 404. Further, after the vehicle has entered driving mode as indicated in step 405, again speed of the vehicle is checked as indicated by step 406, if the speed of the vehicle is lesser than the threshold speed $\lceil x \rceil$, then a sudden drop in the vehicle speed is observed to check for any speed breakers or any impending traffic as indicated in step 407. Further, a timer unit is initiated to check the speed after a predetermined time $\lceil y \rceil$ as indicated in step 408, further, again speed of the vehicle is checked if it is greater than the threshold speed $\lceil x \rceil$ as indicated in step 409, if the speed is greater than the threshold speed $\lceil x \rceil$, then the vehicle remains in driving mode, else the vehicle enters the idling mode and further inputs from the GPS unit is taken to calculate location based on speed of the vehicle.

[00031] Fig. 6 illustrates a flow diagram depicting accident detection module of the vehicle safety system according to another embodiment of the present invention. The accident detection module allows the vehicle to enter into an emergency mode. The accident detection module is begun at step 501. At step 502, emergency case is identified and a check is undertaken if entering emergency mode by the vehicle is automated or not as indicated in step 503. If entering emergency mode is automated, then the vehicle enters in to the emergency mode as indicated in step 504. After entering the emergency mode, the inputs are given to the processor as indicated in step 505; the processor includes a display unit to display emergency contact details and a SMS unit to send out distress messages to saved emergency contact numbers of user's desire and then, first aid tips are displayed to the user through a display unit as indicated in step 506.

[00032] Further, if the emergency mode of the vehicle is not automated, then first aid tips are displayed to the user as indicated in step 506, the displayed first aid tips are followed by the user as indicated in step 507, then a check is undertaken if the problem is solved or not as indicated in step 508. If the problem is solved then, the module stops functioning as indicated

in step **510**. If the problem is not solved, then the emergency contact numbers are contacted as indicated in step **509**.

[00033] Fig. 7 illustrates a vehicle location detection module of a vehicle safety system. The vehicle location detection module includes a data repository **601** that stores most of the places that are of user's interest. At the user end, various inputs are given by the user depending upon the requirement of the user. The various inputs include a place type **608**, a particular restaurant **609**, and an option to navigate to a particular selected place **610**, and distance and other details of the desired location. All the inputs that are required by the user are fetched by the interface from the database.

[00034] For example, the working of the location detection module can be understood with the help of the following example: the user has to only select the place type **608**, for example, if the place type selected by the user is a restaurant, then, the places interface **602** fetches all the restaurants from the data repository **601**, the places interface also gets its inputs from a GPS unit **605**, further, all the restaurants near the location **606** of the user are selected by the places interface **602** and then communicated to the user to select a particular restaurant **609**. Further, if the user requires any more details regarding the selected place, which is a restaurant, then the places details interface **603** fetches detailed description about the restaurant **607** and an option to navigate is communicated to the user as shown in **610**. If the option to navigate **610** is selected by the user, then the MAPS interface **604** fetches the required data as to distance and other details regarding the selected restaurant as indicated by **611**.

[00035] Fig. 8 illustrates a riding environment detection module of the vehicle safety system according to an embodiment of the present invention. The riding environment detection module **700** is capable of interacting with the central weather server **701** to determine the climatic conditions in the path traversed by the rider and constantly keep the rider updated of any harsh climatic conditions, such as a heavy rain, thunderstorm, snowfall etc. in the present embodiment, the central weather server is a third party cloud.

[00036] At the user end, the user through his smartphone **704** comprising the riding environment detection, requests the central weather server **701** to get weather updates. The central weather server **701** through a notification manager **702** communicates to the user. The communication, for example, in the present example is in the form of a push message with

weather details. Further, after receiving the weather updates, the vehicle settings of the user are changed accordingly **703** through a vehicle gateway **705**.

[00037] Fig. **9** illustrates a flow diagram depicting the functionality of the riding environment detection module of the vehicle safety system. The riding environment detection (RED) module begins from the step **801**, at step **802** the user through his smart phone or any other device, checks for any weather updates. The updated weather details are displayed on the display device at the user end as indicated in the step **803**. Further, the details are sent through a vehicle gateway as indicated in step **804**. The vehicle gateway checks if the weather module is matched with the updated weather details as indicated in step **805**. If the weather module matches, then the vehicle settings are changed accordingly as indicated in step **806**, else the riding environment detection (RED) module is again initiated and the functionality begins again from step **801**.

[00038] Fig. **10** illustrates a flow diagram depicting a functionality of a driving pattern detection and analysis module of the safety system of a vehicle. The functionality of the driving pattern detection and analysis (DPDA) module is begun in step **901**. Further, the trip is initialized as indicated in step **902**. Further, the location of the vehicle and other details of the vehicle are obtained from the GPS unit as indicated in step **903**, further, the speed of the vehicle is detected as indicated in step **904**. If the vehicle speed is greater than the threshold speed $\lceil x \rceil$, then the trip is begun, else, if the speed of the vehicle is not greater than the threshold speed $\lceil x \rceil$, then constant connection with the GPS unit is established. Further, after the trip is begun, again any interruption in the speed is detected, it is checked if the idling mode of the vehicle is enabled as indicated in step **905**. Further, at step **913**, condition as to whether the trip has to be continued or not is checked. If the trip has to be continued, then the GPS unit **914** inputs are constantly received and any interruptions if any are detected.

[00039] Further, after the interruption is detected at step **905** and if the trip continuation is disabled, then, the GPS unit fetches the start and the end positions as indicated in step **907**. The GPS unit also received inputs from MAPS interface as indicated in step **906**. Furthermore, the inputs given by the GPS unit is used to calculate the trip details **908** including trip traversed, distance travelled, time taken to finish the trip, maximum speed, etc.,

[00040] Furthermore, the user can share **911** the trip details into any desired medium **912** for his further perusal or for the reference of his peers. Furthermore, the user can save the trip

traversed and the trip details in his favorites⁹⁰⁹, so that the user can compare the future trips with the one saved⁹¹⁰ in the favorites.

[00041] Fig. 11 illustrates a flow diagram depicting functionality of the SOS module. The save our souls (SOS) module is a part of the vehicle safety system as per the proposed invention. The SOS module checks if the SOS key is activated as indicated in step **916**. If the SOS key is activated, then the module seeks inputs from the GPS unit **917**, else, the SOS module is initiated again from the beginning. Further, the GPS unit sends SMS as indicated in the step **918**, after sending the SMS, the module checks if the SOS key is deactivated as indicate in the step **919**. If the SOS key is deactivated, then the SOS module is initiated from the beginning **915**, else the timer is initiated as indicated in step **920**. After Y intervals of time is lapsed by the timer, a SMS with GPS co-ordinates is communicated to the emergency numbers as saved by the user.

[00042] Although the subject matter has been described in considerable detail with reference to certain embodiments thereof, other embodiments are possible. It is to be understood that the aspects of the embodiments are not necessarily limited to the features described herein.

We claim:

1. A vehicle safety method (**200, 300, 400, 500, 700, 800, 900, 160**) comprising the steps of:
 - receiving (**202**) at least one of one or more user inputs and one or more critical vehicular inputs;
 - detecting (**502**) one or more unsafe events based on at least one of one or more user inputs and one or more critical vehicular inputs related to state of a vehicle by a mode detection module;
 - comparing (**904, 805**) said at least one of one or more user inputs and one or more critical vehicular inputs received with a preset safety conditions by a driving pattern detection and analysis (DPDA) module for detection of an emergency mode; and
 - communicating (**204, 918**) to emergency contact during any one of probability of occurring or during occurring of said unsafe event.
2. The vehicle safety method (**200, 300, 400, 500, 700, 800, 900, 160**) as claimed in claim 1, wherein said detecting (**502**) one or more unsafe events comprising the steps of:
 - determining (**202**) sudden change in acceleration of the vehicle;
 - checking (**203**) if a predetermined threshold value is exceeded;
 - enabling (**204**) an audio-visual indication by an accident detection module (**100**) if the predetermined threshold value has exceeded;
 - monitoring the audio-visual indication (**205**);
 - obtaining (**206**) one or more user details and location of vehicle from a GPS unit, if audio-visual indication is not disabled; and
 - communicating (**208**) said one or more user details and location of said vehicle to emergency contacts, if audio-visual indicated is not disabled.
3. The vehicle safety method (**200, 300, 400, 500, 700, 800, 900, 160**) as claimed in claim 1, wherein said detecting (**502**) comprising the steps of:
 - detecting parking space (**302**) by a vehicle location detection module (**301**);
 - displaying (**303**) detected parking space (**302**) in a display unit;
 - selecting (**304**) desired parking space by the user from the display unit;
 - communicating (**305**) selected (**304**) desired parking space to a processor; and

communicating (306) required inputs about the desired parking space to the user.

4. The vehicle safety method (200, 300, 400, 500, 700, 800, 900, 160) as claimed in claim 1, wherein said detecting (502) comprising the steps of:

enabling a riding environment detection module (801) based on at least one of one or more user inputs and one or more critical vehicular inputs;
checking (802) for weather updates on a display device by the user;
displaying (803) the updated weather details to the user;
communicating (804) the updated weather details to a vehicle gateway;
comparing weather details (805) by the vehicle gateway; and
changing (806) one or more vehicular settings if the output of the vehicle gateway is different from the updated weather details.

5. The vehicle safety method (200, 300, 400, 500, 700, 800, 900, 160) as claimed in claim 1, wherein said detecting (502) comprising the steps of:

enabling driving pattern detection analysis (DPDA) module (901);
initializing (902) a trip of the vehicle;
obtaining (903) location of the vehicle from a GPS unit;
monitoring (904) speed of the vehicle;
detecting (905) interruption in the trip;
receiving (906) inputs from a MAPS interface;
fetching (907) a start and the end positions of the trip by the GPS unit;
calculating (908) trip details including trip traversed, distance travelled, time taken to finish the trip, maximum speed, and the like;
saving (909) the trip traversed and the trip details in a favorites module by the user; and
comparing (910) the saved trip details with the current trip details.

6. The vehicle safety method (200, 300, 400, 500, 700, 800, 900, 160) as claimed in claim 1, wherein said comparing (904, 805) comprising the steps of:

monitoring (401) current position of the vehicle;
communicating (402) any change in the current position of the vehicle;
detecting (403) speed of the vehicle;
enabling idling mode (404) if a vehicle speed is not greater than a threshold speed $\times$; and

enabling riding mode (405) if the vehicle speed is not greater than a threshold speed $\times$.

7. The vehicle safety method (200, 300, 400, 500, 700, 800, 900, 160) as claimed in claim 1, wherein said comparing (904, 805) comprising the steps of:

detecting (501) unsafe event;

identifying (502) emergency event, if emergency mode is automated or selected by the user (503);

enabling emergency mode (504) if emergency mode is automatically activated by the vehicle safety module else enabling emergency mode (505) if emergency mode is activated by the one or more user inputs to the processor; and

communicating (506) about unsafe event to the emergency contacts and displaying first aid tips to the user on a display device.

8. The vehicle safety method (200, 300, 400, 500, 700, 800, 900, 160) as claimed in claim 1 or claim 2, wherein said comparing (904, 805) comprising the steps of:

initiating SOS module (915);

checking (916) if the SOS key is activated;

checking for inputs (917) from the GPS unit if the SOS key is activated;

communicating (918) to the emergency contacts upon activation of said emergency mode;

checking if the SOS key is deactivated (919); and

enabling (920) a timer for a predetermined time, communicating to the emergency contacts upon activation of said emergency mode, after the predetermined time is lapsed.

9. A vehicle safety system (150) for providing safe riding conditions of the vehicle to the user, said vehicle safety system comprising:

one or more modules (100, 600, and 700) configured to detect and provide vehicular safety conditions,

wherein,

said at least one of the one or more modules (100, 600, and 700) includes an accident detection module (301) for detecting (502) one or more unsafe events, a mode detection module for enabling emergency mode, and said at least one of the one or more modules (100, 600, and 700) enables triggering (104, 208) of one or more vehicle safety modules based on at least

one of one or more user inputs and one or more critical vehicular inputs related to state of a vehicle.

10. The vehicle safety system (**150**) as claimed in claim 9, wherein said one or more modules (**100**, **600**, and **700**) includes a location detection module for communicating desired location (**609**) to the user through the GPS unit (**605**), said desired location (**609**) includes a restaurant.

1/11

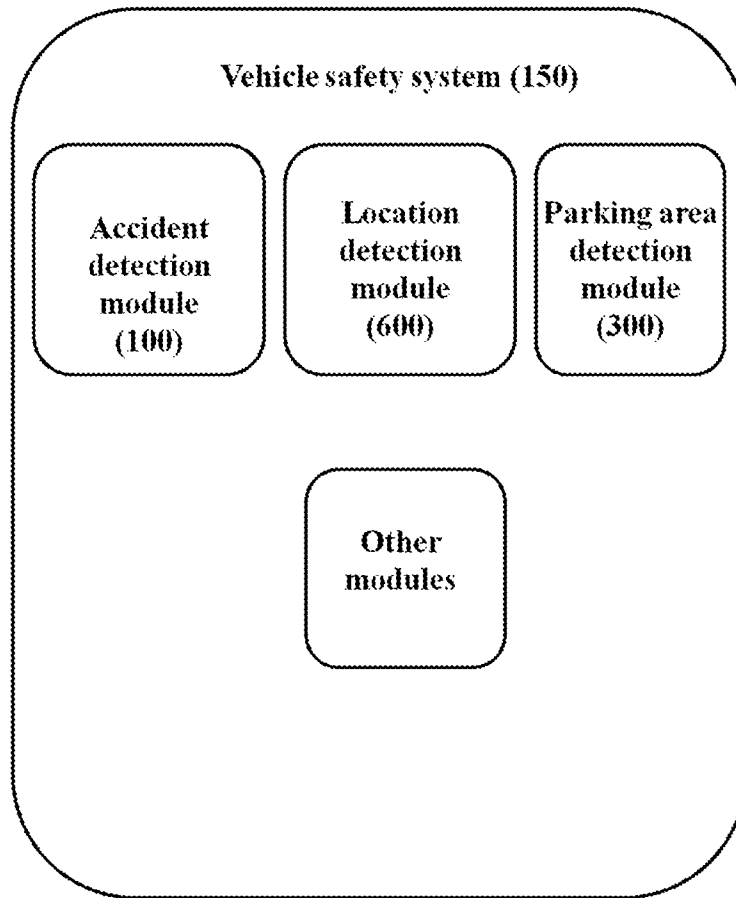


Fig. 1

2/11

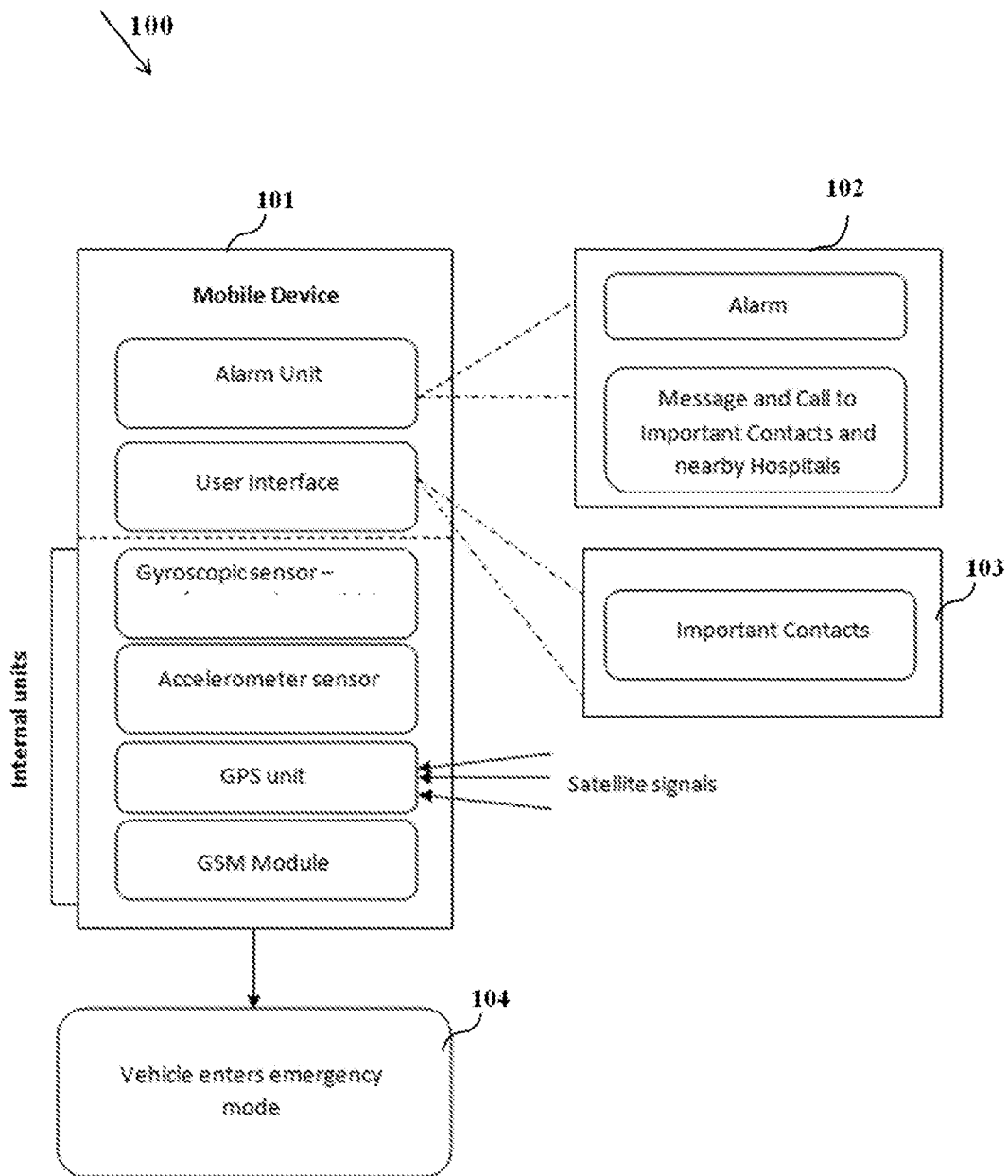


Fig. 2

3/11

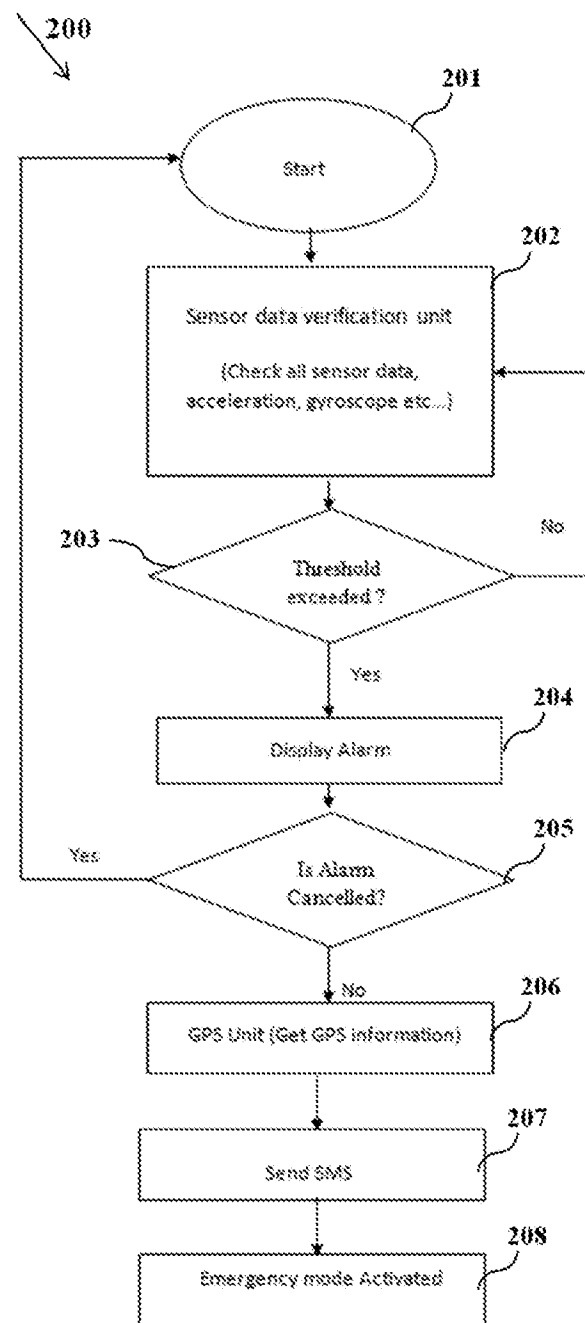


Fig. 3

4/11

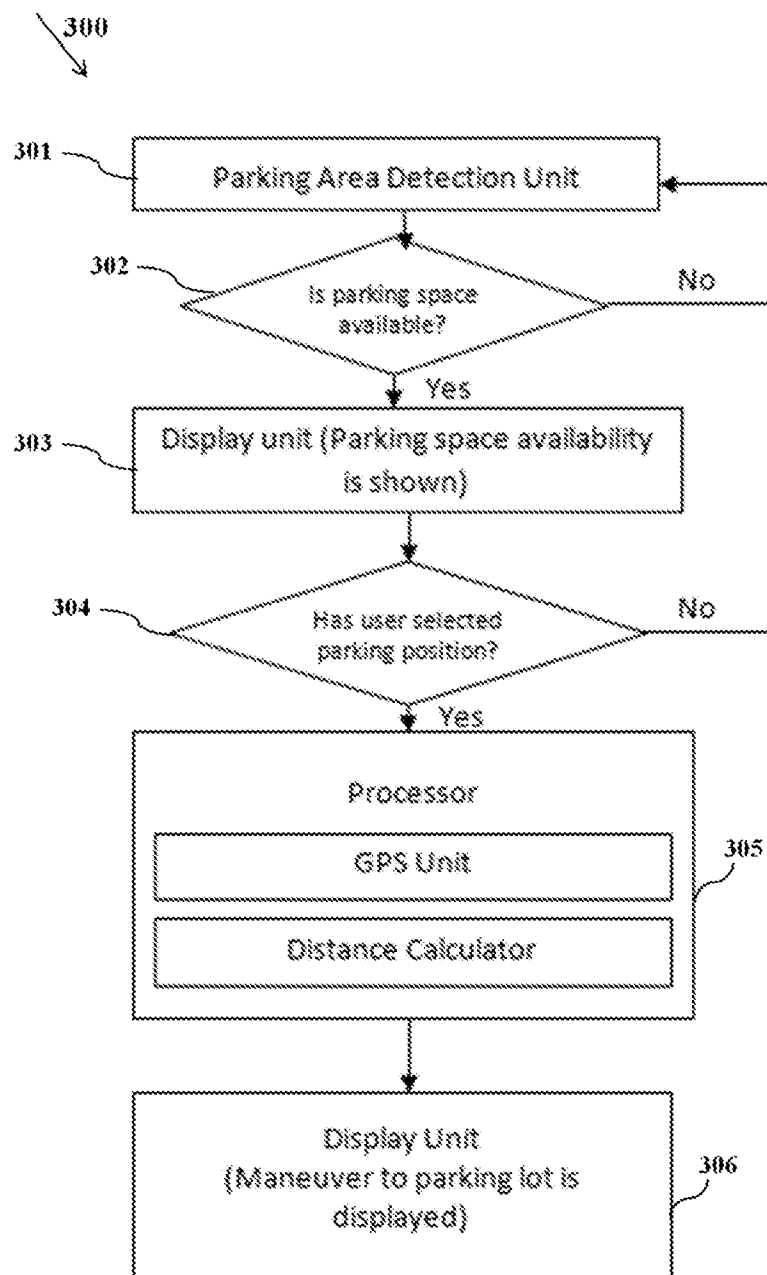


Fig. 4

5/11

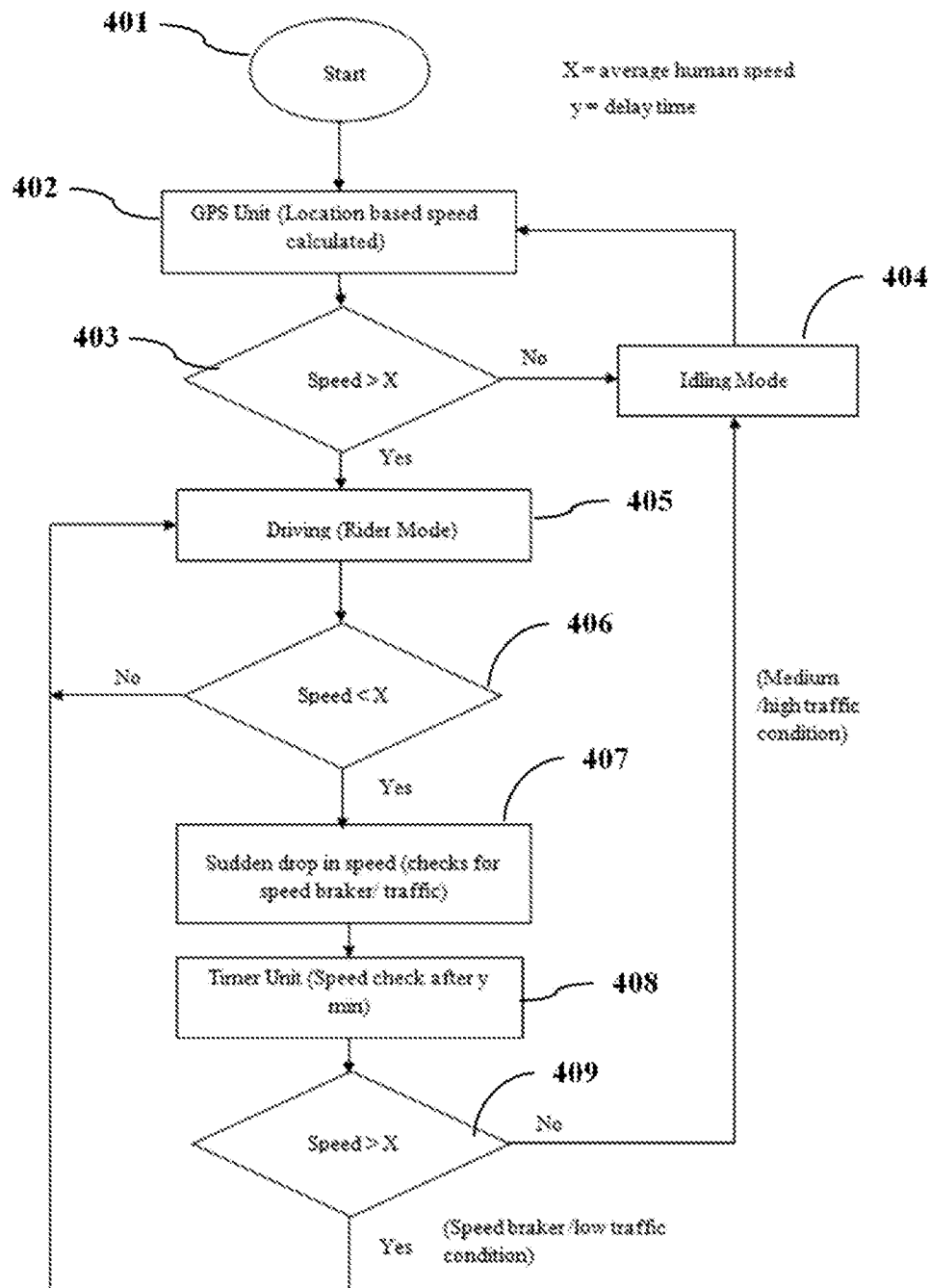


Fig. 5

6/11

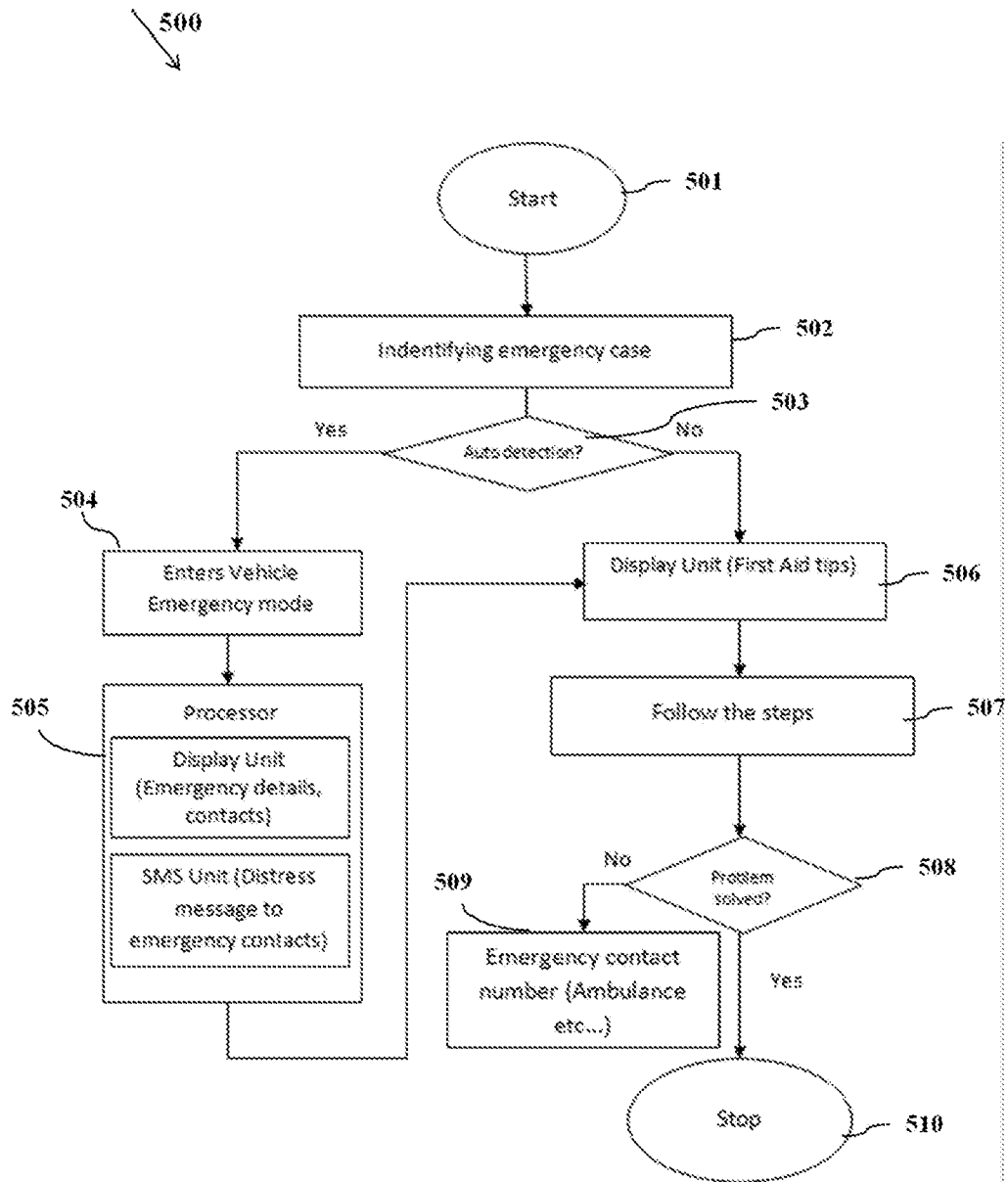


Fig. 6

7/11

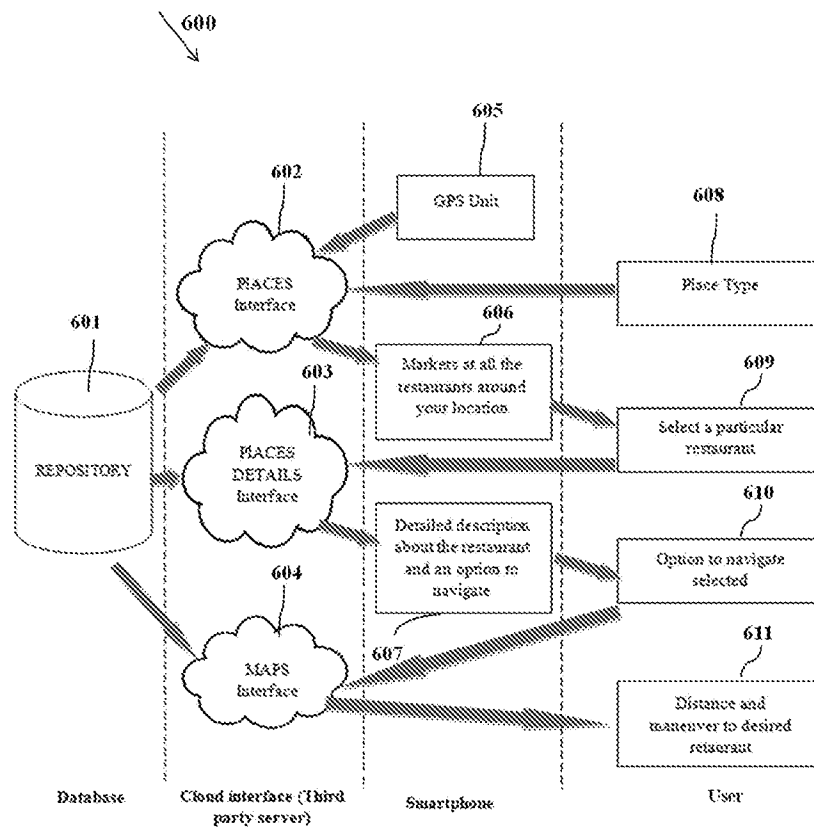


Fig. 7

8/11

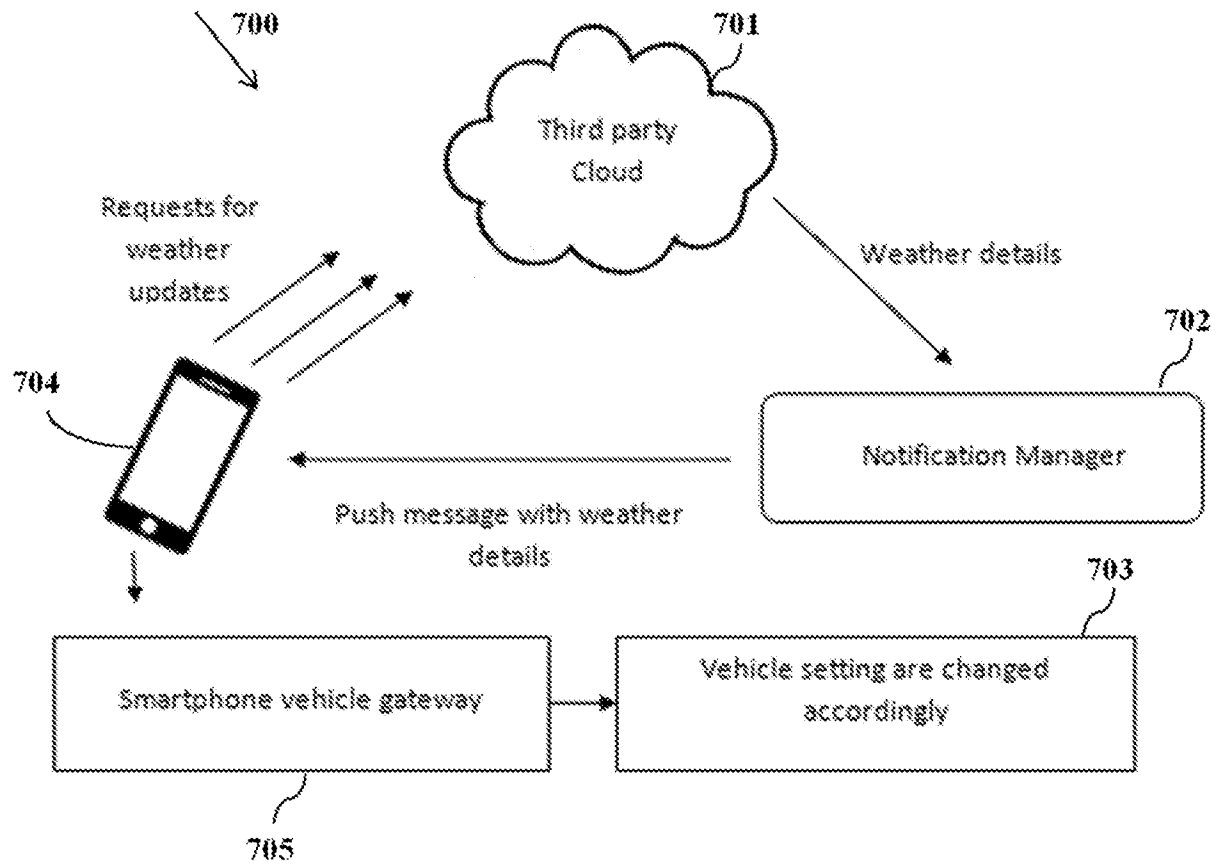


Fig. 8

9/11

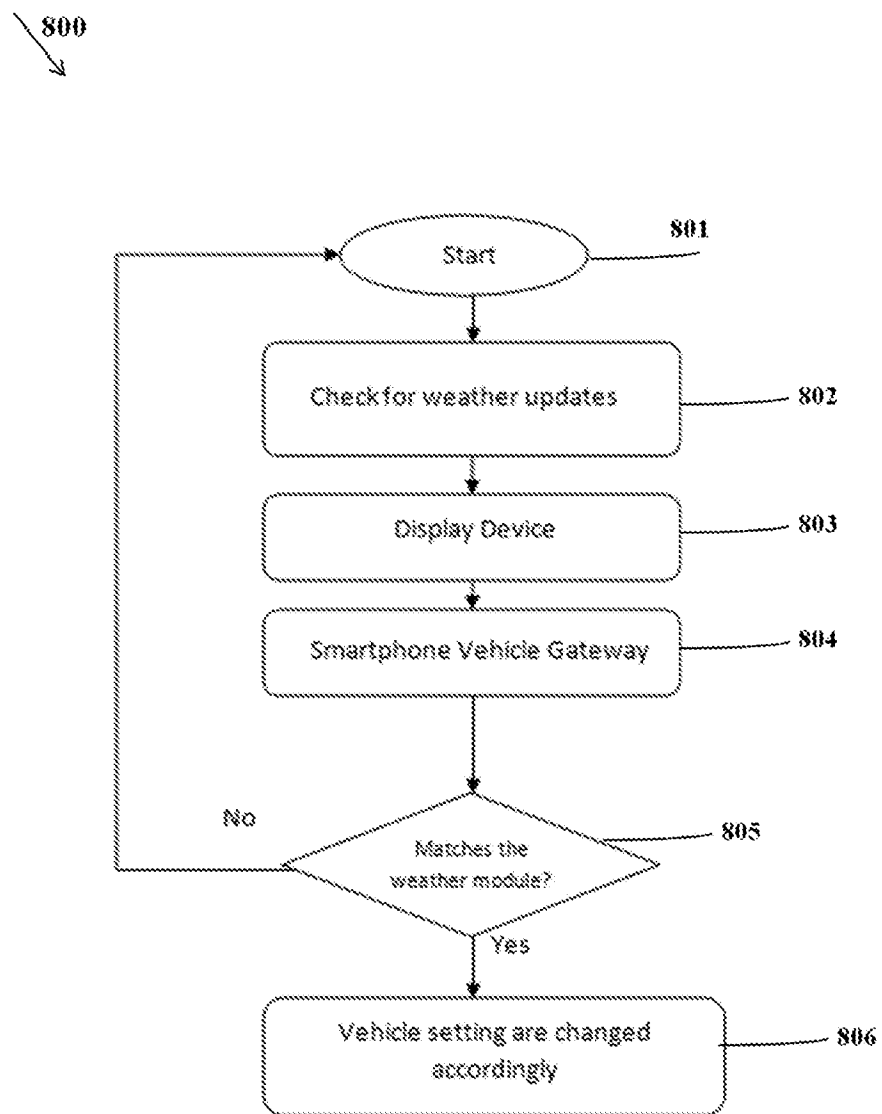


Fig. 9

10/11

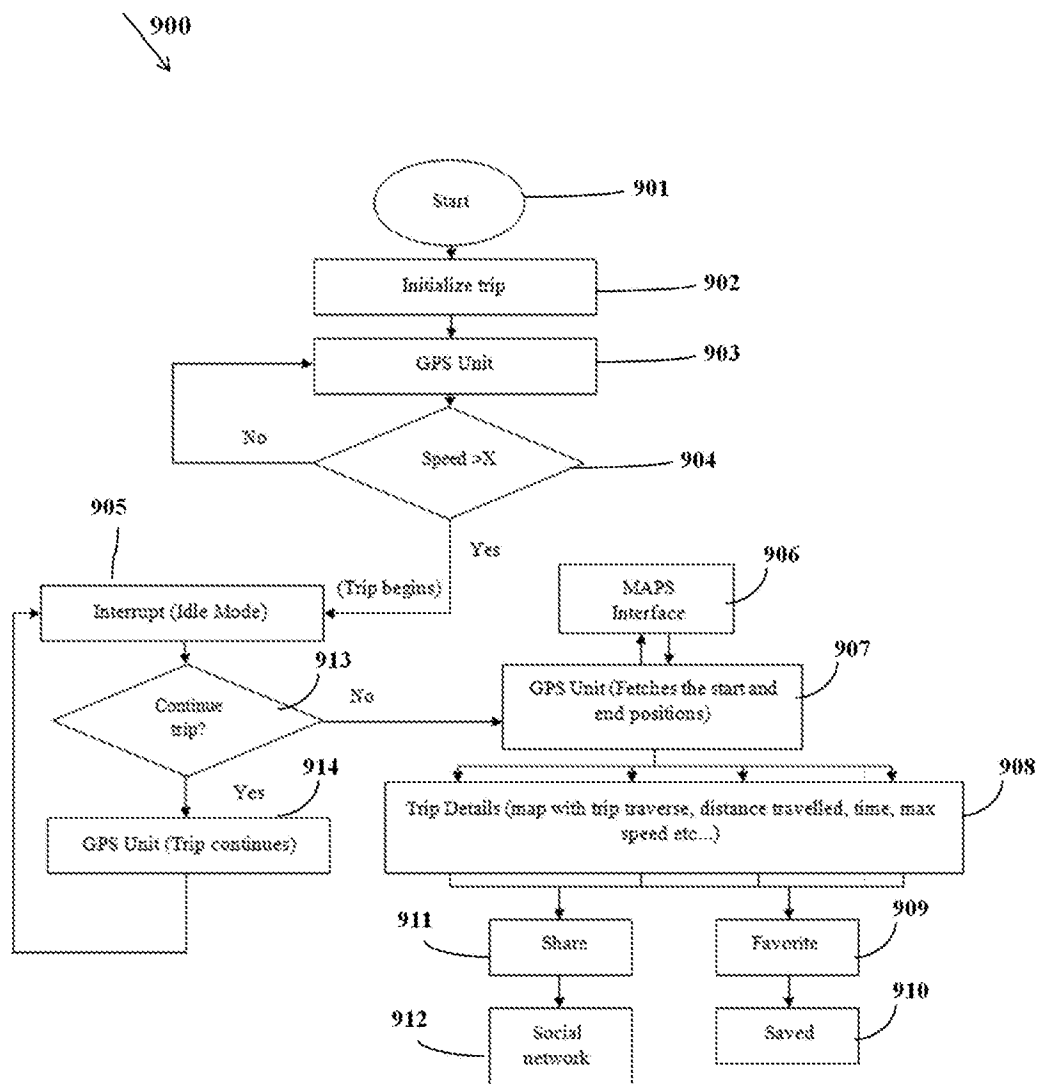


Fig. 10

11/11

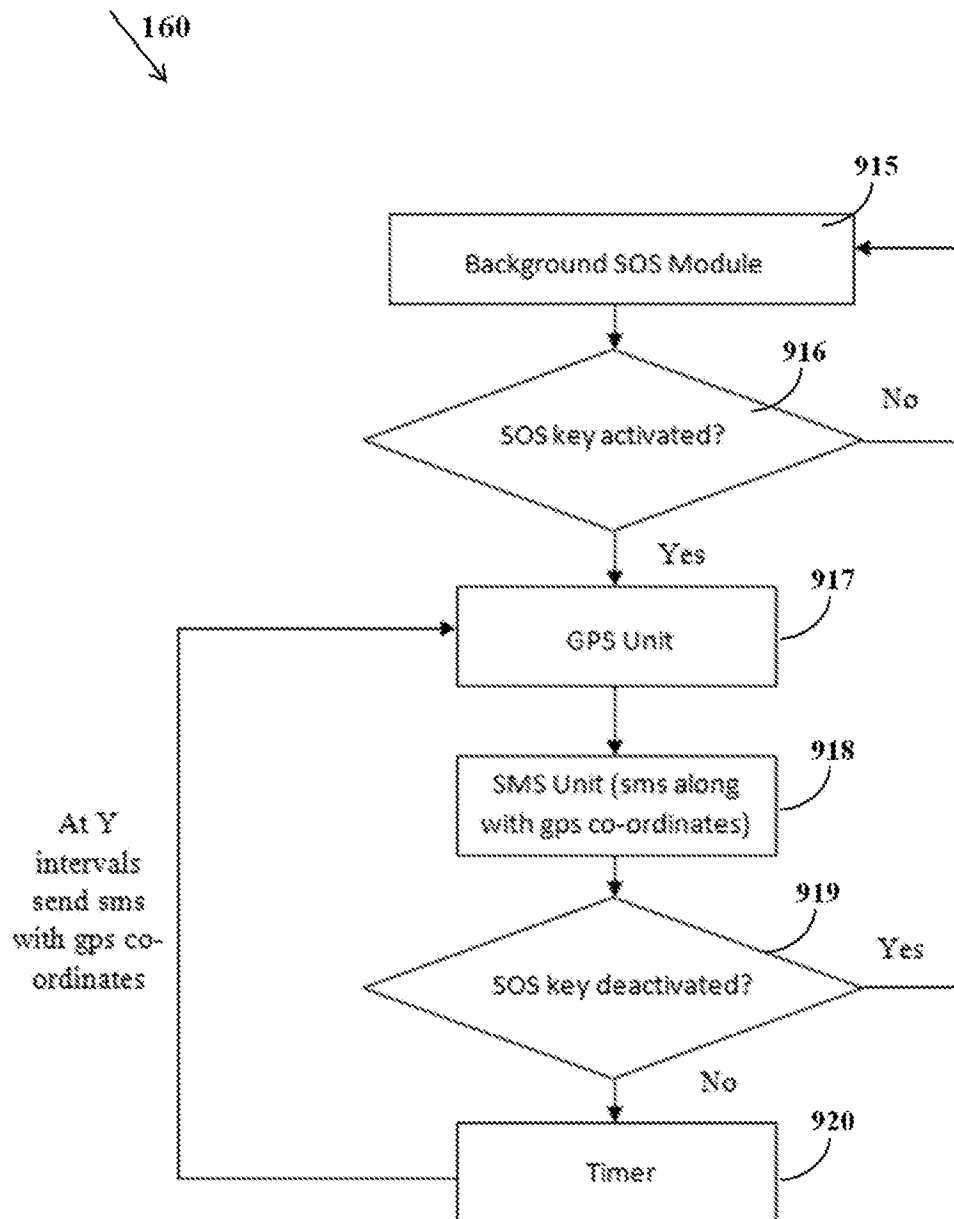


Fig. 11