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(54) **AUTOMATIC EXCHANGE OF INFORMATION IN RESPONSE TO A COLLISION EVENT**

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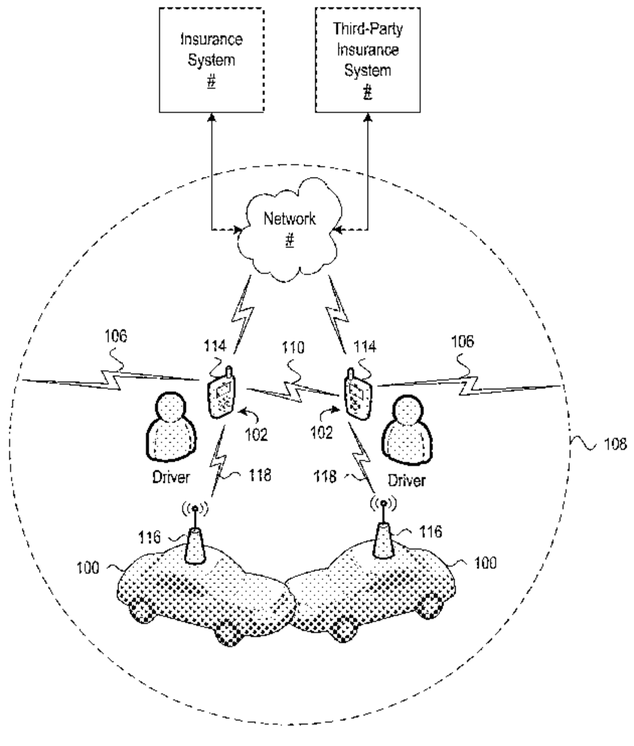
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(57) **ABSTRACT**

Systems and methods for the automatic exchange of insurance information in response to a collision event are provided. A wireless communication device may collect telematics data related to operation of a vehicle. The wireless communication device may detect the occurrence of a collision event involving the vehicle based on the telematics data collected. The wireless communication device may discover another wireless communication device locating in the vicinity of the collision event that has also detected a collision event. The wireless device may initiate an exchange of insurance information with that other wireless communication device. Other types of information may be exchanged between the wireless devices as well as between an insurance system in signal communication with the wireless devices in response to a collision event.

16 Claims, 8 Drawing Sheets



Related U.S. Application Data

continuation-in-part of application No. 13/791,386, filed on Mar. 8, 2013, now Pat. No. 9,019,092, and a continuation-in-part of application No. 14/039,722, filed on Sep. 27, 2013.

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Dec. 7, 2017—U.S. Final Office Action—U.S. Appl. No. 14/039,722.
Dec. 28, 2017—U.S. Final Office Action—U.S. Appl. No. 14/688,611.
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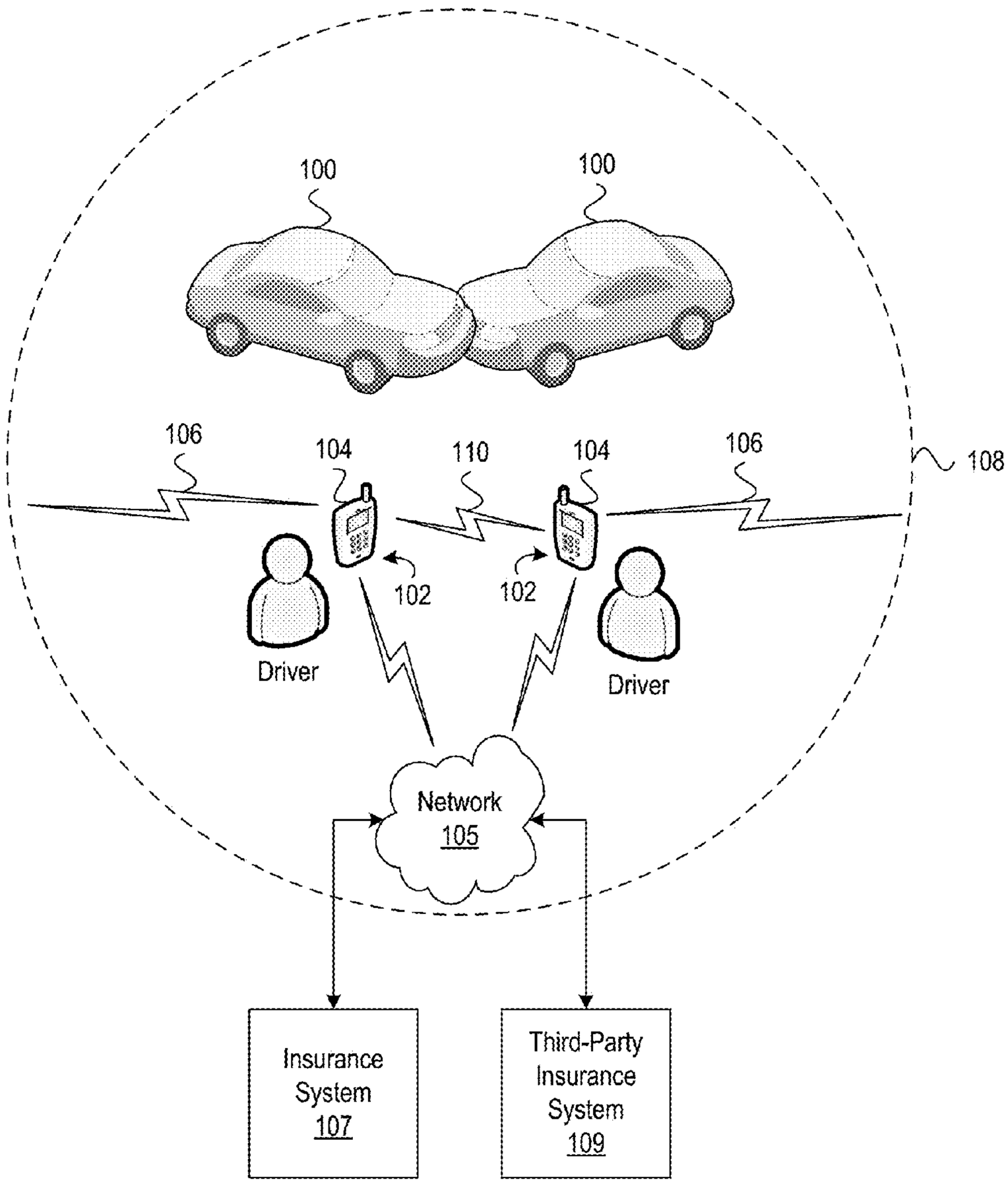

100
100
106
104
110
104
106
108
102
102
Driver
Driver
Network
105
Insurance
System
107
Third-Party
Insurance
System
109

FIG. 1

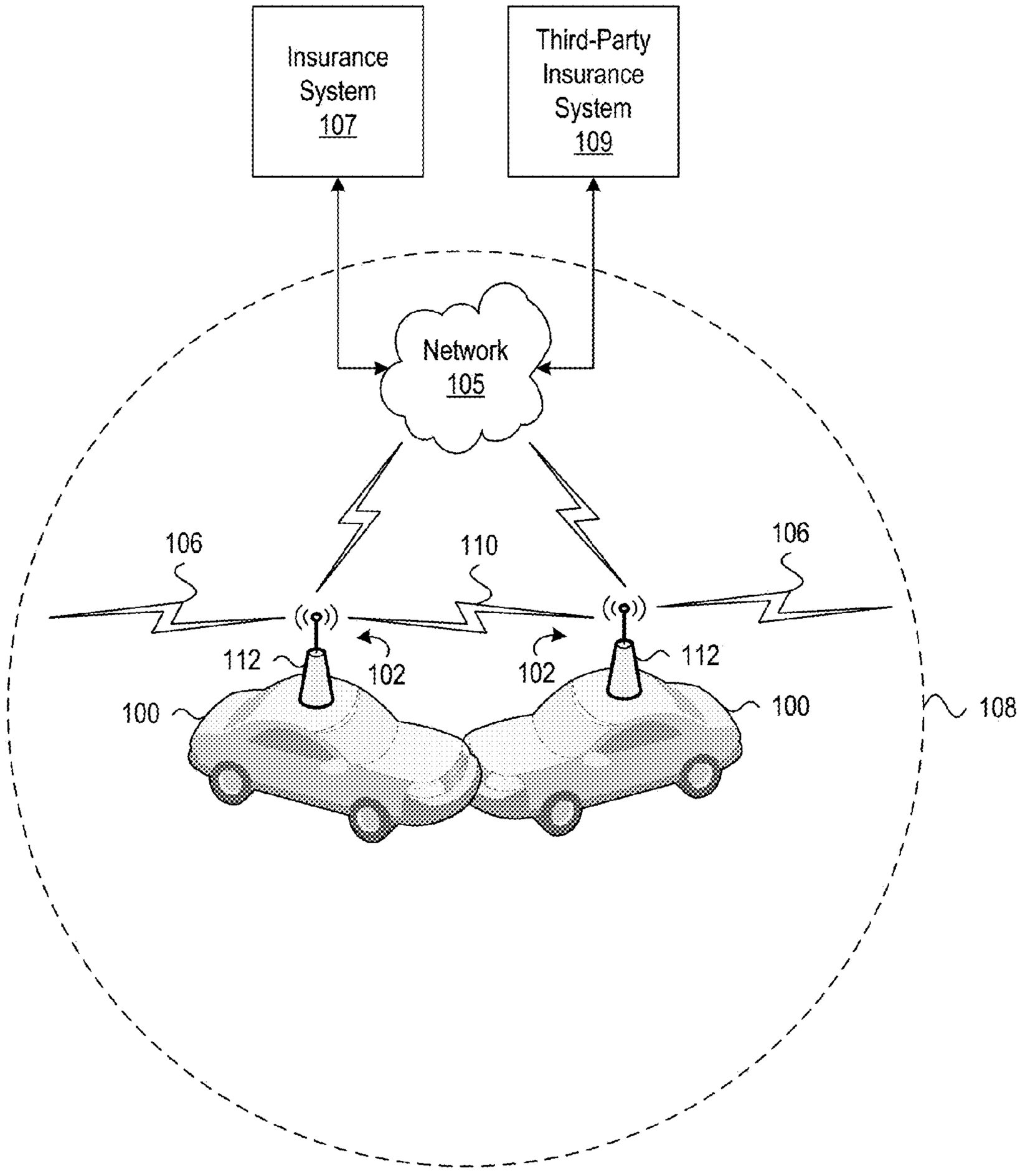

Insurance System 107
Third-Party Insurance System 109
Network 105
106
110
106
112
102
102
112
100
100
108

FIG. 2

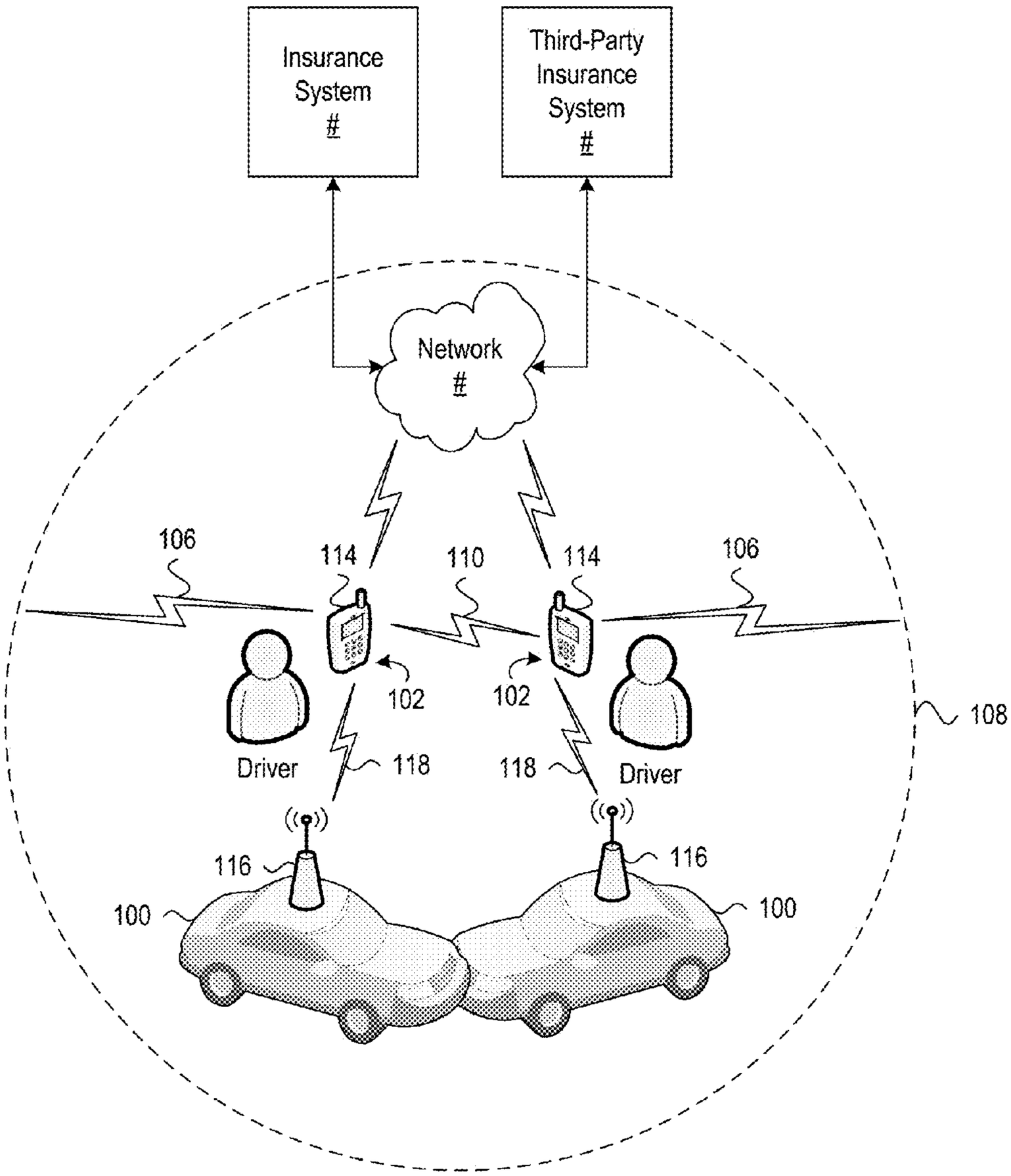

Insurance System #
Third-Party Insurance System #
Network #
106
114
110
114
106
102
102
108
Driver
Driver
118
118
116
116
100
100

FIG. 3

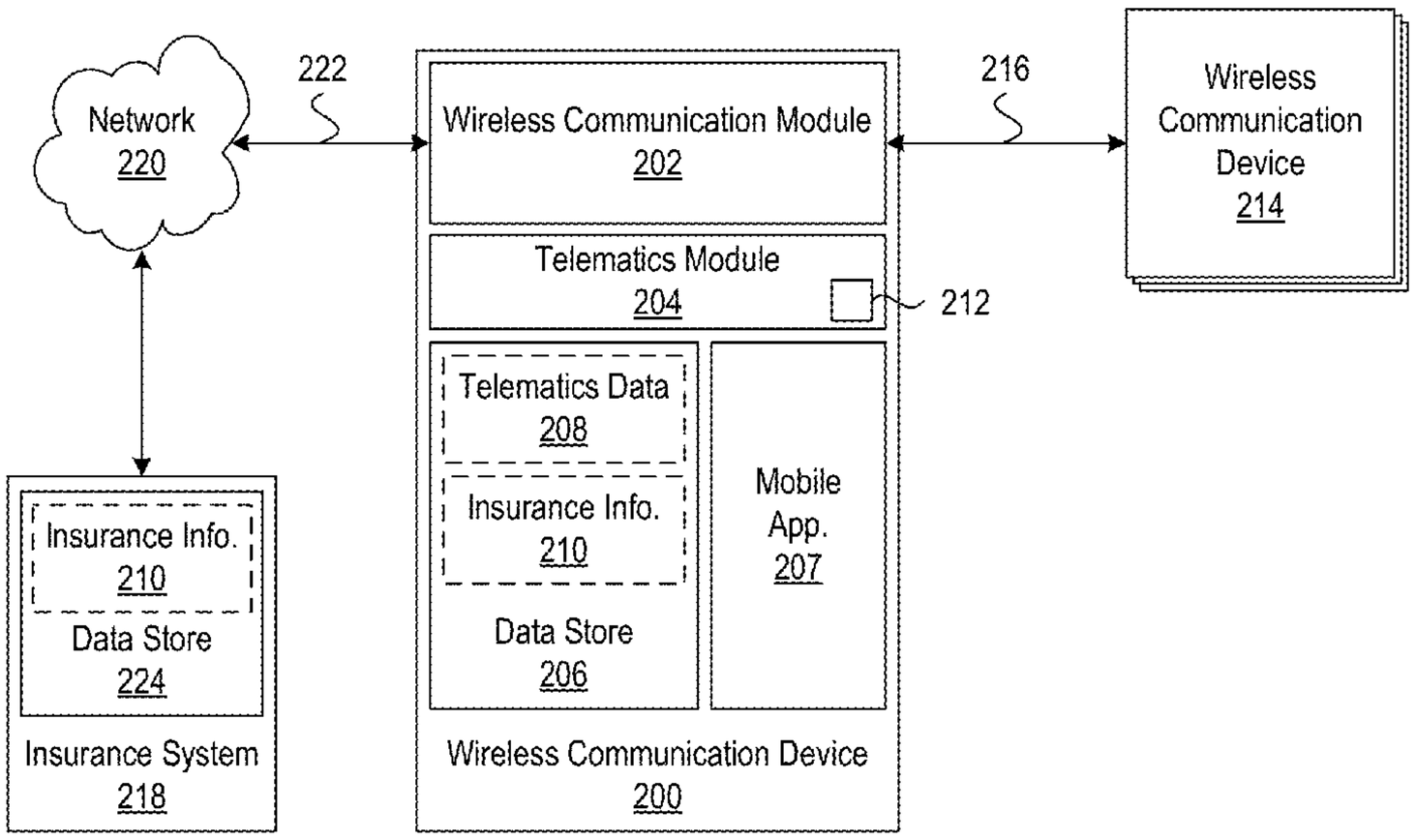

Network
220
222
Wireless Communication Module
202
216
Wireless Communication Device
214
Telematics Module
204
212
Telematics Data
208
Insurance Info.
210
Data Store
206
Mobile App.
207
Insurance Info.
210
Data Store
224
Insurance System
218
Wireless Communication Device
200

FIG. 4A

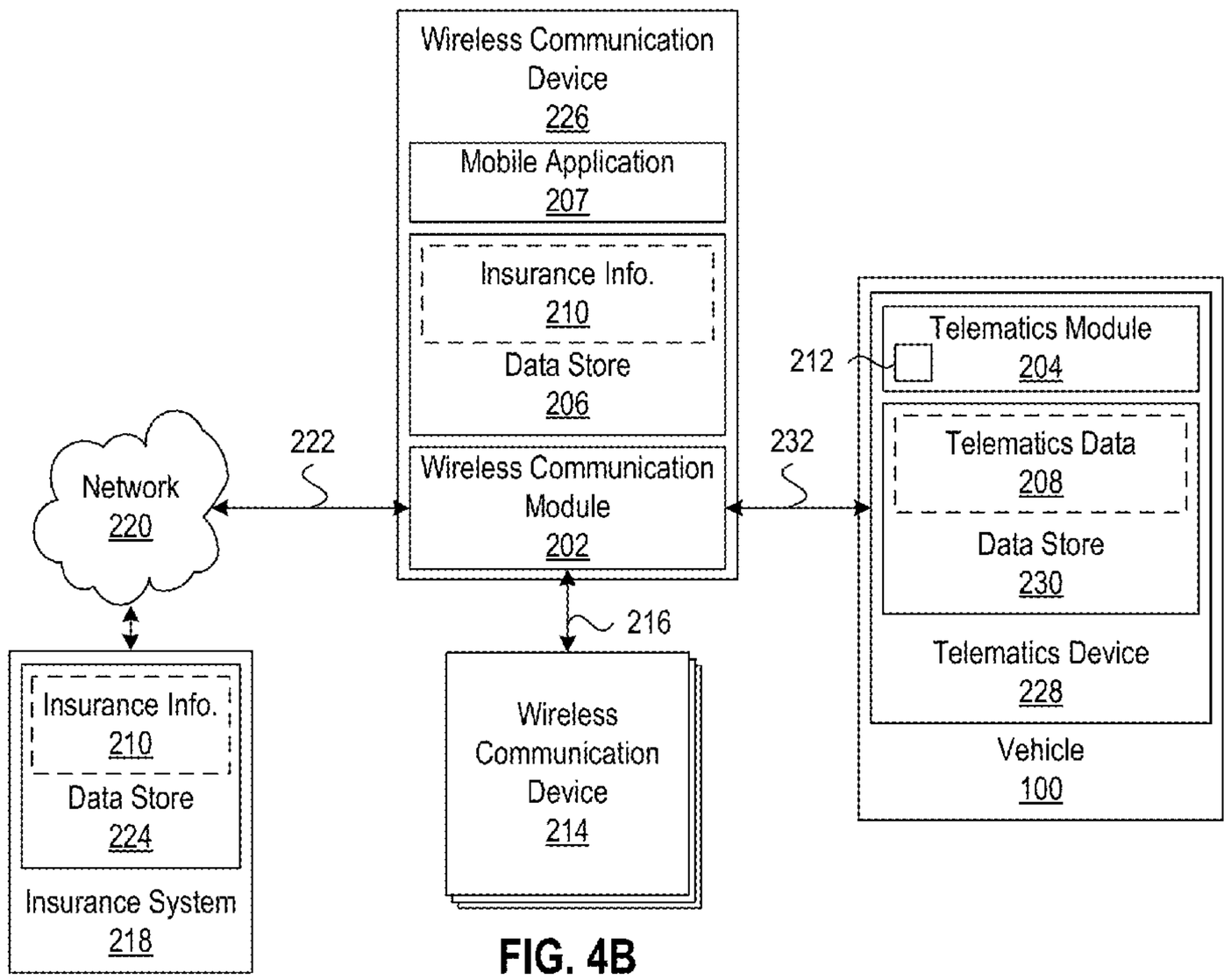

Wireless Communication Device
226
Mobile Application
207
Insurance Info.
210
Data Store
206
Wireless Communication Module
202
Network
220
222
232
Telematics Module
204
212
Telematics Data
208
Data Store
230
Telematics Device
228
Vehicle
100
216
Wireless Communication Device
214
Insurance Info.
210
Data Store
224
Insurance System
218

FIG. 4B

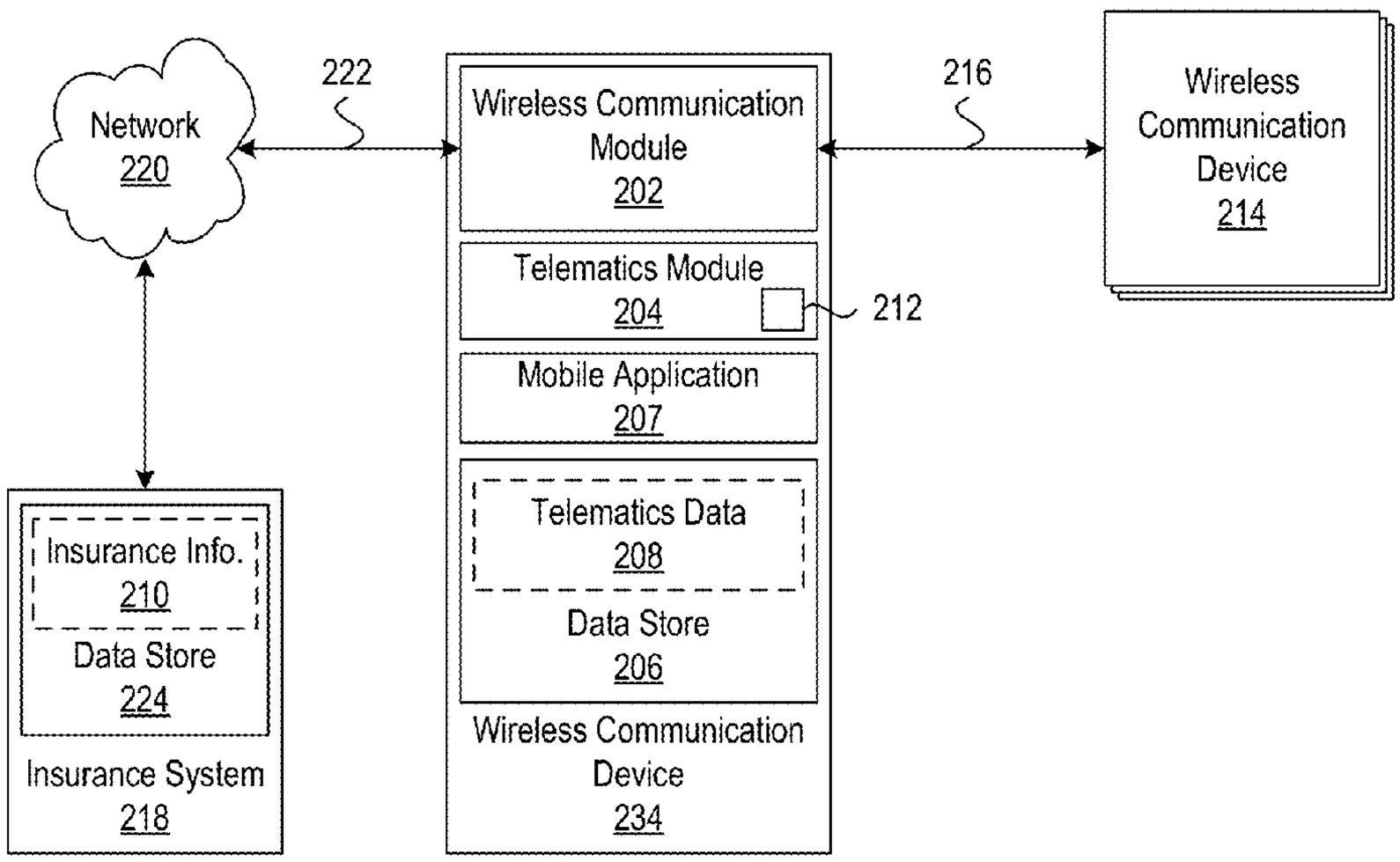

Network
220
222
Wireless Communication Module
202
Telematics Module
204
212
Mobile Application
207
Telematics Data
208
Data Store
206
Wireless Communication Device
234
216
Wireless Communication Device
214
Insurance Info.
210
Data Store
224
Insurance System
218

FIG. 4C

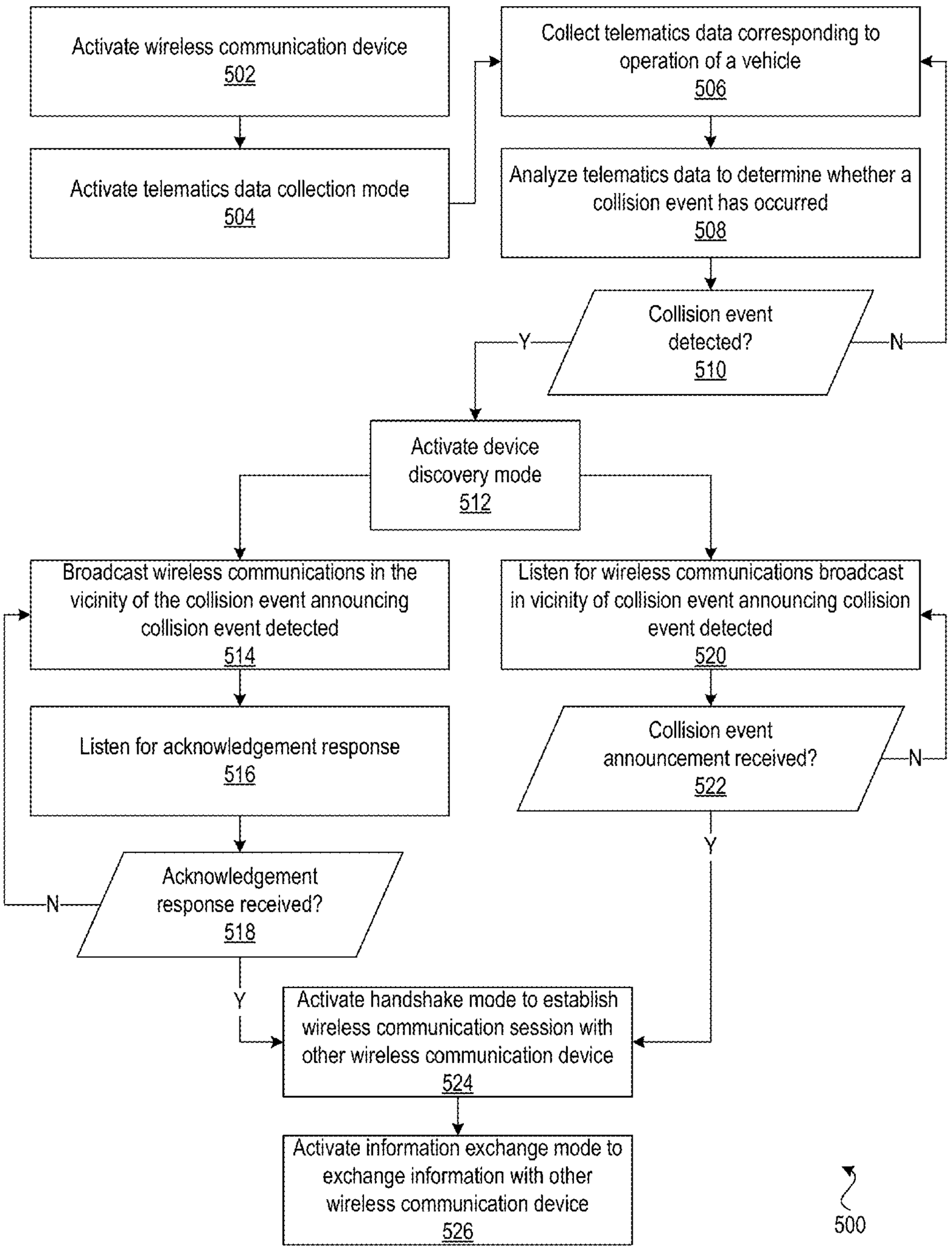

Activate wireless communication device
502
Activate telematics data collection mode
504
Collect telematics data corresponding to operation of a vehicle
506
Analyze telematics data to determine whether a collision event has occurred
508
Collision event detected?
510
Y
N
Activate device discovery mode
512
Broadcast wireless communications in the vicinity of the collision event announcing collision event detected
514
Listen for acknowledgement response
516
Acknowledgement response received?
518
N
Y
Listen for wireless communications broadcast in vicinity of collision event announcing collision event detected
520
Collision event announcement received?
522
N
Y
Activate handshake mode to establish wireless communication session with other wireless communication device
524
Activate information exchange mode to exchange information with other wireless communication device
526
500

FIG. 5

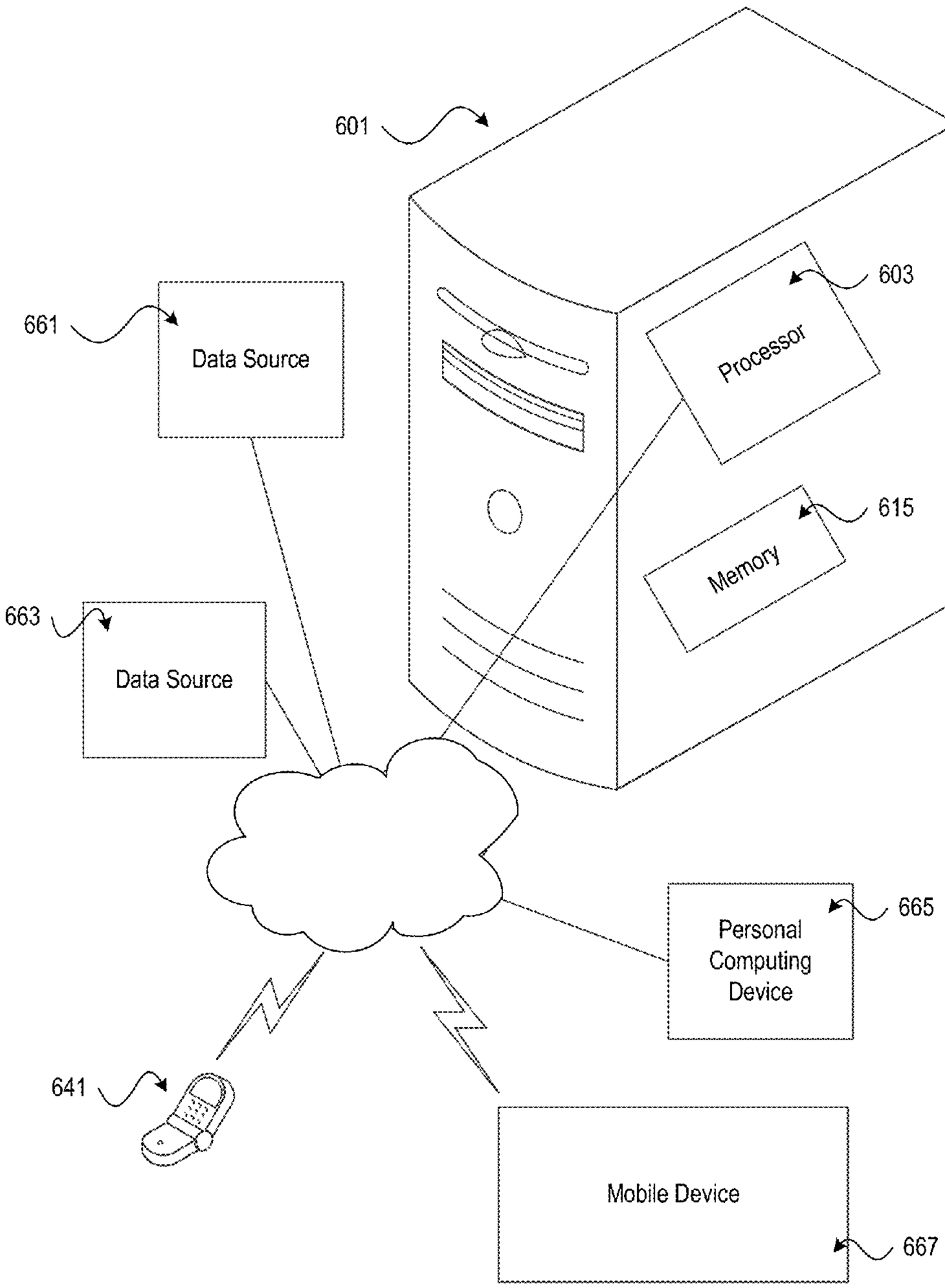

601
603
Processor
615
Memory
661
Data Source
663
Data Source
665
Personal Computing Device
641
667
Mobile Device

FIG. 6A

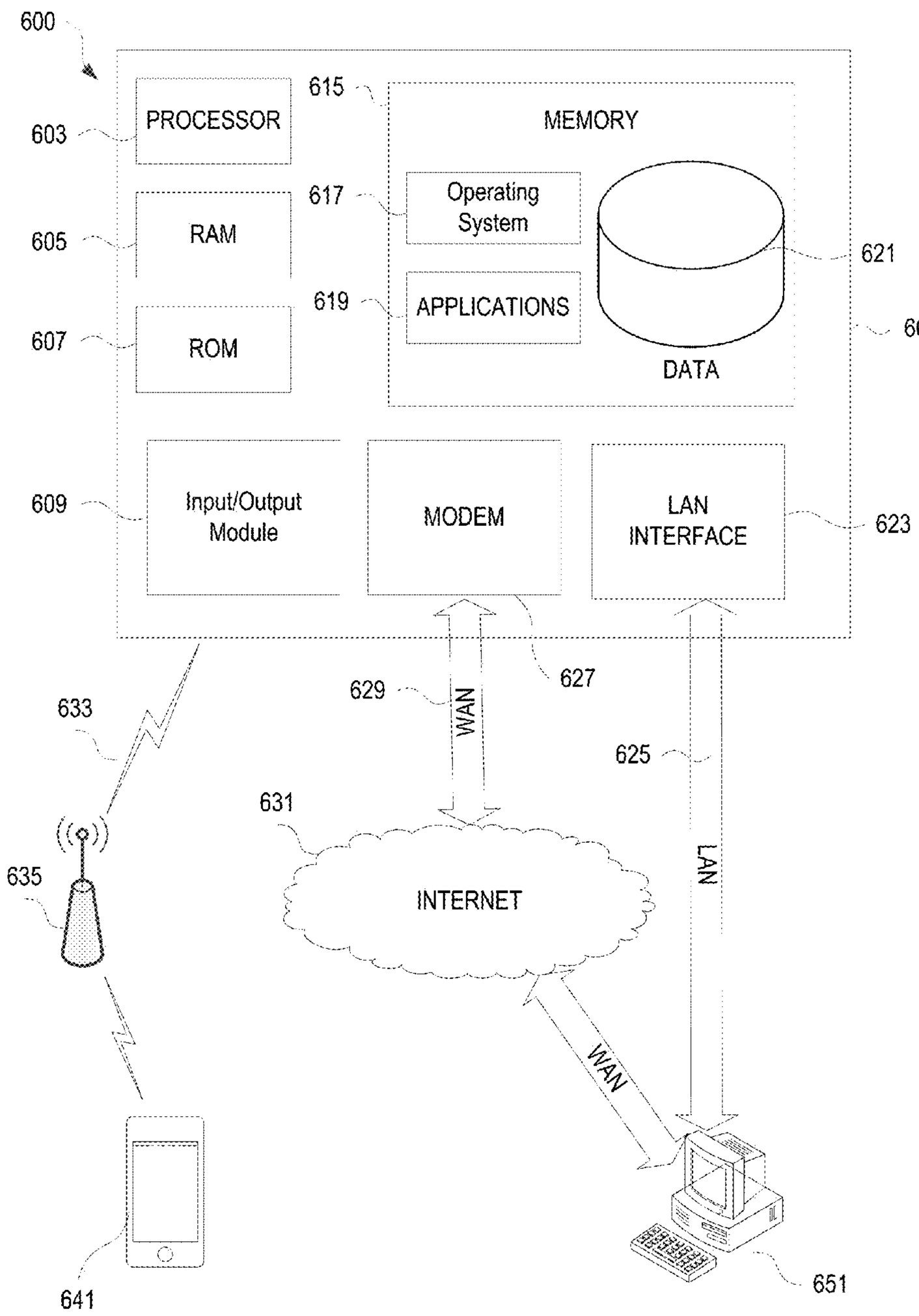

600
615
PROCESSOR
603
MEMORY
617
Operating System
RAM
605
621
619
APPLICATIONS
607
601
ROM
DATA
609
Input/Output Module
MODEM
LAN INTERFACE
623
627
629
WAN
633
625
631
635
INTERNET
LAN
WAN
641
651

FIG. 6B

AUTOMATIC EXCHANGE OF INFORMATION IN RESPONSE TO A COLLISION EVENT

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a continuation-in-part of the following patent applications: U.S. patent application Ser. No. 13/791,338 to Brandmaier et al. entitled "Automated Accident Detection, Fault Attribution, and Claims Processing" and filed on Mar. 8, 2013; U.S. patent application Ser. No. 13/791,386 Brandmaier et al. entitled "Automated Accident Detection, Fault Attribution, and Claims Processing" and filed on Mar. 8, 2013; and U.S. patent application Ser. No. 14/039,722 entitled "Electronic Exchange of Insurance Information" and filed on Sep. 27, 2013. Each of the patent applications identified above are incorporated by reference herein in their entirety.

The present application also incorporates by reference each of the following: U.S. patent application Ser. No. 14/022,552 to Tye et al. entitled "Maintaining Current Insurance Information at a Mobile Device" and filed on Sep. 10, 2013; U.S. patent application Ser. No. 14/188,046 to Bryer et al. entitled "Providing Rewards Based on Driving Behaviors Detected by a Mobile Computing Device" and filed on Feb. 24, 2014; and U.S. patent application Ser. No. 14/211,186 to Bryer et al. entitled "Providing Rewards Based on Driving Behaviors Detected by a Mobile Computing Device" and filed on Mar. 14, 2014.

BACKGROUND

Drivers often keep respective hardcopies of their insurance information in their vehicles in case a vehicle incident such as a collision occurs. Following a vehicle incident, a driver may exchange insurance and contact information with another driver. Typically, drivers involved in a vehicle incident may use paper and pen to exchange insurance information. This paper and pen approach is also often employed to leave behind insurance information when a driver damages an unoccupied vehicle or other unattended property. In some circumstances, drivers may attempt to exchange insurance information by taking photos of the respective insurance cards.

Papers containing insurance information, however, are easily lost and damaged. Additionally, paper and pen may not be available or readily accessible in some situations. Furthermore drivers may be embarrassed or upset following a collision event, and confronting other drivers to exchange insurance information may be additionally distressing. Moreover, depending on the severity of the vehicle incident, a driver may be rattled to the point that copying insurance information via paper and pen or taking a photograph of an insurance card is prohibitively difficult. Therefore, a need exists for improved approaches to sharing and exchanging insurance information between individuals.

SUMMARY

The following presents a simplified summary in order to provide a basic understanding of some aspects of the disclosure. The summary is not an extensive overview of the disclosure and is not intended to identify key or critical elements or to delineate the scope of protection sought. The following summary merely presents some concepts of the disclosure in a simplified form as an introduction to the more detailed description provided below.

A first aspect described herein provides a computer-implemented method of exchanging insurance information. A wireless communication device may collect telematics data related to operation of a vehicle. The wireless communication device may detect the occurrence of a collision event involving the vehicle based on the telematics data collected. The wireless communication device may discover another wireless communication device locating in the vicinity of the collision event that has also detected a collision event. The wireless device may initiate an exchange of insurance information with that other wireless communication device.

A second aspect described herein provides a wireless computing device. The wireless computing device includes at least one processor, a telematics device, and memory storing computer-readable instructions. The telematics device may be configured to, in operation, collect telematics data related to operation of a vehicle. The instructions, when executed by the at least one processor, may cause the wireless communication device to detect a collision event based on the telematics data collected. The instructions, when executed, may also cause the wireless communication device to discover another wireless communication device within the vicinity of the collision event that has also detected a collision event. The instructions, when executed, may further cause the wireless communication device to initiate an exchange of insurance information with the that other wireless communication device.

The details of these and other embodiments of the disclosure are set forth in the accompanying drawings and description below. Other features and advantages of aspects of the disclosure will be apparent from the description and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Aspects of the disclosure may be implemented in certain parts, steps, and embodiments that will be described in detail in the following description and illustrated in the accompanying drawings in which like reference numerals indicate similar elements. It will be appreciated with the benefit of this disclosure that the steps illustrated in the accompanying figures may be performed in other than the recited order and that one or more of the steps disclosed may be optional. It will also be appreciated that one or more components illustrated in the accompanying figures may be positioned in other than the disclosed arrangement and that one or more of the components illustrated may be optional.

FIG. **1** is an illustration of an example scenario in which insurance information may be automatically exchanged between wireless communication devices.

FIG. **2** is an illustration of another example scenario in which insurance information may be automatically exchanged between wireless communication devices.

FIG. **3** is an illustration of a further example scenario in which insurance information may be automatically exchanged between wireless communication devices.

FIG. **4**A is a block diagram of an example of an implementation of a wireless communication device configured to automatically exchange insurance information with another wireless communication device.

FIG. **4**B is a block diagram of another example of an implementation of a wireless communication device configured to automatically exchange insurance information with another wireless communication device.

FIG. **4**C is a block diagram of a further example of an implementation of a wireless communication device configured to automatically exchange insurance information with another wireless communication device.

FIG. **5** is a flowchart of example method steps for automatically exchanging insurance information.

FIG. **6**A is an example of an implementation of a suitable operating environment in which various aspects of the disclosure may be implemented.

FIG. **6**B is a block diagram of a system that may be used according to one or more example embodiments of the disclosure.

DETAILED DESCRIPTION

Commonly-owned U.S. patent application Ser. No. 13/791,338 to Brandmaier et al. and commonly-owned U.S. patent application Ser. No. 13/791,386 to Brandmaier et al.—each of which are incorporated by reference herein—describe, inter alia, techniques for collecting telematics data relating to the operation of a vehicle, detecting vehicle collision events, and automatically providing insurance information to participants involved in vehicle collisions. In addition, commonly-owned U.S. patent application Ser. No. 14/039,722 to Brandmaier et al.—also incorporated by reference herein—describes, inter alia, techniques for electronically exchanging insurance information using mobile computing devices.

Aspects of the present disclosure expand on the teachings of these commonly-owned applications and describe additional techniques for the automated exchange of insurance information in response to a collision event. In general, telematics data may be collected during the operation of a vehicle and analyzed to detect when a collision event has occurred. In response to detecting a collision event, a wireless communication device ("wireless device") may attempt to discover other wireless devices nearby that have also detected or otherwise received notification of a detected collision. If such a wireless device is discovered, an exchange of insurance information between the wireless devices may be initiated. Additional aspects will be appreciated with the benefit of the disclosures provided below.

The techniques for automatically exchanging insurance information described herein provide various advantages over the traditional pen-and-paper method of exchanging insurance information. Following a collision, drivers may be understandably embarrassed or upset. An automatic exchange of insurance information advantageously allows drivers to avoid leaving their vehicle and confronting the other driver. An automatic exchange of insurance information may also advantageously reduce the likelihood that a participant leaves the scene of a collision without providing or receiving the insurance information of the other driver. An automatic exchange of insurance information further advantageously facilitates the claims process by quickly and efficiently providing an insurance provider with the insurance information of the other drivers involved in the collision in the first notice of loss. Additional advantages will be appreciated with the benefit of disclosures provided in more detail below.

As used throughout the description, various terms may be used to refer to the entities and components involved or associated with automatically exchanging insurance information in response to a collision event. A participant in this context is an individual whose vehicle was involved in a collision. A participant may or may not be a customer of an insurance provider that provides insurance coverage. In some instances, participants may be customers of the same insurance provider while in other instances the participants may be customers of different insurance providers. An insurance provider may be referred to as an insurer, and a customer of the insurer may be referred to as an insured. The insurer may provide and operate an insurance system that stores information describing the insurance policies purchased by the insurance customers. Information related to and describing insurance policies is referred to in this description as insurance information. Insurance information may include, for example, the name of the insurance provider, an insurance customer number, the name of the insured, an insurance policy number, effective dates, and other types of insurance-related information that will be appreciated by those skilled in the art of providing insurance services. Where participants are insured by different insurance providers, one of those insurance providers may be referred to, for convenience, as a third-party insurance provider, e.g., a third-party insurer. The third-party insurer may operate a third-party insurance system that also stores information describing the insurance policies purchased by the insurance customers. Moreover collision events refer, for convenience, to events in which two moving vehicle collide with one another as well as events in which a moving vehicle allides with a stationary vehicle, e.g., a vehicle stopped at a traffic signal.

FIGS. **1-3** illustrate example scenarios in which insurance information may be automatically exchanged between wireless devices. In FIG. **1**, a collision between two vehicles **100** is illustrated. The wireless devices **102** that initiate the exchange of insurance information in FIG. **1** are the personal mobile computing devices **104** of the drivers involved in the collision. A mobile computing device **104** may be, for example, a mobile cellular telephone, a tablet computer, a palmtop computer, and other types of mobile computing devices that will be appreciated by those skilled in the art. The mobile computing devices **104**, in this example, are configured to collect telematics data during operation of the vehicles **100** and configured to analyze the telematics data to detect when a collision event occurs. In response to a collision event, the mobile computing devices **104** broadcast wireless communications **106** ("communications") throughout the vicinity **108** of the collision event in order to locate other wireless devices that have also detected a collision event in the vicinity of the collision event. Upon discovering another wireless device within the vicinity **108** that have also detected a collision event, the wireless computing devices **102** may initiate a wireless communication session with that wireless device. As shown by way of example in FIG. **1**, the mobile computing devices **104** have established a wireless communication session during which wireless communications **110** are exchanged. The communications **110** may include respective insurance information for the drivers involved in the collision. Due to the communications **110** exchanged between the mobile computing devices, the drivers may be able to exchange their respective insurance information without leaving their vehicles.

The wireless devices **102** may also be in signal communication with one or more insurance systems via a network **105**. The insurance systems may include an insurance system **107** operated by an insurance provider that insures one of the drivers as well as a third-party insurance system **109** operated by a third-party insurance provider that insures the other driver. As described in further detail below, the communications **110** exchange between the wireless devices **102** may include communications indicating how each wireless device may contact the insurance system **107** or the third-

party insurance system **109**. The network **105** may include one or more wired or wireless networks such as a cellular network, a wireless local area network, and the Internet.

In FIG. **2**, another collision between two vehicles **100** is illustrated. The wireless devices **102** that initiate the exchange of insurance information in FIG. **2**, however, are in-vehicle devices **112**, i.e., devices attached to or installed in the vehicles **100** themselves. The in-vehicle devices **112** may, for example, be configured to attach to an OBD-II port of a vehicle **100** and receive diagnostic information from the vehicle. An in-vehicle device **112** may also be installed in a vehicle **100** as a component of the vehicle. Like the mobile computing devices **104** of FIG. **1**, the in-vehicle devices **112** are configured to collect telematics data during operation the vehicles **100** and configured to analyze the telematics data to detect when a collision occurs. The in-vehicle devices **112** are also configured to broadcast communications **106** throughout the vicinity **108** of the collision event in response to a collision event in order to locate other wireless devices within the vicinity **108** that have also detected a collision event. The in-vehicle devices **112** may likewise initiate a wireless communication session with a wireless device discovered within the vicinity **108** of the collision event that has also detected a collision event. As shown by way of example in FIG. **2**, the in-vehicle devices **112** have established a wireless communication session during which communications **110** are exchanged. As noted above, the communications **110** may include the respective insurance information for the drivers involved in the collision.

In FIG. **3**, a further collision between two vehicles **100** is illustrated. In the configurations shown in FIG. **3**, however, the functionality for detecting a collision event and initiating an exchange of insurance information is split across multiple devices. In this example, the wireless computing devices **102** that initiate the exchange of insurance information are the personal mobile computing devices **114** of the drivers involved in the collision. In contrast to the example implementation illustrated in FIG. **1**, however, in-vehicle devices **116** are configured to collect and analyze telematics data during operation of the vehicles **100** in order to detect a collision event. The mobile computing devices **114** and the in-vehicle devices **116** may be in signal communication with each other and exchange wireless communications **118**. Upon detecting a collision event, an in-vehicle device **116** may transmit a communication **118** to a mobile computing device **114** as a collision notification. In response to receipt of a collision notification from the in-vehicle device **116**, the mobile computing device **114** may broadcast communications **106** throughout the vicinity **108** of the collision event as described above. As shown by way of example in FIG. **3**, the mobile computing devices **114** have each received a collision notification in respective communications **118** from the in-vehicle devices **116**. As also shown in FIG. **3**, the mobile computing devices **114** have established a communication session to exchange communications **110** that include respective insurance information for the drivers of the vehicles **100**.

It will be appreciated that the scenarios illustrated in FIGS. **1-3** are provided by way of example only. Additional and alternative scenarios will be appreciated with the benefit of this disclosure. In one alternative example, the wireless computing devices that exchange communications during a wireless communication session may include the personal mobile computing device of one of the drivers and an in-vehicle device at the vehicle of another one of the drivers. Furthermore, although only two wireless devices are shown in FIGS. **1-3**, it will be appreciated that a wireless device may discover multiple wireless devices that are located within the vicinity of the collision event and that have also detected a collision event. In such scenarios, the wireless devices may establish a wireless ad hoc communication network. The wireless ad hoc communication network may function as a mesh network to exchange insurance information among each of the wireless devices.

It will also be appreciated that additional types of information may be exchanged between wireless devices during a wireless communication session. The communications **110** may include, for example, the telematics data collected at the mobile computing devices **104** of FIG. **1**, the in-vehicle devices **112** of FIG. **2**, or the in-vehicle devices **116** of FIG. **3**. The in-vehicle devices **116** of FIG. **3** may transmit the collected telematics data to the mobile computing devices **114** via the communications **118**. The wireless devices may, in turn, provide the telematics data to an insurance system for fault determination or claims processing. Techniques for fault determination and claims processing using collected telematics data are described in commonly-owned U.S. patent application Ser. No. 13/791,338 to Brandmaier et al. and commonly-owned U.S. patent application Ser. No. 13/791,386 to Brandmaier et al., incorporated by reference herein.

Referring now to FIGS. **4**A-B, two respective examples of implementations of wireless communication devices configured to automatically exchange insurance information in response to a collision event are shown. FIG. **4**A illustrates a block diagram of one example of an implementation of a wireless communication device **200** that is configured to automatically initiate an exchange of insurance information in response to detection of a collision event. The wireless device **200**, in this example, includes a wireless communication module **202**, a telematics module **204**, a data store **206**, and a mobile application **207**. The data store **206**, in this example, stores telematics data **208** collected by the telematics device **204** as well as insurance information **210**. As described above, the insurance information **210** may include information that identifies an insurance customer and describes various aspects of an insurance policy purchased by the insurance customer.

The telematics module **204** may include hardware such as an accelerometer **212**, software, firmware, or a combination of such. The telematics module **204** may be configured to collect the telematics data **208** during operation of a vehicle and provide the telematics data to the data store **206** for storage. The telematics module **204** may also be configured to analyze the telematics data **208** collected in order to detect collision events involving the vehicle. As the telematics module **204** may include an accelerometer **212**, the telematics data **208** may thus include acceleration data generated by the accelerometer during operation of the vehicle. The telematics module **204** may analyze the acceleration data (e.g., at software or firmware) to determine whether a collision has occurred. The telematics module **204** may determine that a collision has occurred based on an observed change in acceleration, e.g., a rapid acceleration or a rapid deceleration. In some example implementations, the telematics module **204** may determine that a collision has occurred upon observing a change in velocity of around 8.0 kilometers per hour occurs within an interval of around 150 milliseconds, i.e., a change in velocity of around 4.97 miles per hour within an interval of around 0.15 seconds.

The telematics data **208** may also include positioning data generated by a positioning device (not shown) of the wireless device **200**. The positioning device may be, e.g., a GPS (Global Positioning System) module, and the positioning

data may be GPS data generated by the GPS module during operation of the vehicle. The telematics module **204** may be in signal communication with the GPS module and collect and analyze the GPS data generated. Accordingly a collision event may additionally or alternatively be based on an analysis of the GPS data. The GPS data may include, e.g., the speed of the vehicle. Accordingly the telematics module **204** may determine that a collision has occurred in response to a change in vehicle speed that correlates with a collision event.

Commonly-owned U.S. patent application Ser. No. 13/791,338 to Brandmaier et al. and commonly-owned U.S. patent application Ser. No. 13/791,386 (each incorporated by reference) describe additional techniques for collecting telematics data during operation of a vehicle and detecting vehicle collision events. In addition, commonly-owned U.S. patent application Ser. No. 14/188,046 to Bryer et al. and commonly-owned U.S. patent application Ser. No. 14/211,186 to Bryer et al. (each also incorporated by reference) describe particular techniques for collecting telematics data at mobile computing devices.

The mobile application **207** of the wireless device **200** may be configured facilitate various aspects associated with collecting telematics data during operation of a vehicle, analyzing telematics data to detect collision events, and exchanging information with other wireless communication devices in response to collision events. An insurance company may provide the mobile application **207** to a mobile application distribution platform for delivery and installation at the wireless device **200**.

The mobile application **207** may be in signal communication with the telematics module **204**. In some example implementations, the mobile application **207** may instruct the telematics module **204** to start collecting the telematics data **208**. In other example implementations, the mobile application **207** may instruct the telematics module to detect when movement of a vehicle has begun and start collecting the telematics data **208** in response. The mobile application **207** may be configured to instruct the telematics module **204** in response to user input received at the wireless device **200**. The telematics module **204** may automatically initiate collection of the telematics data in response to detecting movement that correlates with movement of a vehicle, e.g., a relatively large change in detected acceleration based on the acceleration data generated by the accelerometer **212**. The telematics module **204** may inform the mobile application **207** when collection of the telematics data **208** has started and stopped. As noted above, the telematics module **204** may be configured to analyze the telematics data **208** to detect collision events. Accordingly the telematics module **204** may also provide the mobile application **207** a collision notification in response to detecting a collision event based on an analysis of the telematics data **208**.

In some example implementations, however, the telematics module **204** may simply collect the telematics data **208**, and the mobile application **207** may be configured to analyze the telematics data to detect collision events. In some example implementations, the telematics module **204** may be a component or sub-module of the mobile application **207** and in signal communication with components of a wireless device such as an accelerometer.

The mobile application **207** may also provide a user interface that indicates a current mode at the wireless device **200**. Modes may include: a telematics data collection mode; a device discovery mode in which the wireless device **200** polls for other wireless devices in the vicinity of a collision event that have also detected a collision event; a handshake mode in which the wireless device establishes a wireless communication session with another wireless device; and an information exchange mode in which the wireless devices exchange information, e.g., insurance information and telematics data. These examples modes will be discussed in further detail below. The interface may also present visual or audible notifications that another wireless device has been discovered, that a wireless communication session has been established, that information has been received from the other wireless device, and that information has been delivered to the other wireless device.

As described in further detail below, the wireless device **200** may activate a device discovery mode in response to detecting a collision event. The wireless device **200** may activate the discovery mode to discover other wireless devices in the vicinity of the collision event that have also detected a collision event. When the device discovery mode is active, the wireless device **200** broadcasts wireless communications and listening for wireless communications broadcast in the vicinity of the collision event. The communications broadcast by the wireless device **200** may announce that the wireless device has detected a collision event. The wireless device **200** may include in the communications broadcast a timestamp indicating the date and time the collision was detected.

Other wireless devices configured with the same functionality as wireless device **200** may be located within the vicinity of the collision event, e.g., wireless communication devices **214**. Accordingly those other wireless communication devices **214** may also initiate a device discovery mode in response to detecting a collision event, broadcasting wireless communications announcing detection of the collision event and listening for wireless communications broadcast in the vicinity of the collision event. In response to receipt during the device discovery mode of a wireless communication announcing the detection of a collision event, the wireless devices **200** and **214** may initiate a handshake procedure to establish a wireless communication session. The handshake procedure may include broadcasting and receiving synchronize requests and acknowledgements. Additional details with respect to implementing the handshake procedure will be appreciated by those skilled in the art of telecommunications. Furthermore discovering other wireless devices in the vicinity of a collision event and establishing a wireless communication session between devices may be referred to as pairing those wireless devices.

The wireless communication module **202** may be configured to send and receive the wireless communications. In addition the wireless communication module **202** may include multiple sub-modules for handling various types of wireless communications. As shown in FIG. **4**A, for example, the wireless device **200** is in signal communication with another wireless communication device **214** which may be located in the vicinity of a collision event. Accordingly one of the sub-modules of the wireless communication module **202** may be configured for exchanging wireless communications **216** with the wireless device **214**. As noted above, the communications **216** may include insurance information, telematics data, and other types of information that will be appreciated with the benefit of this disclosure.

As noted above, the wireless device **200** is configured to broadcast wireless communications within the vicinity of a collision event. As used in this description, the vicinity of a collision event refers to an area surrounding the vehicle defined by the useful range of wireless communications broadcast by a short-range device, e.g., a wireless device having an effective radiated power (ERP) of around 25

milliwatts to around 100 milliwatts (mw). Those skilled in the art of telecommunications will appreciate that an area defined by the useful range of wireless communications broadcast by a wireless communication module having an ERP of around 25-100 mw would have an approximate diameter of a few hundred meters. Due to the relatively short range of the wireless communications **216**, the wireless communications sessions and ad hoc networks established by the wireless devices **200** and **214** may be akin to "near me" area networks (NANs) or personal area networks (PANs).

Accordingly any wireless communication standards suitable for broadcasting wireless communications in the vicinity of the collision event may be selectively employed. Such standards may include those that operate in the 2.4 GHz ISM radio band or the 5 GHz U-NIII radio band. Some example of wireless standards that may be selectively employed include Wi-Fi (e.g., the IEEE 802.11 or 802.15 standard), Wi-Fi Direct, Bluetooth, ZigBee, Wireless USB, Z-Wave, and other standards for wireless communication that will be appreciated by those skilled in the art of telecommunications.

The wireless communications **216** exchanged between the devices **200** and **214** in the vicinity of the collision event may include various types of information. As described in further detail below, the communications **216** may include wireless communications announcing that the devices **200** and **214** have detected a collision event. Upon receiving a communication **216** announcing detection of a collision event, the devices **200** and **214** may then exchange communications **216** during a perform a handshake procedure to establish a wireless communication session.

The communications **216** exchanged during the session may include insurance information, telematics information, and other types of information as described above. Various formats for the information exchanged may be selectively employed. In some example implementations the information and data may be transmitted as a delimited list of values or as a set of values annotated using a mark-up language (e.g., XML). Various file formats may also be employed. In some example implementations, the information may be transmitted as raw text, in a document file (e.g., .txt, .doc, .pdf) or in an image file (e.g., .gif, .jpg, .png).

As also shown in FIG. **4**A, the wireless device **200** is in signal communication with an insurance system **218** via a network **220**. The network **220** may include a wireless cellular network, and the wireless communications **222** exchanged with the insurance system **218** may thus include wireless cellular communications. Accordingly one of the sub-modules of the wireless communication module **202** may be configured for sending and receiving wireless cellular communications, e.g., where the wireless device **200** is a mobile cellular telephone.

The insurance system **218** may include a data store **224** that stores the insurance information **210** as described above. In some example implementations, the data store **224** of the insurance system **218** may permanently store the insurance information **210** and the data store **206** of the wireless computing device **200** may temporarily store the insurance information **210** for the purposes of exchanging insurance information with another wireless device **214**. In these example implementations, the wireless device **200** may submit a request to the insurance system **218** for the insurance information associated with an operator of the wireless device. In response to the request, the insurance system **218** may retrieve the insurance information from the data store **224** and provide it to the wireless device **200**. The communications **222** may respectively include the request sent to the insurance system **218** and the insurance information **210** sent back to the wireless device **200** in response. The request may include a unique identifier (e.g., a customer number, insurance policy number) that the insurance system **218** utilizes to retrieve the appropriate insurance information **210**.

In other example implementations, both the wireless device **200** and the insurance system **218** may permanently store the insurance information **210**. In these other example implementations, the wireless device **200** may receive the most up-to-date insurance information from the insurance system **218**. The wireless device **200** may periodically request whether new insurance information is available from the insurance system **218**. Additionally or alternatively the insurance system may push new insurance information to the wireless device **200** when it becomes available at the insurance system. Techniques for maintaining up-to-date insurance information are described in commonly-owned U.S. patent application Ser. No. 14/022,552 to Tye et al., incorporated by reference.

The communications **222** from the wireless device **200** to the insurance system **218** may also include the telematics data **208** collected by the telematics module **204** as well as insurance information and telematics data received from another wireless device **214** during a wireless communication session. A wireless communication **222** notifying the insurance system **218** that a collision event has been detected may represent the first notice of loss to the insurance provider that operates the insurance system. In response to receipt of a wireless communication **222** that includes a collision notification, the insurance system **218** may, e.g., create a placeholder insurance claim in response. The insurance system **218** may also pre-populate the placeholder insurance claim with customer information and insurance information stored at the insurance system or received from the wireless device **200**. The insurance provider may thus leverage the pre-populated insurance claim should the participant subsequently file a claim for the collision event. The insurance provider may utilize the telematics data **208** received during claims processing, e.g., to determine which participant was at fault, to determine an order for the collision events (e.g., based on the timestamps of collision notifications received), and perform other types of analyses on the telematics data that will be appreciated by those skilled in the art of insurance claims processing. The insurance policy that insures the participant may authorize the insurance provider to utilize the telematics data **208** received during subsequent claims processing.

As noted above, the insurance system **218** may be operated by an insurance provider that insures the participant associated with the wireless communication device **200**. Alternatively the insurance system **218** may be a third-party insurance system that insures the other participant in the collision event. In this alternative scenario, the communications **216** exchanged between the wireless devices **200** and **214** may include respective contact information for each of the insurance providers. Accordingly the wireless communications **222** from the wireless device **200** may include communications to a third-party insurance provider to notify that insurance provider of the collision event and provider the insurance information **210** for the participant associated with the wireless device **200**.

Referring now to FIG. **4**B, another example of an implementation of a wireless communication device **226** is shown. In FIG. **4**B, the functionality associated with collecting the telematics data **208** and exchanging the insurance

information **210** is distributed across multiple devices as described above with reference to FIG. **3**. As seen in FIG. **4**B, a wireless communication device **226** is in signal communication with a telematics device **228** installed at or attached to a vehicle **100**. The telematics device **228**, in this example, includes the telematics module **204** as well as a data store **230** that stores the telematics data **208** collected by the telematics module. The telematics module **204** of FIG. **4**B likewise includes an accelerometer **212** that generates acceleration data during operation of the vehicle which is stored at the data store **230** as the telematics data **208**. The telematics device **228** may be configured to initiate collection of the telematics data **208** in response to ignition of the vehicle **100**. Techniques for collecting telematics data at a device installed at or attached to a vehicle are described in commonly-owned U.S. patent application Ser. No. 13/791,338 and U.S. patent application Ser. No. 13/791,386, each of which are incorporated by reference.

As noted above, the wireless device **226** and the telematics device **228** may be in signal communication with each other via wireless communications **232**. The communications **232** may include wireless communications that establish a communication session during a handshake procedure. The communications **232** may also include wireless communications to provide the telematics data **208** from the telematics device **228** to the wireless device **226**. The wireless device **226** may similarly include a mobile application **207** as described above. The mobile application **207** in FIG. **4**B, however, may be in signal communication with the wireless communication module **202** to exchange the communications **232** with the telematics device **228**. The wireless device **226** may also establish a wireless communication session with wireless communication devices **214** discovered during a device discovery mode following detection of a collision event. As described above, the wireless devices **226** and **214** may exchange communications **216** to establish the wireless communication session and exchange information such as insurance information and telematics data.

Like the wireless device **200** of FIG. **4**A, the wireless device **226** may also be in signal communication with an insurance system **218** via a network **220**, e.g., a cellular network. Wireless communications **222** exchanged between the wireless device **226** and the insurance system may likewise include: communications to transmit telematics data **208** collected by the telematics device **228** or telematics data received from another wireless device **214**; communications to request and receive insurance information **210** from the insurance system **218**; and other types of communications that will be appreciated with the benefit of this disclosure.

In an alternative implementation similar to that of FIG. **4**B, the data store **230** of the telematics device **228** may also store the insurance information **210**. In this alternative example, the wireless device **226** and the telematics device **228** may perform a handshake procedure to pair with each other and establish a wireless communication session. The wireless device **226** and the telematics device **228** may perform the handshake procedure, e.g., in response to ignition of the vehicle where the telematics device polls for nearby devices. Once paired the wireless device **226** may transmit the insurance information **210** to the telematics device **228** via the communication session. The telematics device **228** may store the insurance information **210** received at the data store **230**. In this way, the insurance information **210** shared in response to a collision event may be insurance information for an insurance policies that insure the individual drivers rather than insurance policies that insure the vehicle. In some example implementations, the telematics device **228** may clear the data store **230** of any telematics data **208** and insurance information **210** when the vehicle is shut off.

With reference now to FIG. **4**C, a further example of an implementation of a wireless computing device **234** is shown. As seen in FIG. **4**C, the wireless communication device **234**, in this example, includes a wireless communication module **202**, a telematics module **204**, a data store **206**, and a mobile application **207**. The wireless communication module **202**, telematics module **204**, and data store **206** may have functionality similar to that described above with reference to FIG. **4**A. The data store **206** may store the telematics data **208**, and the telematics module **204** may include an accelerometer that collects acceleration data to be stored as telematics data. Furthermore the wireless device **234** may establish a wireless communication session with one or more wireless devices **214** in the vicinity of a collision event and exchange wireless communications **216** as described above.

In the example implantation shown in FIG. **4**C, however, the wireless device **234** does not store the insurance information **210**. Instead the insurance information **210**, in this example, is only stored at the data store **224** of the insurance system **218**. The wireless device **234**, in this example, initiates the exchange of insurance information with another wireless device **214** by requesting that the insurance system **218** transmit the insurance information **210** to the wireless device **214** (e.g., as a text message) or to another location associated with that wireless device (e.g., an email address of the operator of that wireless device). The wireless device **234** may submit the request to the insurance system **218** in one of the communications **222** to the insurance system.

In this example, the communications **216** exchanged between the wireless devices **234** and **214** during a wireless communication session may include contact information or identification information that may be utilized to lookup contact information. Contact information may include, for example, a mobile telephone number for a wireless device or an email address for the operator of the wireless device. In response to receipt of contact information from the wireless device **214**, the wireless device **234** may forward the contact information to the insurance system **218** in one of the wireless communications **222**. The wireless device **234** may, for example, include the contact information received from the wireless device **214** in the request submitted to the insurance system **218**. In response to receipt of the request and the contact information, the insurance system **218** may retrieve the insurance information **210** and provide it to the wireless device **214** or to another location associated with the wireless device. Where the contact information is a mobile telephone number, the insurance system **218** may provide the insurance information **210** to the wireless device **214** as, e.g., a text message, an automated voice message, or other type of message that utilizes a mobile phone number to reach wireless devices. Where the contact information is an email address, the insurance system **218** may provide the insurance information **210** in an email to that email address. Additional and alternative types of contact information may be selectively employed, e.g., screennames for chat programs where the insurance information **210** is provided in a chat message to the screenname provided.

Identification information may include any type of information that uniquely identifies the operator of a wireless device such as wireless devices **234** and **214**. Accordingly, identification information may include, e.g., an insurance

customer number, an insurance policy number, and other types of unique identifiers that will be appreciated by those skilled in the art. It will be appreciated that a mobile telephone number may also be utilized to determine the identity of the operator and may thus also be considered as identification information.

The insurance system **218** may utilize identification information to determine the identity of an individual associated with that information as well as contact information for that individual. The insurance system **218** may, for example, perform a lookup in a customer database using the identification information received. The customer database may store customer records that may be retrieved using the identification information received. The customer records may include contact information (e.g., a mobile telephone number, email address, etc.) for the insurance customer. If the insurance system **218** locates a matching customer record, then the insurance system may provide the insurance information **210** using the corresponding contact information as described above.

As noted above participants in a collision event may be insured by different insurance providers. Therefore the insurance system **218** may not store customer records for individuals insured by other insurance providers. The insurance system **218**, however, may be in signal communication with the insurance systems of other insurance providers and configured to query other insurance providers if a matching customer record cannot be found using the identification information provided. The query to the insurance system of a third-party insurance provider may include the identification information received from the wireless device **234**. In some example implementations, the third-party insurance system may respond to the insurance system **218** with the contact information associated with the identification information if a matching customer record is located at a customer database of the third-party insurance system. In other example implementations, the query to the third-party insurance system may include the insurance information **210** with a request to transmit the insurance information if a matching customer record is located at the third-party insurance system. In this other example implementation, insurance providers may advantageously avoid sharing customer information with other insurance providers. Instead the insurance systems may simply receive identification information used to lookup the contact information as well as the insurance information to share.

In FIG. **5**, a flowchart **500** of example method steps for automatically exchanging insurance information is shown. The steps shown in FIG. **5** may be performed by one or more of the components described above with reference to FIGS. **4**A-C. A driver may activate a wireless communication device (block **502**) that is configured to collect and analyze telematics data to determine whether a collision event has occurred and, if so, discover other wireless devices in the vicinity of the collision event in order to initiate an exchange of insurance information. As described above, the wireless communication device may include or otherwise be in signal communication with a telematics module configured to collect the telematics data (e.g., acceleration data or GPS data) during operation of the vehicle. A telematics data collection mode may be activated (block **504**) during which the telematics module may collect the telematics data. The telematics data collection mode may be manually activated in response to user input received at the wireless device or automatically activated in response to determining that vehicle ignition has occurred or that the vehicle has begun moving.

During operation of the vehicle, the telematics module may collect the telematics data (block **506**), and the telematics data may be analyzed to determine whether a collision event has occurred (block **508**). As noted above, the telematics module or a mobile application at the wireless device may be configured to analyze the telematics data and determine whether a collision event has occurred. In some example implementations, the telematics module or the wireless device may provide the telematics data to an insurance system that analyzes the telematics data and responds with a collision notification if a collision event is detected. If the analysis of the telematics data does not indicate that a collision event has occurred (block **510**: N), then the telematics module may continue to collect the telematics data during operation of the vehicle (block **506**). If, however, the analysis of the telematics data does indicate that a collision event has occurred (block **510**: Y), then the wireless device may initiate a device discovery mode (block **512**) to discover other wireless devices in the vicinity of the collision event that have also detected a collision event.

During the device discovery mode, the wireless device may broadcast wireless communications in the vicinity of the collision event announcing that a collision event has been detected (block **514**). The wireless device may broadcast the wireless communications announcing detection of the collision event at a predetermined periodic interval, e.g., every 100, 250, 500, or 1000 milliseconds (ms). After broadcasting one or more wireless communications announcing the collision event, the wireless device may listen for any acknowledgment responses broadcast by other wireless devices in response to receipt of the collision notification communication (block **516**). If the wireless device does not receive an acknowledgment response (block **518**: N), then the wireless device may continue to broadcast the collision notification communications (block **514**). In some example implementations the wireless device may be configured to cease broadcasting the collision notification communications after a predetermined duration, e.g., 60, 120, 300, or 600 seconds.

The wireless device may also listen for communications broadcast by other wireless devices in the vicinity of the collision event indicating that those wireless devices have also detected a collision event (block **520**) during the device discovery mode. If the wireless device does not receive any collision notification communications (block **522**: N), then the wireless device may continue to listen for any such communications (block **520**) for a predetermined period of time, e.g., 60, 120, 300, or 600 seconds. If the wireless device has not received an acknowledgement response or a collision notification communication after that predetermined period of time, the wireless device may terminate the device discovery mode.

If, however, the wireless device receives an acknowledgement response (block **518**: Y) or receives a collision notification communication (block **522**: Y), the wireless device may activate a handshake mode with another wireless device in order to establish a wireless communication session with that wireless device (block **524**). Once the wireless communication is established, each connected wireless device may active an information exchange mode to exchange information via the wireless communication session (block **526**). As described above, the information exchanged may include one or more of: insurance information, telematics data, contact information, identification information, and so forth. As also described above, the wireless devices themselves may exchange the insurance information or the wireless devices may request that an insurance system provide the

insurance information to the operator of the other wireless device, e.g., at the other wireless device itself or using contact information included in the request. It will thus be appreciated with the benefit of this disclosure that various implementations may be selectively employed to automatically exchange insurance information in response to a collision event.

Referring to FIG. **6**A, an example of an implementation of a suitable operating environment in which various aspects of the disclosure may be implemented is shown. The operating environment is only one example of a suitable operating environment and is not intended to suggest any limitation as to the scope of use or functionality of the disclosure. The operating environment may be comprised of one or more data sources **661**, **663** in communication with a computing device **601**. The computing device **601** may use information communicated from the data sources **661**, **663** to generate values that may be stored in a database format. In one embodiment, the computing device **601** may be a high-end server computer with one or more processors **603** and one or more memories **615** for storing and maintaining the values generated. The memories **615** storing and maintaining the values generated need not be physically located in the computing device **601**. Rather, the memories (e.g., ROM **607**, RAM **605**, flash memory, hard drive memory, RAID memory, and the like) may be located in a remote data store (e.g., a memory storage area) physically located outside the computing device **601**, but in communication with the computing device **601**.

A personal computing device **665** (e.g., a personal computer, tablet PC, handheld computing device, personal digital assistant, mobile device, etc.) may communicate with the computing device **601**. Similarly, a mobile device **667** (e.g., a mobile cellular telephone, palmtop computer, tablet computer, laptop computer, and the like) may communicate with the computing device **601**. The communication between the computing device **601** and the other devices **665**, **667** may be through wired or wireless communication networks or direct links. One or more networks may be in the form of a local area network (LAN) that has one or more of the well-known LAN topologies and may use a variety of different protocols, such as Ethernet. One or more of the networks may be in the form of a wide area network (WAN), such as the Internet. The computing device **601** and other devices (e.g., devices **665**, **667**) may be connected to one or more of the networks via twisted pair wires, coaxial cable, fiber optics, radio waves or other media. The term "network" as used herein and depicted in the drawings should be broadly interpreted to include not only systems in which devices or data sources are coupled together via one or more communication paths, but also stand-alone devices that may be coupled, from time to time, to such systems that have storage capability.

In another embodiment in accordance with aspects of the disclosure, a mobile device **667** may operate in a stand-alone manner by locally storing some of the database of values stored in the memories **615** of the computing device **601**. For example, a mobile device **667** (e.g., a mobile cellular telephone) may be comprised of a processor, memory, input devices **668**, and output devices **669** (e.g., keypad, display screen, speaker, and the like). The memory may be comprised of a non-volatile memory that stores a database of values. Therefore, the mobile device **667** need not communicate, in one example, with a computing device **601** located at a remote location. Rather, the mobile device **667** may behave in a stand-alone manner and use its processor to perform particular steps disclosed herein. If desired, the mobile device **667** may be refreshed with an updated database of values after a period of time.

In yet another embodiment in accordance with aspects of the disclosure, a personal computing device **665** may operate in a stand-alone manner by locally storing some of the database of values stored in the memory of the computing device. For example, a personal computing device **665** may be comprised of a processor, memory, input device (e.g., keypad, CD-ROM drive, DVD drive, etc.), and output device (e.g., display screen, printer, speaker, etc.). The memory may be comprised of CD-ROM media. Therefore, the personal computing device **665** may use the input device to read the contents of the CD-ROM media. Rather, the personal computing device **665** may behave in a stand-alone manner and use its processor to perform particular steps disclosed herein. If desired, the personal computing device may be provided with an updated database of values (e.g., in the form of updated CD-ROM media) after a period of time.

The data sources **661**, **663** may provide information to the computing device **601**. In one embodiment in accordance with aspects of the disclosure, a data source may be a computer which contains memory storing data and is configured to provide information to the computing device **601**. Some examples of providers of data sources in accordance with aspects of the disclosure include, but are not limited to, insurance companies, third-party insurance data providers, government entities, state highway patrol departments, local law enforcement agencies, state departments of transportation, federal transportation agencies, traffic information services, road hazard information sources, construction information sources, weather information services, geographic information services, vehicle manufacturers, vehicle safety organizations, and environmental information services. For privacy protection reasons, in some embodiments of the disclosure, access to the information in the data sources **661**, **663** may be restricted to only authorized computing devices **601** and for only permissible purposes. For example, access to the data sources may be restricted to only those persons or entities that have signed an agreement (e.g., an electronic agreement) acknowledging their responsibilities with regard to the use and security to be accorded this information.

The computing device **601** may use the information from the data sources **661**, **663** to generate values that may be used to facilitate the sharing and exchange of insurance information and respond to messages indicating the sharing or exchange of insurance information. Some examples of the information that the data sources may provide to the computing device **601** include, but are not limited to, accident information, geographic information, and other types of information useful to share and exchange insurance information as well as provide other insurance-related services.

FIG. **6**B illustrates a block diagram of a computing device (or system) **601** in the communication system **600** that may be used according to one or more illustrative embodiments of the disclosure. The device **601** may have a processor **603** for controlling overall operation of the device **601** and its associated components, including RAM **605**, ROM **607**, input/output (I/O) module **609**, and memory **615**. The computing device **601**, along with one or more additional devices (e.g., terminals **641**, **651**) may correspond to any of multiple systems or devices, such as a system for facilitating and responding to the sharing and exchange of insurance information (FIG. **2**) as described herein.

I/O module **609** may include a microphone, keypad, touch screen, and/or stylus through which a user of the computing device **601** may provide input, and may also include one or more of a speaker for providing audio output and a video

display device for providing textual, audiovisual or graphical output. Software may be stored within memory **615** or storage to provide instructions to processor **603** for enabling device **601** to perform various functions. For example, memory **615** may store software used by the device **601**, such as an operating system **617**, application programs **619**, and an associated internal database **621**. Processor **603** and its associated components may allow the system to execute a series of computer-readable instructions to, e.g., collect and analyze telematics data, discover other wireless devices in the vicinity of a collision event, and initiate an exchange of information with such devices.

The system may operate in a networked environment supporting connections to one or more remote computers, such as terminals **641** and **651**. The terminals **641** and **651** may be personal computers, servers (e.g., web servers, database servers), or mobile communication devices (e.g., vehicle telematics devices, on-board vehicle computers, mobile phones, portable computing devices, and the like), and may include some or all of the elements described above with respect to the system **601**. The network connections may include a local area network (LAN) **625** and a wide area network (WAN) **629**, and a wireless telecommunications network **633**, but may also include other networks. When used in a LAN networking environment, the system may be connected to the LAN **625** through a network interface or adapter **623**. When used in a WAN networking environment, the system **601** may include a modem **627** or other means for establishing communications over the WAN **629**, such as network **631** (e.g., the Internet). When used in a wireless telecommunications network **633**, the system **601** may include one or more transceivers, digital signal processors, and additional circuitry and software for communicating with wireless computing devices **641** (e.g., mobile phones, vehicle telematics devices) via one or more network devices **635** (e.g., base transceiver stations) in the wireless network **633**.

It will be appreciated that the network connections shown are illustrative and other means of establishing a communications link between the computers may be used. The existence of any of various network protocols such as TCP/IP, Ethernet, FTP, HTTP and the like, and of various wireless communication technologies such as GSM, CDMA, WiFi, and WiMAX, is presumed, and the various computing devices and system components described herein may be configured to communicate using any of these network protocols or technologies.

Additionally, one or more application programs **619** used by the system may include computer-executable instructions (e.g., telematics analysis programs or modules, device discovery programs or modules, information exchange programs or modules, etc.) for collecting and analyzing telematics data, discovering other wireless devices in the vicinity of a collision event, initiating an exchange of information with such devices, and performing other related functions as described herein. The computer-executable instructions may be stored on computer-readable media which, as used in this disclosure, refers to all types of computer-readable media with the sole exception being a transitory propagating signal.

While the disclosure has been described with respect to specific examples including presently illustrative modes of carrying out the disclosure, a person having ordinary skill in the art, after review of the entirety disclosed herein, will appreciate that there are numerous variations and permutations of the above-described systems and techniques that fall within the spirit and scope of the disclosure.

What is claimed is:

1. A computer-implemented method comprising:

generating, at a first wireless computing device during operation of a vehicle, first vehicle operation data describing operation of the vehicle;

detecting, by the first wireless computing device, a collision event involving the vehicle based on the first vehicle operation data including an observed change in acceleration of the vehicle;

establishing, by the first wireless computing device, a communication session with an insurance system;

receiving, by the first wireless computing device and from the insurance system, first insurance information;

wherein detection of the collision event activates the first wireless computing device to initiate a discovery mode to determine whether a second wireless computing device is located in a vicinity of the collision event and also detected at least one collision event, the discovery mode including broadcasting, by the first wireless computing device, of an indication that the collision event has occurred and a date and time of the collision event;

discovering, by the first wireless computing device, a second wireless computing device, the discovering including receiving, in response to the broadcasting and by the first wireless computing device, an acknowledgement response from the second wireless computing device;

responsive to discovery of the second wireless computing device:

activating a handshake mode between the first wireless computing device and the second wireless computing device to establish a communication session between the first wireless computing device and the second wireless computing device;

initiating transmission by the first wireless computing device to the second wireless computing device, of the first insurance information and at least a portion of the first vehicle operation data,

receive, from the second wireless computing device, second insurance information and second vehicle operation data, and

transmit, to the insurance system, third vehicle operation data comprising the second vehicle operation data and at least a portion of the first vehicle operation data;

identify, by the insurance system, an at-fault participant for the collision event based on the third vehicle operation data.

2. The computer-implemented method of claim **1** wherein:

the broadcast, by the first wireless computing device, includes an identifier associated with an operator of the first wireless computing device.

3. The computer-implemented method of claim **1** wherein:

the discovery mode further comprises receiving, at the first wireless computing device, a wireless communication from the second wireless computing device indicating that the second wireless computing device has detected at least one collision event.

4. The computer-implemented method of claim **1** wherein:

the first wireless computing device initiates transmission by transmitting, to the insurance system, a request comprising an identifier associated with the second wireless computing device; and

receipt of the request causes the insurance system to transmit the first insurance information to the second wireless computing device.

5. The computer-implemented method of claim **1** wherein:

establishing the communication session between the first wireless computing device and the second wireless computing device activates the first wireless computing device to:

transmit, to the second wireless computing device during the communication session between the first wireless computing device and the second wireless computing device, at least a portion of the first vehicle operation data, and

receive, from the second wireless computing device during the communication session between the first wireless computing device and the second wireless computing device, the second vehicle operation data.

6. The computer-implemented method of claim **1** wherein:

the insurance system is associated with an insurance provider that insures an operator associated with the first wireless computing device.

7. The computer-implemented method of claim **1** wherein:

receipt of the third vehicle operation data further causes the insurance system to identify an order in which a plurality of collision events occurred based on the third vehicle operation data.

8. The computer-implemented method of claim **1** wherein:

the first vehicle operation data comprises acceleration data generated by an accelerometer of the first wireless computing device; and

detection of the collision event is based on an analysis of the acceleration data at the first wireless computing device.

9. A wireless computing device comprising:

one or more processors; and

memory storing computer-readable instructions that, when executed by one of the processors, cause the wireless computing device to:

generate, during operation of a vehicle, vehicle operation data describing operation of the vehicle;

detect a collision event involving the vehicle based on the vehicle operation data including an observed change in acceleration;

establish a communication session with an insurance system;

receive, from the insurance system, first insurance information;

responsive to detection of the collision event, initiate a discovery mode in order to determine whether another wireless computing device within a vicinity of the collision event has also detected at least one collision event, the discovery mode including broadcasting an indication that a collision event has occurred and a date and time of the collision event;

discovering the other wireless computing device, the discovering including receiving, in response to the broadcasting, an acknowledgement response from the other wireless computing device;

responsive to discovering the other wireless computing device:

activating a handshake mode between the wireless computing device and the other wireless computing device to establish a communication session between the wireless computing device and the other wireless computing device;

initiating an exchange of the first insurance information and vehicle operation data with the other wireless computing device; and

transmitting, to the insurance system, the exchanged vehicle operation data;

wherein receipt of the exchanged vehicle operation data causes the insurance system to identify an at-fault participant for the collision event based on the exchanged vehicle operation data.

10. The wireless computing device of claim **9** wherein:

the discovery mode further comprises broadcasting, at a periodic interval, individual wireless communications that indicate the wireless computing device has detected the collision involving the vehicle.

11. The wireless computing device of claim **9** wherein:

the discovery mode further comprises receiving a wireless communication from the other wireless computing device indicating that the other wireless computing device has detected at least one collision event.

12. The wireless computing device of claim **9** wherein:

the instructions, when executed by the one or more processors, further cause the wireless computing device to, responsive to detection of the collision event,

transmit, to the insurance system, a request comprising an identifier associated with the other wireless computing device;

wherein receipt of the request causes the insurance system to transmit insurance information associated with an operator of the wireless computing device to the other wireless computing device.

13. The wireless computing device of claim **9** further comprising:

an accelerometer; and

wherein the vehicle operation data comprises acceleration data generated by the accelerometer.

14. The wireless computing device of claim **9** further comprising:

a wireless transceiver having an effective radiated power of around 25 milliwatts to around 100 milliwatts.

15. The computer-implemented method of claim **1** wherein:

receipt of the third vehicle operation data at the insurance system further causes the insurance system to automatically create an insurance claim and automatically populate the insurance claim with information associated with an individual associated with the first wireless computing device.

16. The wireless computing device of claim **9**, wherein:

receipt of the exchanged vehicle operation data at the insurance system further causes the insurance system to automatically create an insurance claim and automatically populate the insurance claim with information associated with an individual associated with the wireless computing device.

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