US008380161B2

(12) **United States Patent**
Ewell, Jr.

(10) **Patent No.: US 8,380,161 B2**
(45) **Date of Patent: *Feb. 19, 2013**

(54) **APPARATUS, SYSTEM, AND METHOD FOR DISABLING A MOBILE COMMUNICATOR**

(75) Inventor: **Robert C. Ewell, Jr.**, Ballston Spa, NY (US)

(73) Assignee: **Mobile Communication Technologies, LLC**, Houston, TX (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **13/163,122**

(22) Filed: **Jun. 17, 2011**

(65) **Prior Publication Data**

US 2011/0244825 A1 Oct. 6, 2011

Related U.S. Application Data

(60) Division of application No. 11/832,432, filed on Aug. 1, 2007, now abandoned, and a continuation-in-part of application No. 10/908,377, filed on May 10, 2005, now Pat. No. 7,590,405.

(51) **Int. Cl.**
H04M 11/04 (2006.01)

(52) **U.S. Cl.** **455/404.1**; 455/404.2; 455/456.1; 455/565

(58) **Field of Classification Search** 455/404.1, 455/404.2, 456.1–457, 565
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,844,544	A	12/1998	Kahn et al.
5,886,683	A	3/1999	Tognazzini et al.
5,892,447	A	4/1999	Wilkinson
6,108,532	A	8/2000	Matsuda et al.
6,115,607	A	9/2000	Holcman
6,282,553	B1	8/2001	Flickner et al.
6,377,813	B1	4/2002	Kansakoski et al.
6,496,703	B1	12/2002	Da Silva
6,556,810	B2	4/2003	Suzuki
6,633,762	B1	10/2003	Rauscher
6,633,950	B1	10/2003	Brown et al.
6,636,732	B1	10/2003	Boling et al.
6,662,023	B1	12/2003	Helle

(Continued)

FOREIGN PATENT DOCUMENTS

JP	2005303384	A	10/2005

OTHER PUBLICATIONS

Application No. PCT/US2010/060014, International Search Report and the Written Opinion of the International Searching Authority, or the Declaration dated Mar. 10, 2011, 11 pages.

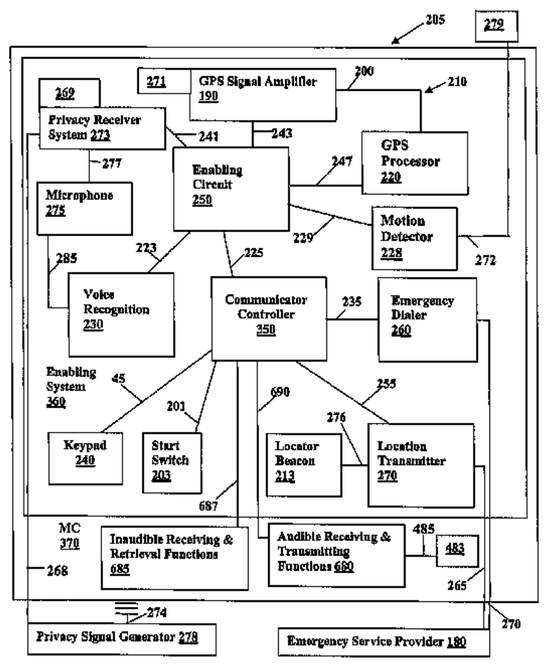
(Continued)

Primary Examiner — Ariel Balaoing
Assistant Examiner — Yungsang Lau
(74) *Attorney, Agent, or Firm* — Schmeiser, Olsen & Watts, LLP

(57) **ABSTRACT**

Provided is a mobile communicator apparatus comprising a locational tracking unit and a disabling circuit. The locational tracking unit determines the location of the mobile communicator. The disabling circuit is configured to change the state of the mobile communicator from an enabled state, wherein the audible receiving and transmitting functions of the mobile communicator are enabled, to a disabled state, wherein the audible receiving and transmitting functions of the mobile communicator are disabled when the location of the mobile communicator as determined by the locational tracking unit satisfies the at least one condition. Also provided is a corresponding mobile communicator disabling system comprised of a mobile communicator apparatus and a network of signal transceivers and a corresponding method for disabling a mobile communicator apparatus.

20 Claims, 13 Drawing Sheets



U.S. PATENT DOCUMENTS

6,687,497	B1	2/2004	Parvulescu et al.
6,690,940	B1	2/2004	Brown et al.
6,694,143	B1	2/2004	Beamish et al.
6,771,946	B1	8/2004	Oyaski
6,823,199	B2	11/2004	Gough
6,871,063	B1	3/2005	Schiffer
6,934,547	B2	8/2005	Suzuki
6,967,580	B1	11/2005	Schulze
6,973,333	B1	12/2005	O'Neil
7,065,349	B2	6/2006	Nath et al.
7,088,225	B2	8/2006	Yoshioka
7,113,170	B2	9/2006	Lauper et al.
7,123,874	B1	10/2006	Brennan
7,187,953	B2	3/2007	Bauchot et al.
7,308,247	B2	12/2007	Thompson et al.
7,343,148	B1	3/2008	O'Neil
7,505,784	B2	3/2009	Barbera
7,590,405	B2	9/2009	Ewell, Jr.
7,719,520	B2	5/2010	Singh et al.
7,762,665	B2	7/2010	Vertegaal et al.
2001/0051514	A1	12/2001	Lindholm
2002/0090919	A1	7/2002	Hofman
2002/0128000	A1	9/2002	do Nascimento, Jr.
2002/0164979	A1	11/2002	Mooney et al.
2002/0173301	A1	11/2002	Ikeda
2002/0193107	A1	12/2002	Nascimento, Jr.
2002/0198005	A1	12/2002	Hilton et al.
2003/0045322	A1	3/2003	Baer et al.
2003/0050039	A1	3/2003	Baba et al.
2004/0077339	A1	4/2004	Martens
2004/0110421	A1	6/2004	Takamura
2004/0171407	A1	9/2004	Ninomiya
2004/0176083	A1	9/2004	Shiao et al.
2004/0198306	A1	10/2004	Singh et al.
2004/0203554	A1	10/2004	Simon
2004/0204003	A1	10/2004	Soerensen et al.
2004/0204021	A1	10/2004	Cocita
2004/0229645	A1	11/2004	Montgomery
2005/0026644	A1	2/2005	Lien
2005/0255874	A1	11/2005	Stewart-Baxter et al.
2006/0003809	A1	1/2006	Boling et al.
2006/0066567	A1	3/2006	Scharenbroch et al.
2006/0099940	A1	5/2006	Pfleging et al.
2006/0148490	A1	7/2006	Bates et al.
2006/0240860	A1	10/2006	Benco et al.
2006/0258376	A1	11/2006	Ewell, Jr.
2007/0024579	A1	2/2007	Rosenberg
2007/0078552	A1	4/2007	Rosenberg
2007/0164990	A1	7/2007	Bjorklund et al.
2007/0270122	A1	11/2007	Ewell, Jr.
2008/0169914	A1	7/2008	Albertson et al.
2008/0299900	A1	12/2008	Lesyna
2008/0299954	A1	12/2008	Wright et al.
2008/0305735	A1	12/2008	Farnsworth et al.
2009/0029675	A1	1/2009	Steinmetz et al.
2009/0117919	A1	5/2009	Hershenson
2009/0163243	A1	6/2009	Barbera
2009/0215466	A1	8/2009	Ahi et al.
2009/0253423	A1	10/2009	Kullberg
2009/0270143	A1	10/2009	Bury
2010/0093405	A1	4/2010	Ewell, Jr.
2010/0156781	A1	6/2010	Fahn
2010/0182243	A1	7/2010	Singh et al.
2010/0197351	A1	8/2010	Ewell, Jr.

OTHER PUBLICATIONS

Office Action (Mail Date Nov. 22, 2010) for U.S. Appl. No. 11/832,432, filed Aug. 1, 2007.

Office Action (Mail Date Aug. 17, 2012) for U.S. Appl. No. 12/638,290, filed Mar. 23, 2010.

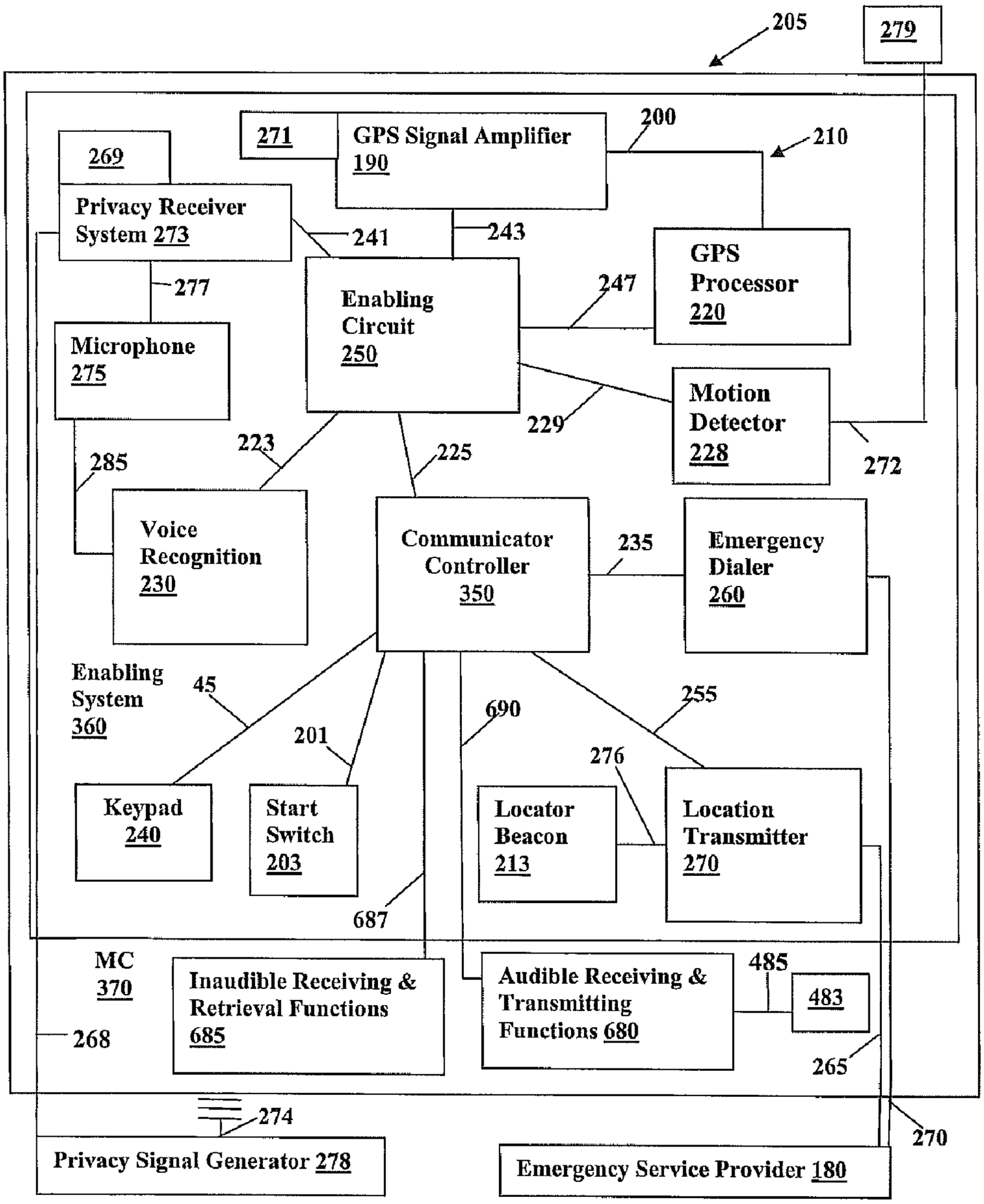

205
279
271
GPS Signal Amplifier 190
200
210
269
Privacy Receiver System 273
241
243
277
Enabling Circuit 250
247
GPS Processor 220
Microphone 275
229
Motion Detector 228
272
223
225
285
Voice Recognition 230
Communicator Controller 350
235
Emergency Dialer 260
Enabling System 360
45
201
690
255
276
Keypad 240
Start Switch 203
Locator Beacon 213
Location Transmitter 270
687
MC 370
Inaudible Receiving & Retrieval Functions 685
Audible Receiving & Transmitting Functions 680
485
483
268
265
274
270
Privacy Signal Generator 278
Emergency Service Provider 180

FIG. 1

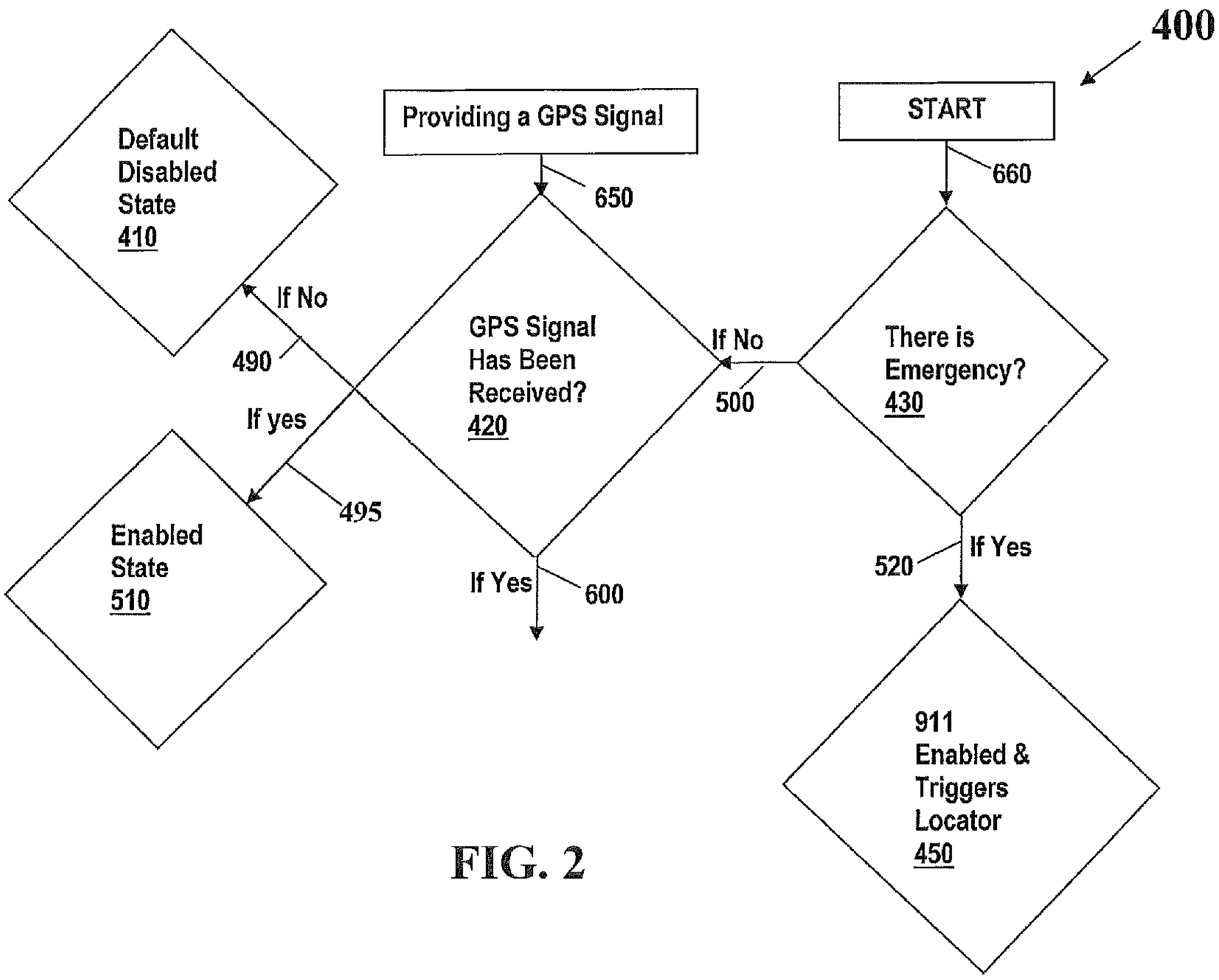

400
START
660
Providing a GPS Signal
650
Default
Disabled
State
410
If No
490
If yes
495
GPS Signal
Has Been
Received?
420
If No
500
There is
Emergency?
430
Enabled
State
510
If Yes
600
520
If Yes
911
Enabled &
Triggers
Locator
450

FIG. 2

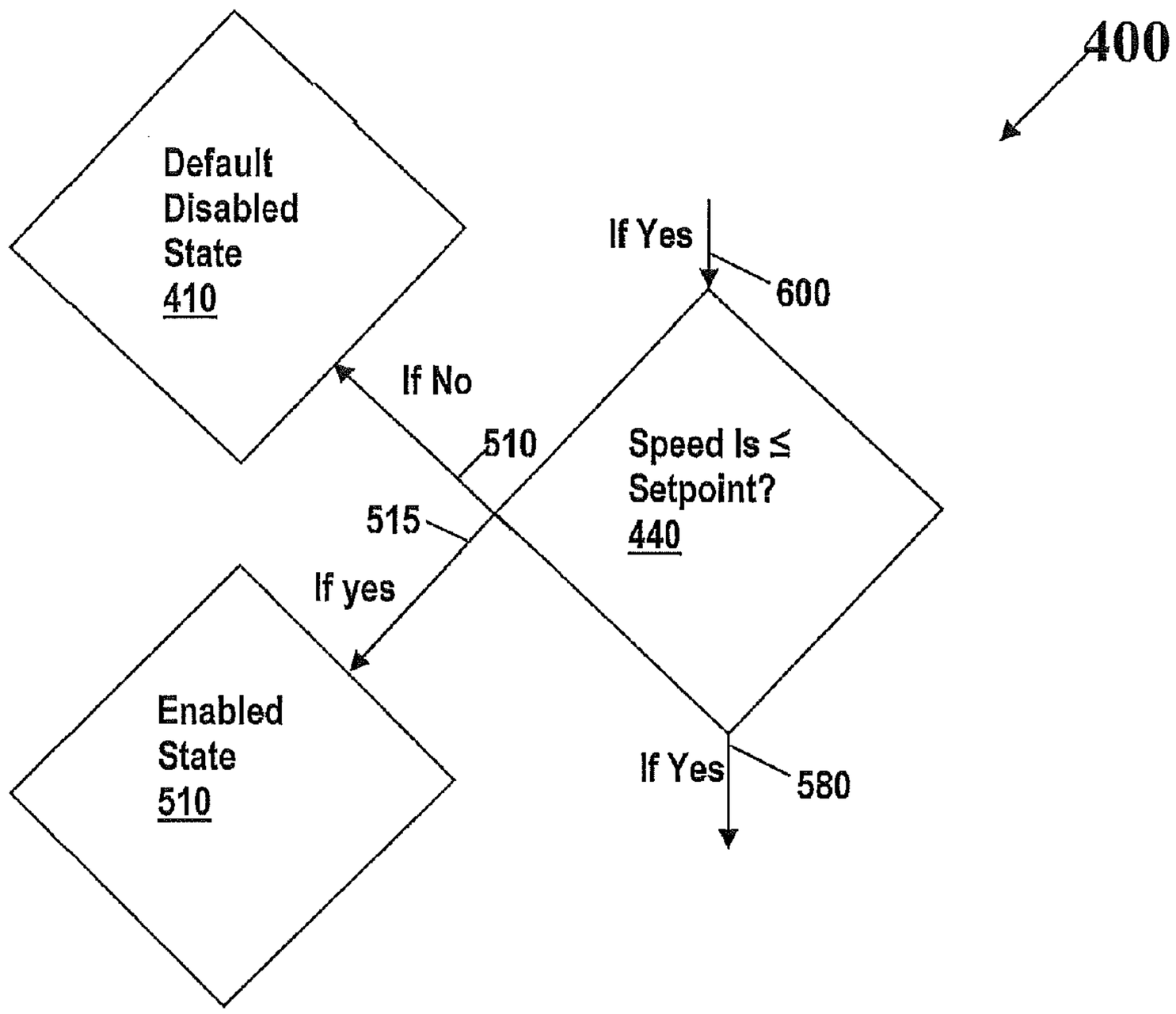

400
Default
Disabled
State
410
If Yes
600
If No
510
Speed Is ≤
Setpoint?
440
515
If yes
Enabled
State
510
If Yes
580

FIG. 3

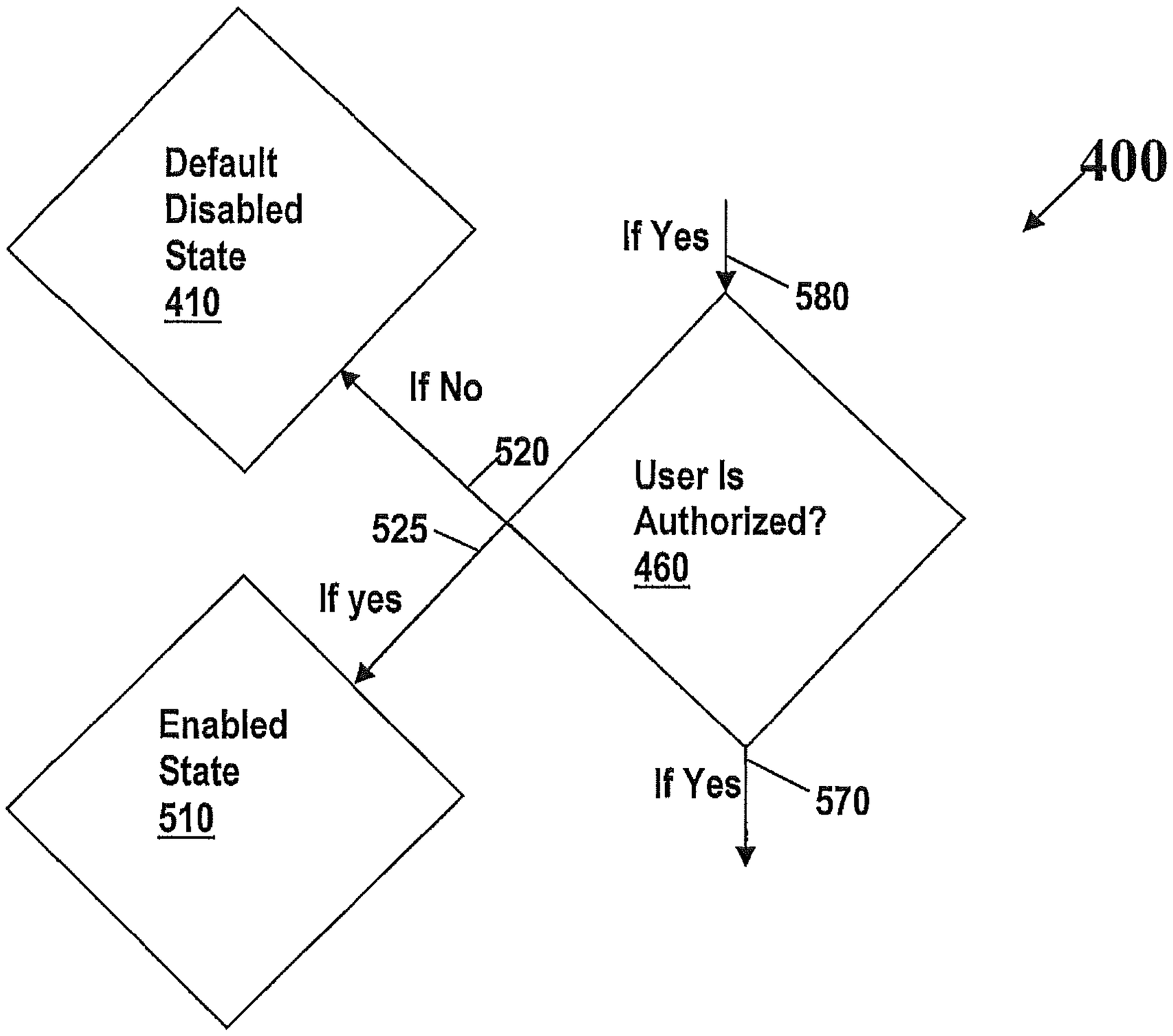

400
Default
Disabled
State
410
If No
520
525
If yes
Enabled
State
510
If Yes
580
User Is
Authorized?
460
If Yes
570

FIG. 4

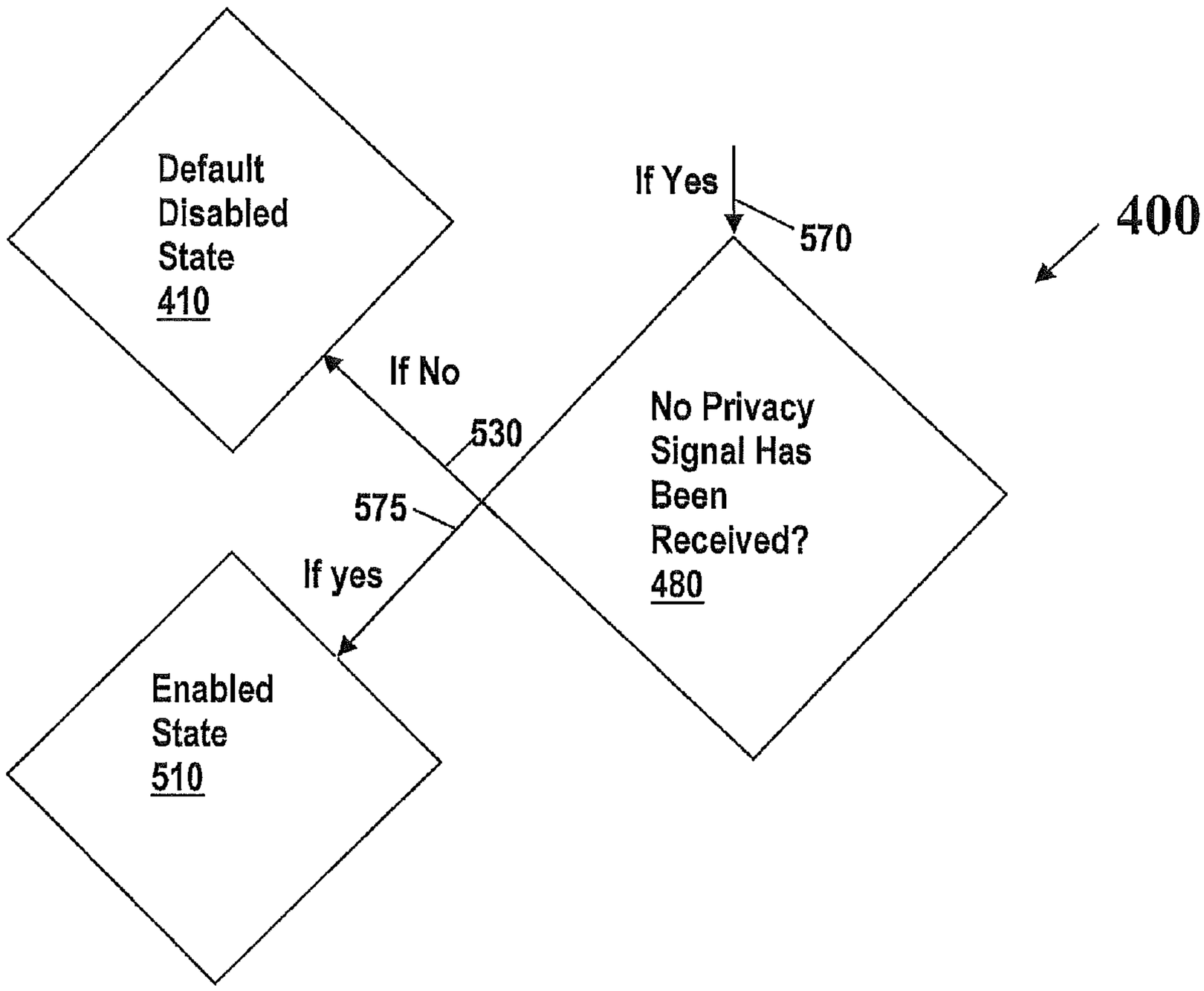

Default
Disabled
State
410
If No
530
575
If yes
Enabled
State
510
If Yes
570
No Privacy
Signal Has
Been
Received?
480
400

FIG. 5

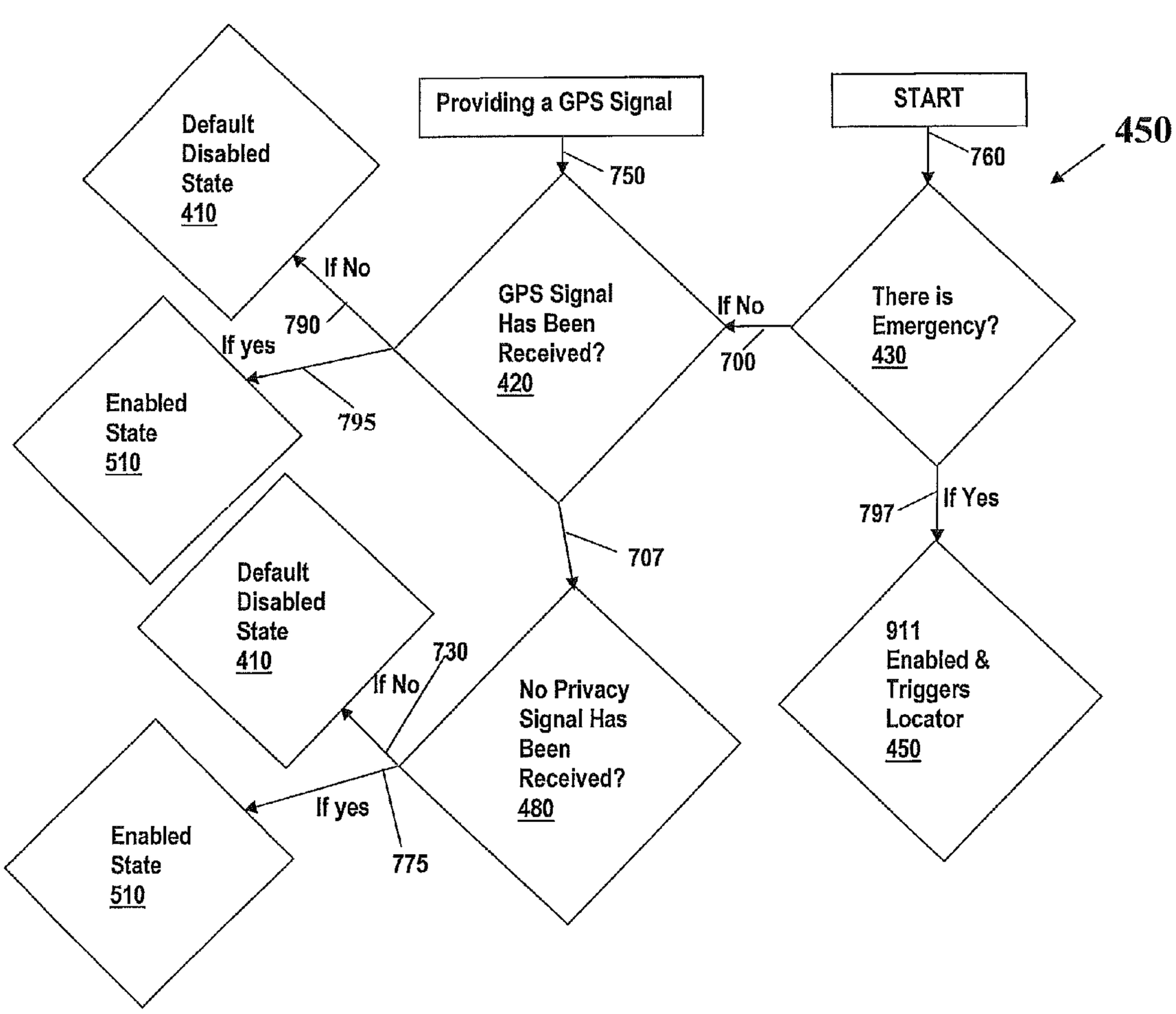

START
760
Providing a GPS Signal
750
Default Disabled State 410
If No
790
If yes
795
GPS Signal Has Been Received? 420
If No
700
There is Emergency? 430
450
Enabled State 510
Default Disabled State 410
If No
730
If yes
775
No Privacy Signal Has Been Received? 480
707
797
If Yes
911 Enabled & Triggers Locator 450
Enabled State 510

FIG. 6

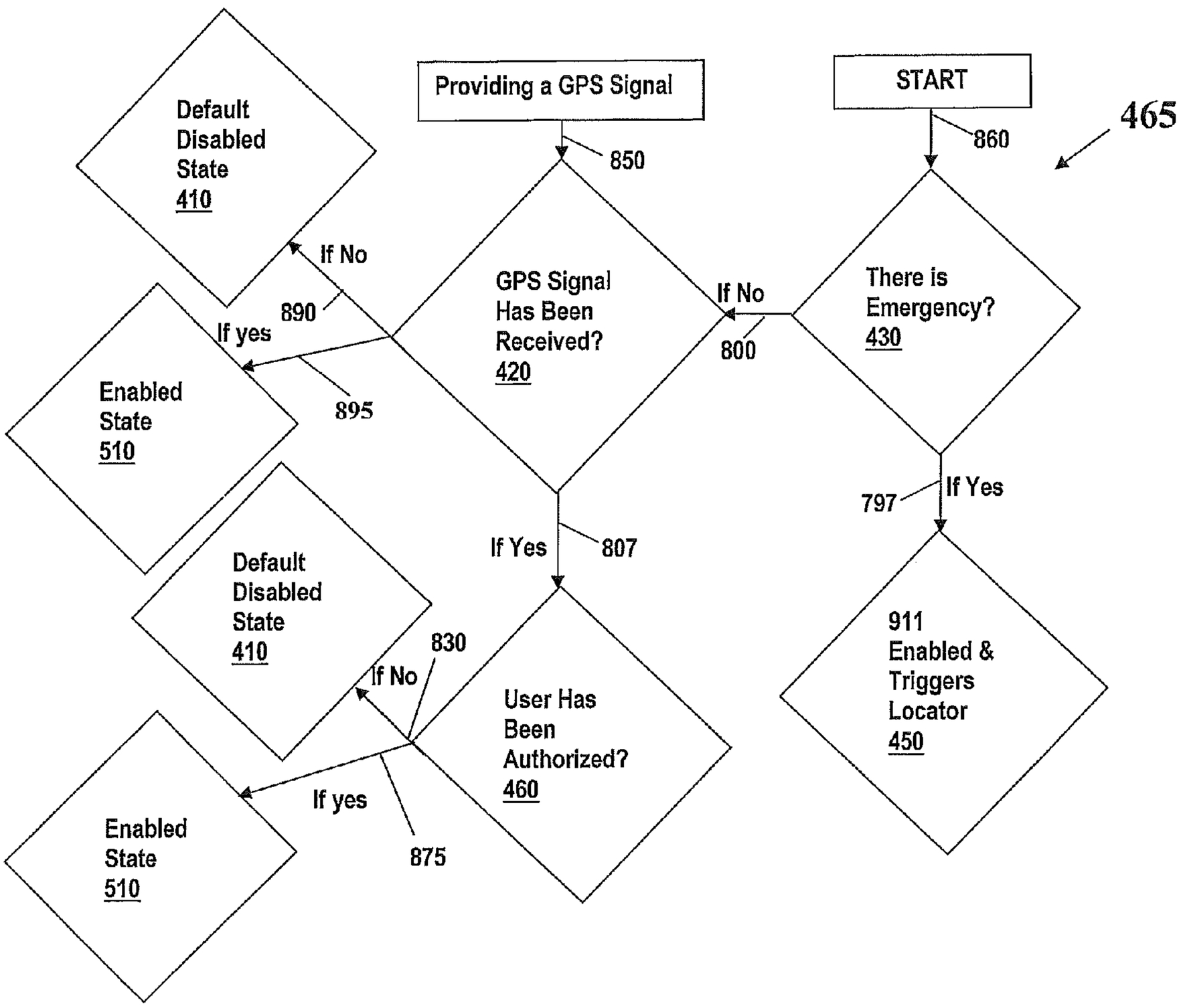

Default Disabled State 410
Providing a GPS Signal
850
START
860
465
If No
890
GPS Signal Has Been Received? 420
If No
800
There is Emergency? 430
If yes
895
Enabled State 510
If Yes
807
797
If Yes
Default Disabled State 410
830
If No
User Has Been Authorized? 460
911 Enabled & Triggers Locator 450
If yes
875
Enabled State 510

FIG. 7

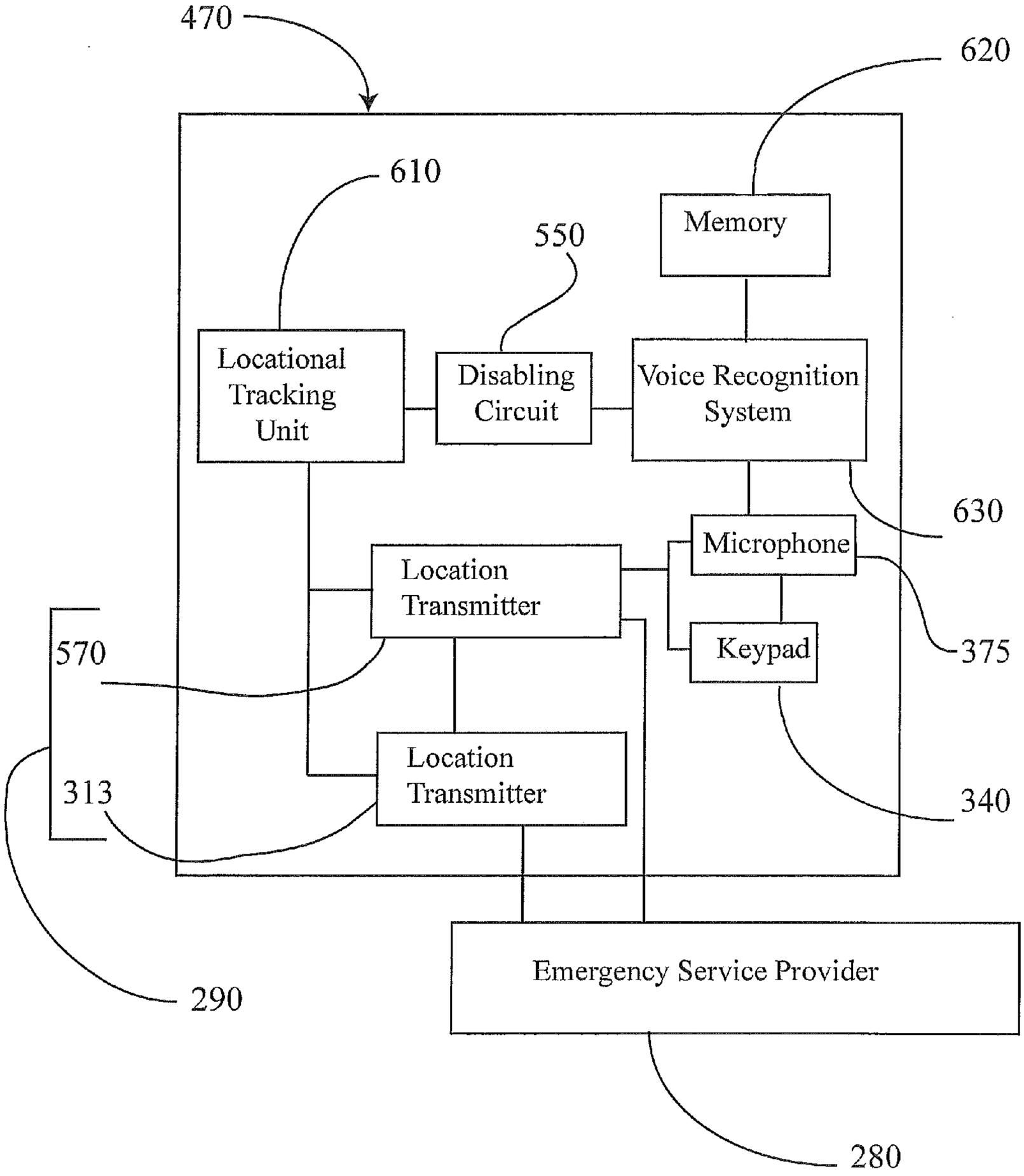

470
620
610
Memory
550
Locational Tracking Unit
Disabling Circuit
Voice Recognition System
630
Microphone
Location Transmitter
375
570
Keypad
Location Transmitter
313
340
290
Emergency Service Provider
280

FIG. 8

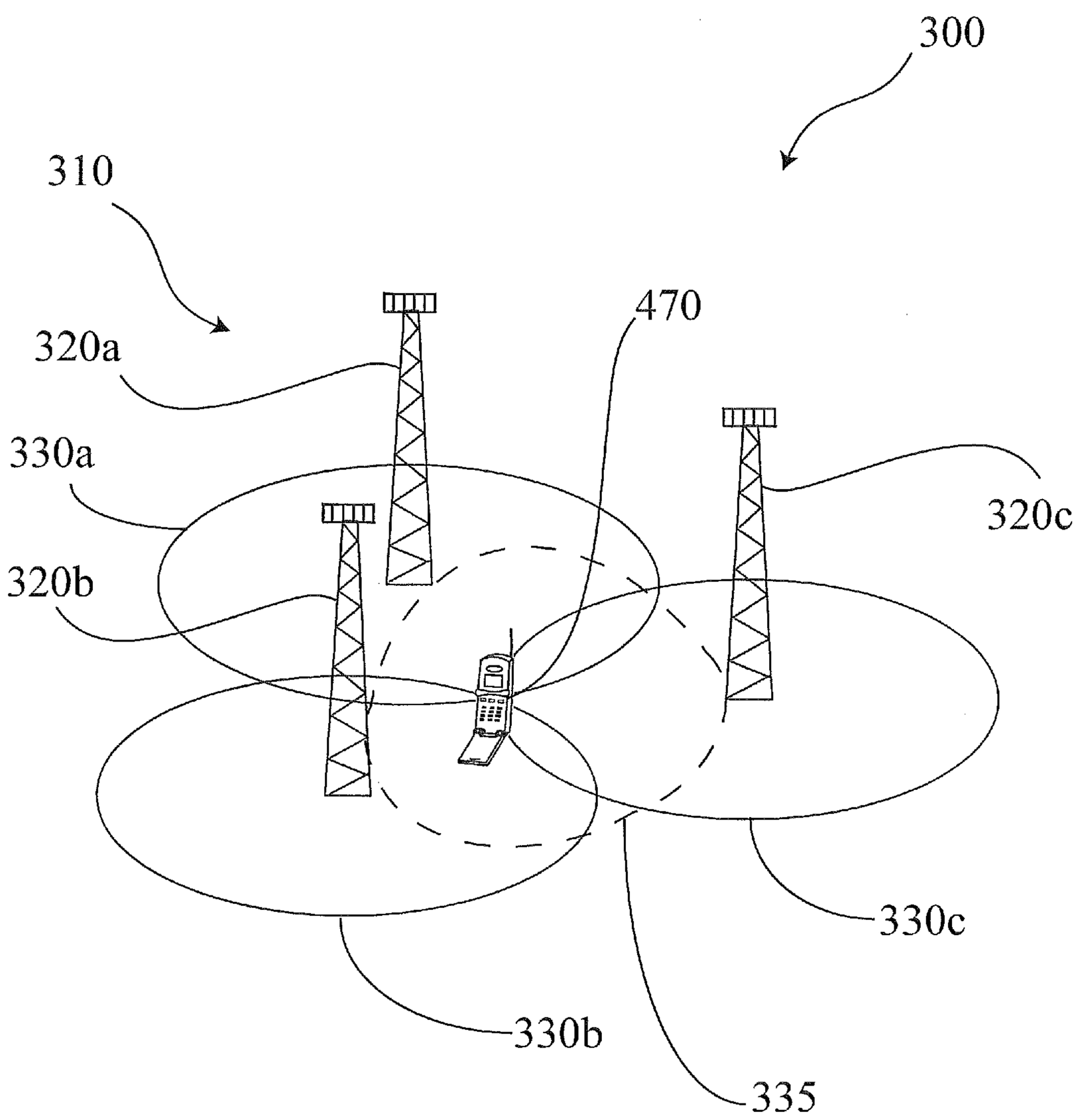


FIG. 9

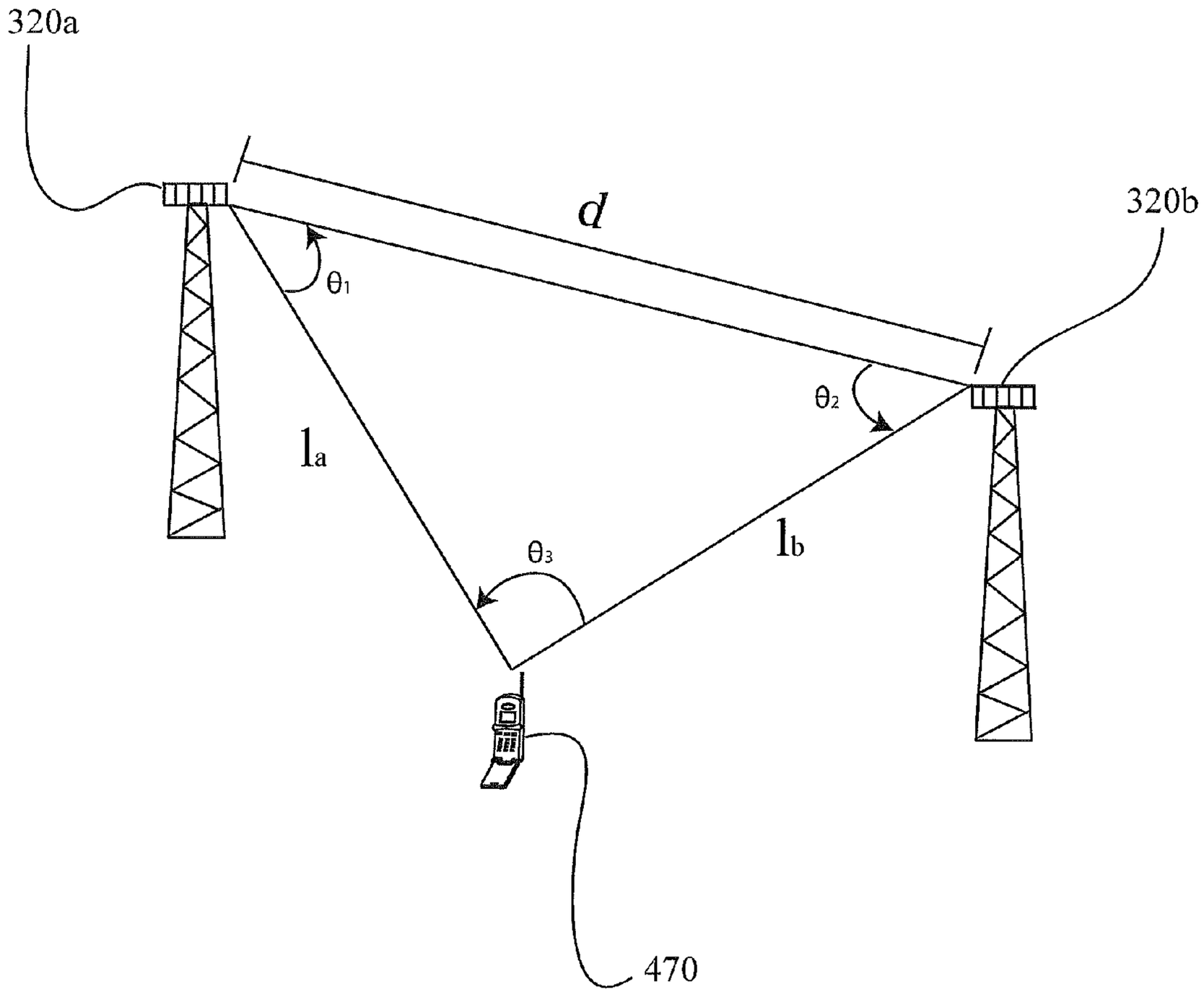


FIG. 10

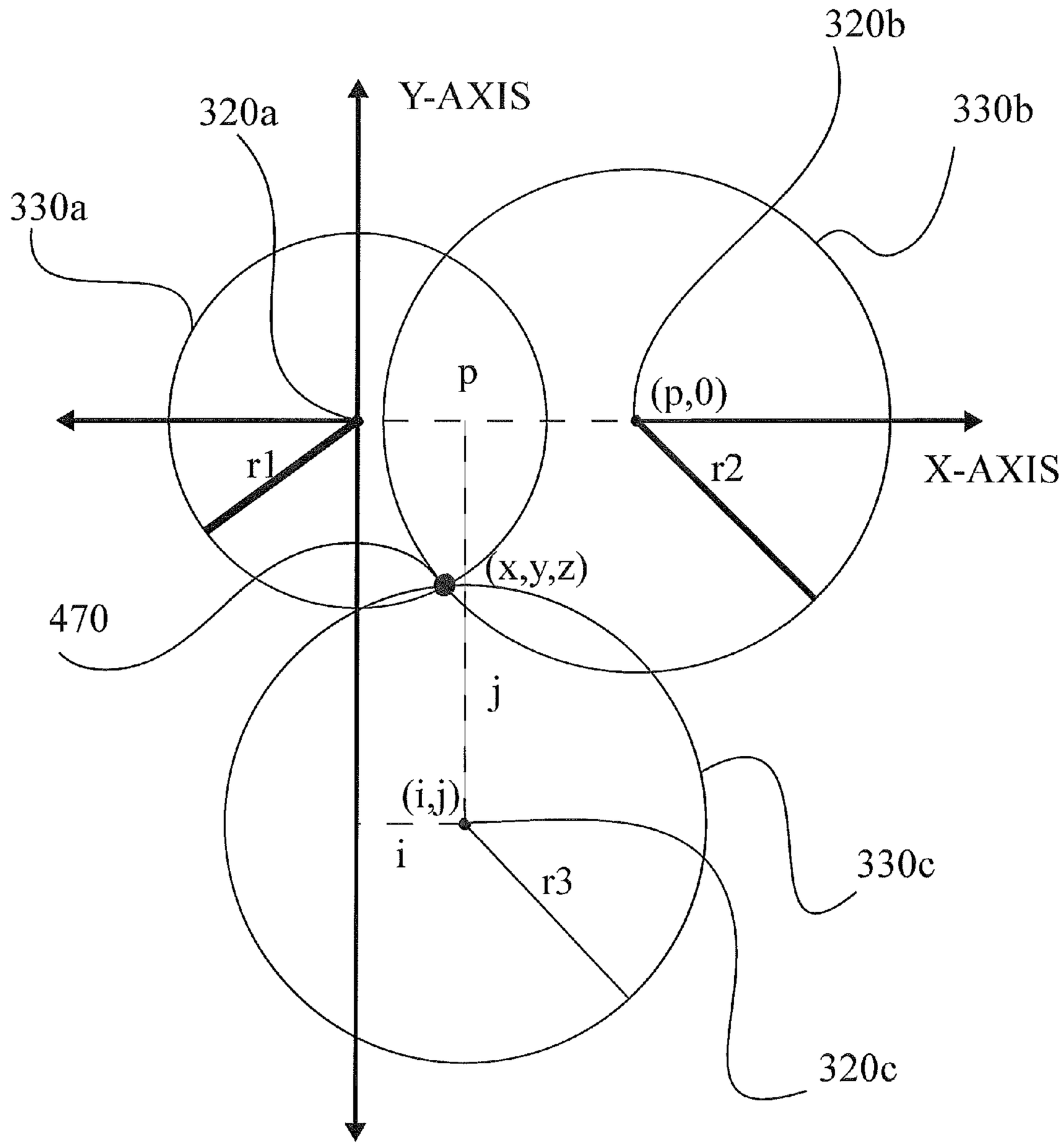

320b
330b
320a
Y-AXIS
330a
p
(p,0)
r1
r2
X-AXIS
(x,y,z)
470
j
(i,j)
i
r3
330c
320c

FIG. 11

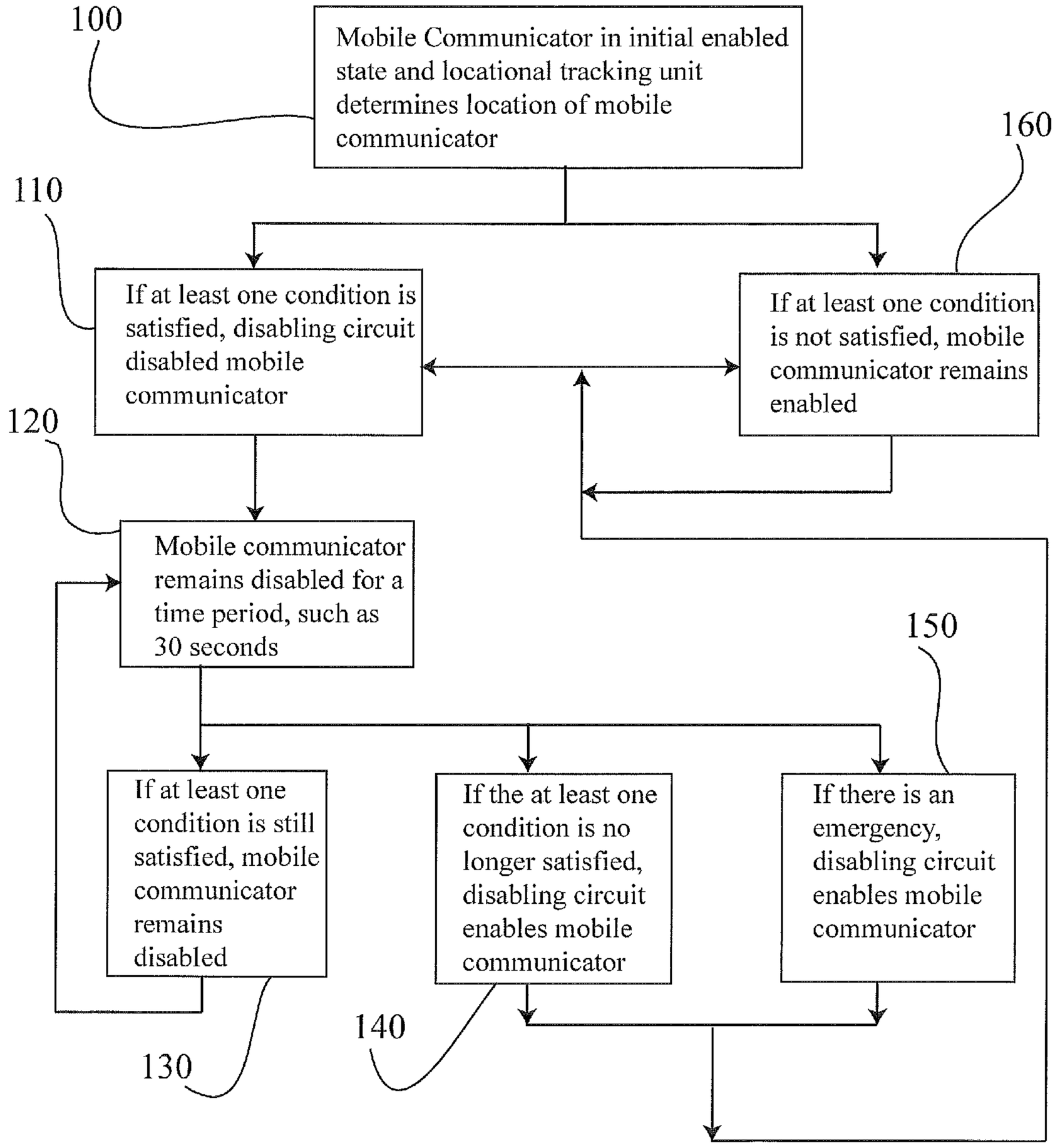

100
Mobile Communicator in initial enabled state and locational tracking unit determines location of mobile communicator
110
If at least one condition is satisfied, disabling circuit disabled mobile communicator
160
If at least one condition is not satisfied, mobile communicator remains enabled
120
Mobile communicator remains disabled for a time period, such as 30 seconds
150
If at least one condition is still satisfied, mobile communicator remains disabled
If the at least one condition is no longer satisfied, disabling circuit enables mobile communicator
If there is an emergency, disabling circuit enables mobile communicator
130
140

FIG. 12

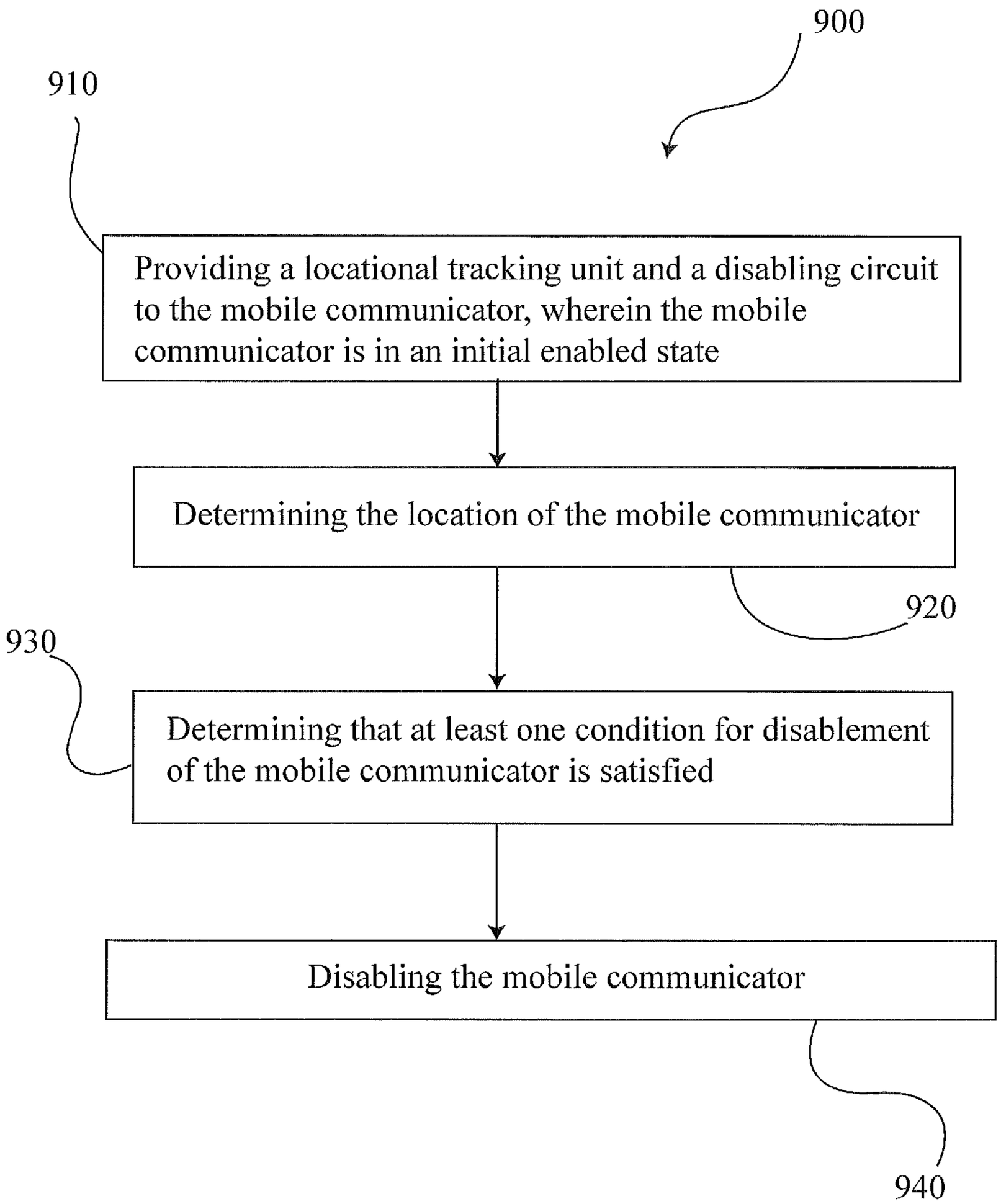

900
910
Providing a locational tracking unit and a disabling circuit to the mobile communicator, wherein the mobile communicator is in an initial enabled state
Determining the location of the mobile communicator
920
930
Determining that at least one condition for disablement of the mobile communicator is satisfied
Disabling the mobile communicator
940

FIG. 13

APPARATUS, SYSTEM, AND METHOD FOR DISABLING A MOBILE COMMUNICATOR

RELATED APPLICATIONS

The present invention is a divisional application claiming priority to U.S. patent application Ser. No. 11/832,432, filed on Aug. 1, 2007 and a continuation-in-part of co-pending U.S. patent application Ser. No. 10/908,377, filed May 10, 2005 and entitled "Apparatus for Enabling a Mobile Communicator and Methods of Using the Same" and is incorporated herein by reference in its entirety.

FIELD OF THE TECHNOLOGY

The present invention relates generally to an apparatus and method for using a mobile communication device, and more specifically to an apparatus and method for controlling the mobile communication device.

BACKGROUND

Mobile or wireless cell phones or other wireless mobile communication devices such as two way radios have become popular devices for communicating when away from home or the office. Some people rely exclusively on wireless mobile communication devices because they may be carried on their persons, so their mobile communicator may always be accessible. This ubiquitous nature of wireless cell phones may be a disadvantage because cell phones may not be bound by use restrictions that may be placed on wired phones, when conditions arise in which cell phone use may need to be limited.

Therefore there is a need for controlling cell phone use when conditions arise in which cell phone use may need to be limited.

SUMMARY

A first aspect of the present invention provides a Mobile Communicator, comprising: an Enabling System, wherein the Enabling System includes a Global Positioning System (GPS) Receiver and an Enabling Circuit, wherein a logic of the Enabling Circuit has changed a Default Disabled State of the Mobile Communicator to an Enabled State because an at least one condition has been satisfied.

A second aspect of the present invention provides a kit for enabling a Mobile Communicator, comprising: a Mobile Communicator having an initial Default Disabled State; and an Enabling System, wherein the Enabling System includes a Global Positioning System (GPS) Receiver and an Enabling Circuit, and wherein a logic of the Enabling Circuit has enabled the Mobile Communicator because an at least one condition has been satisfied.

A third aspect of the present invention provides a method for enabling a Mobile Communicator, comprising: providing a Global Positioning System (GPS) and an Enabling System in the Mobile Communicator, wherein the Mobile Communicator is in a Default Disabled State; satisfying an at least one condition for enablement of the Mobile Communicator; and enabling the Mobile Communicator.

A fourth aspect of the present invention provides an apparatus for a mobile communicator, comprising: a locational tracking for determining the location of the mobile communicator; and a disabling circuit for changing the state of the mobile communicator from an enabled state, wherein the audible receiving and transmitting functions of the mobile communicator are enabled, to a disabled state, wherein the audible receiving and transmitting functions of the mobile communicator are disabled when the location of the mobile communicator as determined by the locational tracking unit satisfies at least one condition.

A fifth aspect of the present invention provides a mobile communicator disabling system, comprising: a mobile communicator, wherein the mobile communicator includes a locational tracking unit configured to determine the location of the mobile communicator; and a disabling circuit configured to change the state of the mobile communicator from an enabled state, wherein the audible receiving and transmitting functions of the mobile communicator are enabled, to a disabled state, wherein the audible receiving and transmitting functions of the mobile communicator are disabled; and a network of signal transceivers located in specific and known locations, wherein said network of signal transceivers is configured to communicate with the locational tracking unit to determine the location of the mobile communicator and the mobile communicator is disabled by the disabling circuit when an at least one condition is satisfied.

A sixth aspect of the present invention provides a method for disabling a mobile communicator, comprising: providing a locational tracking unit and a disabling circuit to the mobile communicator, wherein the mobile communicator is in an initial enabled state; determining the location of the mobile communicator; determining that at least one condition for disablement of the mobile communicator is satisfied; and disabling the mobile communicator.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** depicts a kit and a Mobile Communicator, in accordance with embodiments of the present invention; and

FIGS. **2-7** depict embodiments of method(s) for using the kit and the Mobile Communicator, in accordance with embodiments of the present invention.

FIG. **8** is a view of an embodiment of the mobile communicator apparatus of the present invention;

FIG. **9** is a view of an embodiment of the mobile communicator disabling system, in accordance with the present invention;

FIG. **10** is a view of a method of determining the location of the mobile communicator, in accordance with the present invention;

FIG. **11** is a view of an alternative method of determining the location of the mobile communicator, in accordance with the present invention;

FIG. **11** is a diagram of logic within the mobile communicator apparatus, in accordance with the present invention;

FIG. **12** is a diagram of the method for disabling a mobile communicator, in accordance with the present invention;

FIG. **13** is a diagram of the method for disabling a mobile communicator, in accordance with the present invention.

DESCRIPTION OF THE TECHNOLOGY

Mobile cell phones or other mobile communication devices such as two way radios have become popular devices for communicating when away from home or the office. Some people rely exclusively on mobile communication devices because they may be carried on their persons, so they can always be near their mobile communicator.

Firstly, this ubiquitous nature of cell phones may be a disadvantage when a user receives or transmits a call from a cell phone within a proximity of other people because it may interfere with their enjoyment of their quiet and solitude.

Hereinafter, "proximity of other people" is defined as within a listening distance of the other people.

Secondly, the ubiquitous nature of cell phones may also be disadvantageous for companies that wish to prevent their trade secrets or other proprietary information from being communicated to the outside world via a cell phone, or by a camera accessory of a cell phone, by an employee or other visitor having access to the trade secrets or other proprietary information.

Thirdly, the ubiquitous nature of cell phones may also be disadvantageous because of safety concerns. Many states such as New York State have enacted laws prohibiting an operator of a moving vehicle from holding a mobile communication device while operating the vehicle in order to reduce the number of moving vehicle accidents that may occur as a result of operators of moving vehicles using mobile communication devices during operation of the vehicle.

Therefore, there is a need for providing safeguards to avoid safety hazards or interference with the quiet and solitude of others resulting from use of cell phones or other mobile communication devices.

Many states such as New York State have enacted laws prohibiting an operator of a moving vehicle from holding a mobile communication device while operating the vehicle in order to reduce the number of moving vehicle accidents that may occur as a result of operators of moving vehicles using mobile communication devices during operation of the vehicle.

Therefore there is a need for equipping a Mobile Communicator such as a cell phone so that some or all of its transmitting and audible receiving functions **680** may remain in a Disabled State unless certain conditions for Enabling the transmitting and audible receiving functions **680** are satisfied. Non-limiting examples of the transmitting and audible receiving functions **680** include ringer notification of messages or incoming calls, calling in/out, e.g., making incoming and outgoing calls from the Mobile Communicator **370**, use of photocopying accessories such as a camera, use of microcomputer accessories, such as palm pilots, as user interfaces for text messaging or email, electronic communicators and combinations thereof.

FIG. **1** depicts a kit **205** or a Mobile Communicator **370**, comprising: an Enabling System **360**, wherein the Enabling System **360** includes a "Start Switch" **203** for activating the kit **205** or the Mobile Communicator **370** if an at least one condition is satisfied, and wherein an outgoing call to an Emergency Service Provider **180** may always be enabled by the Enabling System **360**. Alternatively, the kit **205** or the Mobile Communicator **370** may remain in a Default Disabled State **410** if the at least one condition is not satisfied, even if the Start Switch **203** may be activated. The Enabling System **360** may include a keypad **240** for inputting information into the Communicator Controller **350**, such as passwords for user identification by the Communicator Controller **350**, a Location Transmitter **270** for transmitting a location of the kit **205** or the Mobile Communicator **370**, a Locator Beacon **213**, for giving notice, such as an alarm, such as a flashing light or an audible sound, as to a geographical location of the kit **205** or the Mobile Communicator **370**, an Emergency Dialer **260**, for calling an emergency service provider such as the Emergency Service Provider **180**, a Global Positioning System (GPS) Receiver **210**, a Privacy Receiver System **273**, having a privacy signal antenna **269**, a Voice Recognition System **230**, a Motion Detector **228**, a Microphone **275** and an Enabling Circuit **250**. Although the Microphone **275** may by any device able to convert sound(s) wave(s) into an electrical signal, the Microphone **275** may have the following specifications: 100-10 KHz frequency response; low impedance; normal and zoom settings; an effective output level from about −66 dB+/−3 dB unbalanced (normal); −79 dB+/−3 dB unbalanced (zoom); and a Microphone **275** range to 80 dB.

The Microphone **275** may provide received sound(s) to the Voice Recognition System **230** via the wire **285**, or wirelessly, or to the Privacy Receiver System **273** via the wire **277**, or wirelessly. A Privacy Signal Generator **278** may provide a privacy signal to the Microphone **275** wirelessly by transmitting from the antenna **274**. The Microphone **275** may provide the privacy signal received wirelessly from the antenna **274** to the Privacy Receiver System **273** via a wire **277**, or wirelessly. The Privacy Signal Generator **278** may provide the privacy signal to the Privacy Receiver System **273** wirelessly, wherein the antenna **274** of the Privacy Signal Generator **278** may transmit and the antenna **269** of the Privacy Signal Receiver **273** may receive the privacy signal. Alternatively, the Privacy Signal Generator **278** may provide the privacy signal to the Privacy Receiver **273** via a wire **268**, or wirelessly. The Enabling Circuit **250** may include a logic that enables the Mobile Communicator **370** if at least one of a number of conditions may be satisfied, and wherein outgoing calls to an Emergency Service Provider **180** may always be enabled by the Enabling System **360**. Hereinafter "enabling the Mobile Communicator **370**" is defined as making the Mobile Communicator's **370** transmitting and audible receiving functions **680** operational; to activate the Mobile Communicator's **370** transmitting and audible receiving functions **680**. Hereinafter, "logic" is defined as non-arithmetic operations performed by a logic circuit (not shown) in the Enabling Circuit **250** or in a computer (not shown), such as sorting, comparing, and matching, that involve yes-no decisions, wherein the logic may be provided by computer software or the computer circuit that may be located in the Enabling Circuit **250** or in the computer (not shown).

The "Start Switch" **203** may be any appropriate means of opening or closing an electrical circuit in the Communicator Controller **350** via a wire **201**, or wirelessly, such as a contact closure. Hereinafter, a contact closure may be a variety of electrical switches in an electrical circuit that may be open, i.e., having infinite electrical resistance, or closed, i.e., being electrically conducting. The contact closure may be the Start Switch **203** providing a contact closure to the Communicator Controller **350**, via the wire **201**, or wirelessly, and the electrical circuit may include the Communicator Controller **350** and at least one other component of the Enabling System **360**, such as the Enabling Circuit **250**, via the wire **225**, or wirelessly, the Emergency Dialer **260**, via the wire **235**, or wirelessly, or the Location Transmitter **270**, via the wire **255**, or wirelessly. Alternatively, the contact closure may be in the Enabling Circuit **250** providing a contact closure for the Communicator Controller **350**, via the wire **225**, or wirelessly, and the electrical circuit may include the Communicator Controller **350**, the Enabling Circuit **250**, via the wire **225**, or wirelessly, and the Enabling Circuit **250** and at least one other component of the Enabling System **360**, such as the GPS Receiver **210**, via the wires **200**, **243**, **247**, or wirelessly, and the Voice Recognition System **230**, via the wire **223**, or wirelessly, and the Motion Detector **228**, via the wire **229**, or wirelessly, and the Privacy Receiver System **273**, via the wire **241**, or wirelessly. When the contact closure is closed, the electrical circuit that may include the Communicator Controller **350** and the Enabling Circuit **250** may be complete and functional. Alternatively, when the contact closure is open, the electrical circuit that may include the Communicator Controller **350** and the Enabling Circuit **250** is open and non-functional. When the electrical circuit is open and non-

functional the transmitting and audible receiving functions **680** of the kit **205** or the Mobile Communicator **370** may remain in the Default Disabled State **410**.

In embodiments of the kit **205** or the Mobile Communicator **370** and of the methods **400**, **450** and **465** described herein, Data Retrieval & Inaudible Receiving Functions **685** may remain enabled if the at least one condition (**420-480**) may not be satisfied. Non-limiting examples of Data Retrieval & Inaudible Receiving Functions **685** include ability to receive incoming calls as messages, vibrator or optical notification of incoming messages, visual page, accessing phone numbers or other stored information, personal schedules, and combinations thereof.

Alternatively, when the electrical circuit is closed and functional the transmitting and audible receiving functions **680** of the kit **205** or the Mobile Communicator **370** may be changed from the Default Disabled State **410** to the Enabled State **510** if an at least one condition (**420-480**) may be satisfied, as in the methods **400**, **450**, and **465** described herein, because the Communicator Controller **350** may drive the Enabled State **510** transmitting and audible receiving functions **680** of the kit **205** or the Mobile Communicator **370** if the Communicator Controller **350** has received a contact closure from either the Start Switch **203** or the Enabling Circuit **250**. The Communicator Controller **350** may drive the transmitting and audible receiving functions **680** via the wire **690**, or wirelessly.

The at least one condition for what conditions must be met so that the kit **205** or the Mobile Communicator **370** may be enabled may be that there is an emergency, wherein calling an Emergency Service Provider **180** and/or triggering a Location Transmitter **270** may be enabled if there has been an emergency. Alternatively, the at least one condition may be that the GPS Receiver **210** receives a GPS Signal, wherein transmitting and audible receiving functions **680** of the Mobile Communicator **370** may be enabled if a GPS signal is received.

Hereinafter, the GPS signal received by the GPS Receiver **210** is defined as any signal that provides geographic location information in the signal as to a longitude and latitude location of the kit **205** or the Mobile Communicator **370** on the Earth. Such signals and information may be obtained from a source such as a GPS satellite, a cell phone provider, or any other provider of the signal having longitude and latitude information about the location of the kit **205** or the Mobile Communicator **370** on the Earth.

Alternatively, the at least one condition may be that the Mobile Communicator **370** has a speed ≦a setpoint, wherein audible receiving and transmitting functions **680** of the Mobile Communicator **370** may be enabled if the speed of the Mobile Communicator is ≦the setpoint. Alternatively, the at least one condition may be that a user's voice or password is authenticated, wherein transmitting and audible receiving functions **680** of the Mobile Communicator **370** may be enabled if the user's voice or identifying sound(s) or password are authenticated. The Voice Recognition System **230** may authenticate a user by determining that each sound(s) provided by the user essentially matches a preprogrammed or recorded user identifying sound(s). Alternatively, the at least one condition may be that the Mobile Communicator **370** receives a privacy signal, wherein transmitting and audible receiving functions **680** of the Mobile Communicator **370** may be enabled if the Mobile Communicator **370** receives the privacy signal. The privacy signal may include signals from broadcast and pager systems, signals from optical/infrared system, signals from acoustic/ultrasonic systems, 2.4 GHz, audible sounds, inaudible sounds and combinations thereof.

The Enabling System **360** of the kit **205** may include a Global Positioning System (GPS) Receiver **210**, a Privacy Signal Receiver **273**, and a Communicator Controller **350**. The GPS Receiver **210** may include a GPS Signal Amplifier **190** for amplifying a GPS signal and a GPS Processor **220**. The GPS Signal Amplifier **190** may include a GPS Antenna **271**. The GPS Signal Amplifier **190** may communicate the amplified GPS signal to the GPS Processor **220** via a wire **200**, or wirelessly. Alternatively, the amplified GPS signal may be transmitted to the GPS Processor **220** by the GPS Signal Amplifier **190** wirelessly using, for example, Wi-Fi protocol. The Privacy Signal Receiver **273** may receive a privacy signal from Microphone **275**, via a communicating wire **277**, or wirelessly. The Privacy Signal Generator **278** may generate the privacy signal wirelessly using, for example, Wi-Fi protocol. The GPS Processor **220** may process the information from the GPS Signal Amplifier **190** to determine a speed and/or a geographic location of the Mobile Communicator **370**. Hereinafter "geographic location" includes a longitude and latitude from which a position on the earth's surface may be determined. The GPS Processor **220** may provide said speed and geographic location information to the Enabling Circuit **250** via wire **247**, or wirelessly. The Privacy Receiver System **273** may provide a privacy signal to the Enabling Circuit **250** via the wire **243**, or wirelessly. Different types of privacy signals employed may be signals from broadcast and pager systems, optical/infrared system, and acoustic/ultrasonic systems. Alternatively, the privacy signal may operate at 2.4 GHz.

In one embodiment of the Mobile Communicator **370** and the kit **205**, not receiving the privacy signal enables transmitting and audible receiving functions **680** of the Mobile Communicator **370** in a restricted use area. The restricted use area may include a theater, a sports tournament, a hospital, a church, a waiting room, a locker room, a library, a spa, a vehicle, a business area housing trade secrets or confidential information, a conference room in which trade secrets or confidential proprietary information are discussed and combinations thereof. A vehicle may be any transportation vehicle that carries passengers, such as an airplane, an automobile, a coach in a train. However, the restricted use area may be any area in which privacy, quiet or enjoyment of solitude may be desired and in which transmitting and audible receiving functions **680** of the kit **205** of the Mobile Communicator **370** may interfere. The Microphone **275** of the kit **205** or the Mobile Communicator **370** that is used for receiving the Privacy Signal and for voice recognition may be the same Microphone **275** a user may speak into to make outgoing calls and for receiving and transmitting function of the kit **205** and the Mobile Communicator **370**.

The GPS Receiver **210** may use National Marine Electronics Association (NEMA) standards for data communication between marine instruments GPS protocol (as used between a GPS and Autopilot, for example). The GPS Receiver **210** may be designed to provide a low cost alternative to other geographic location devices that require high precision and/or accuracy. The GPS Receiver **210** may have a GPS Signal Amplifier **190** having an active GPS Antenna **271**. The GPS Receiver **210** may have a RS-232 output for connection to a PC or navigation system and may be enclosed in an essentially 100% waterproof, pole mount case. The NMEA RS-232 output may provide an easy connection to a PC to translate and process the GPS Receiver **210** data strings. The GPS **213** may be accurate: position horizontal, +/−15 m 2D RMS (SA off), velocity, 0.1 m/sec 95% (SA off), 1 micro-second synchronized to GPS time, WASS, +/−10 m 2D RMS.

The Enabling System **360** may include a Voice Recognition System **230**, and a Microphone **275**, for inputting an identifiable or distinguishable sound(s). The user identifying sound(s) may be the voice of a user or a user identifying tone or frequency, such as a tone from a tuning fork, a musical note or clip, an animal sound, or any sound by which a user may wish to be identified. The user identifying sound(s) may be inaudible to the human ear such as high frequency or low frequency sounds that are outside of a range of the human ear, such as a dog whistle, having a tone that has been recorded by the Voice Recognition System **230** and may be compared to the identifying sound provided by a user to be authenticated by the Voice Recognition System **230**. Hereinafter, comparing the identifying sound(s) provided by a user to be authenticated by the Voice Recognition System **230** to the recorded user identifying sound(s) is a first step in a process by which the Voice Recognition System **230** may "recognize" or "authenticate" a user of the kit **205** or the Mobile Communicator **370**. A second step in the process may be determining if the identifying sound(s) may match or be essentially identical to the preprogrammed or pre-recorded identifying sound(s). The comparing and matching steps may compare and match features of the identifying sound(s) that include frequency, pitch, volume, and interval between musical notes, syllables of words and the like. The at least one condition to be satisfied for enablement of the transmitting and audible receiving functions **680** of the kit **205** or the Mobile Communicator **370** may be that the comparison of the identifying sound(s) provided by the user to be authenticated is determined by the Voice Recognition System **230** to be essentially identical or essentially matches the preprogrammed or recorded identifying sound(s) in the Voice Recognition System **230**. Hereinafter, user identifying sound(s) include the voice of a user or an identifying tone or frequency, such as a tone from a tuning fork or inaudible sounds such as a dog whistle, having a tone recognizable by the Voice Recognition System **230**. The Microphone **275** may provide the user identifying sound(s) or password to the Voice Recognition System **230** via a wire **285**, or wirelessly, and the Voice Recognition System **230** may provide or signal that the user's voice has been recognized or authenticated to the Enabling Circuit **250** via a wire **223**, or wirelessly.

The Voice Recognition System **230** may determine that the user authorization condition has been satisfied by authenticating the user identifying sound(s) that the user provides into the Microphone **275**. "Authenticating" or "authentication" is defined as determining the authenticity or identity of the user identifying sound(s) that the user provides into the Microphone **275** by comparing the user identifying sound(s) to authentic or actual user identifying sound(s) that have been recorded or preprogrammed into the Voice Recognition System **230** so that the Voice Recognition System **230** may recognize the user's voice or sound(s) to identify them, i.e., authenticate them to the Enabling System **360** of the kit **205** or the Mobile Communicator **370**. The at least one condition to be satisfied for enablement of the transmitting and audible receiving functions **680** of the kit **205** or the Mobile Communicator **370** may be that a user's voice is authenticated. The at least one condition to be satisfied for providing identification of the user to the Emergency Service Provider and triggering a Locator Beacon may be entry of an authenticated password or authenticated voice.

The Enabling Circuit **250** may receive a signal indicating authentication from the Voice Recognition System **230** via wire **223**, or wirelessly. The Voice Recognition System **230** may receive the user-identifying voice or the frequency of the user-identifying sound(s) from the Microphone **275** through the wire **285**, or wirelessly.

A user placing or originating an outgoing call from the Mobile Communicator **370** may be authenticated by the Voice Recognition System **230**. The Voice Recognition System **230** may authenticate the user by determining that a pattern of frequencies of the sound(s) provided by the user include sounds audible to a human ear or sounds inaudible to a human ear matches or may be essentially identical to a preprogrammed or recorded pattern of the frequencies of the user identifying sound(s) that may be preprogrammed or recorded in the Voice Recognition System **230**.

Once having been authenticated by the Voice Recognition System **273**, a user may enable the transmitting and audible receiving functions **680** of the kit **205** or the Mobile Communicator **370** by speaking or verbalizing a name of a person to be called that has been preprogrammed or recorded in the Enabling System **360**, such as in an address book **483**. Thus, the user may place a call to a telephone number of a person in the address book **483** by speaking or verbalizing the person's name or any other preprogrammed or recorded tag attached to the person's name, such as nicknames. The address book **483** may provide preprogrammed or recorded names for recall from the address book **483** by the authenticated user via a wire **485**, or wirelessly.

Embodiments of the present invention may be used to communicate an identity of a user who places a call for emergency services to the Emergency Services Provider **180**. For example, an authorized user may identify himself to the Emergency Services Provider **180** by providing an authenticated password or authenticated voice to the Enabling System **360** of the kit **205** or the Mobile Communicator **370**. Providing an authenticated password or authenticated voice or authenticated sound(s) to the Enabling System **360** of the kit **205** or the Mobile Communicator **370** may trigger an Emergency Dialer **260** and Locator Beacon **213**. The Microphone **275** of the Mobile Communicator **370** that is used to input the user identifying sound(s) or verbal password for authentication by the Voice Recognition System **230** and to input a privacy signal may be the same Microphone used for making outgoing calls. The inventor has found use of the same Microphone **275** for making outgoing calls and for inputting the user identifying sound(s) or verbal password for authentication by the Voice Recognition System **230**, or for inputting the privacy signal for satisfying the Privacy Receiver System **273**, may render methods of bypassing the Voice Recognition System **230** or the Privacy Receiver System **273** impossible. For example, shielding the Voice Recognition System **273** or the Privacy Receiver System **273** so that it may not receive the user identifying sound(s) or verbal password for authentication by the Voice Recognition System **230**, or the privacy signal for satisfying the Privacy Receiver System **273** would also shield the Microphone **275** from receiving the user's voice message that would interfere or prohibit the Microphone **275** from being used to make outgoing calls.

The Enabling Circuit **250** may provide go/no go logic such that an authenticated voice may activate the Communicator Controller **350**, resulting in enablement of the Mobile Communicator's **370** incoming/outgoing calls and other transmitting and audible receiving functions **680**, including calling the Emergency Service Provider **180**, other emergency numbers such as 911 and/or triggering the Locator Beacon **213**. Alternatively, the Communicator Controller **370** may be activated by providing a password or Personal Identification Number (PIN) or alphanumeric combination of numbers and letters using the keypad **240**.

Alternatively, the Voice Recognition System **230** may be equipped with a Wi-Fi receiver that may enable the Voice Recognition System **230** to receive the user-identifying voice or the frequency of the user-identifying sound from the microphone **275** via wireless transmission using Wi-Fi protocol and a Wi-Fi transmitter. Hereinafter "Wi-Fi" refers to wireless fidelity and is meant to be used generically when referring of any type of 802.11 network, that 802.11b, 802.11a, dual-band, etc. The term is promulgated by the Wi-Fi Alliance.

Any products tested and approved as "Wi-Fi Certified" (a registered trademark) by the Wi-Fi Alliance are certified as interoperable with each other, even if they are from different manufacturers. A user with a "Wi-Fi Certified" product can use any brand of access point with any other brand of client hardware that also is certified. Typically, however, any Wi-Fi product using the same radio frequency (for example, 2.4 GHz for 802.11b or 11 g, 5 GHz for 802.11a) will work with any other, even if not "Wi-Fi Certified."

Formerly, the term "Wi-Fi" was used only in place of the 2.4 GHz 802.11b standard, in the same way that "Ethernet" is used in place of IEEE 802.3. The Alliance expanded the generic use of the term in an attempt to stop confusion about wireless LAN interoperability.

The Enabling Circuit **250** may contain logic that queries that certain conditions have been satisfied so that the Enabling System **360** may enable the Mobile Communicator **370**. The Enabling Circuit **250** may provide a contact closure via a wire **225**, or wirelessly, that completes an electrical circuit between the Enabling Circuit **250** and the Communicator Controller **350**, enabling the Communicator Controller **350** to drive Enabled State **510** transmitting and audible receiving functions **680** of the kit **205** or the Mobile Communicator **370** when an answer to the query as to that the certain condition has been satisfied is "yes." However, the contact closure may not be provided to the Communicator Controller **350** when the answer to the query as to that the certain condition has been satisfied is "no." The Communicator Controller **350** may drive certain Enabled State **510** transmitting and audible receiving functions **680** via a wire **690**, or wirelessly, or inaudible or suppressed receiving and transmitting functions **685** of the Mobile Communicator **370** via a wire **687**, or wirelessly, when the Communicator Controller **350** may receive the contact closure from the Enabling Circuit **250**, i.e., when the certain condition has been satisfied. The Enabled State **510** transmitting and audible receiving functions **680** include ringer notification of messages or incoming calls, calling in/out, e.g., making incoming and outgoing calls from the Mobile Communicator **370**, and combinations thereof. The Enabled State **510** inaudible or suppressed receiving and transmitting functions **685** include a vibrator notification, a camera, a palm pilot, text messaging, message receipt and storage, internet connectivity, silent mode, selective suppression or damping of portions of frequencies of transmissions such as high frequency portion, substitution of video or audio output for suppressed output, and combinations thereof.

The Enabling System **360** may include a Keypad **240**, for inputting information to the Communicator Controller **350** via a wire **245**. Alternatively, the keypad **240** may input information to the Communicator Controller **350** wirelessly.

The kit **205** or the Mobile Communicator **370** may be enabled for hands-free calling when the at least one condition for enablement of the kit **205** or the Mobile Communicator **370** has been satisfied. A purpose of hands-free calling is to enable use of the kit **205** or the Mobile Communicator **370** when a user's hands are not available to operate the kit **205** or the Mobile Communicator **370**, such as for activating the Start Switch **203**. Hereinafter, "hands-free calling" or "hands-free operation" is defined as allowing a user to retrieve a preprogrammed name and phone number of the person to be called from an address book **483**. A user may enable the transmitting and audible receiving functions **680** of the kit **205** or the Mobile Communicator **370** by speaking or verbalizing the name that has been preprogrammed or recorded in the Enabling System **360**, such as in the address book **483**. Thus, the user may place a call to a telephone number of a person whose name and number may have been stored in the address book **483** by speaking or verbalizing the person's name or any other preprogrammed or recorded tag attached to the person's name, such as nicknames. The address book **483** may provide preprogrammed or recorded names for recall from the address book **483** by the authenticated user via a wire **485**, or wirelessly.

The Communicator Controller **350** may also drive a voice activated Emergency Dialer **260** and/or a Location Transmitter **270**. A user may simply speak or verbalize a predetermined call for assistance, such as a word or phrase, e.g., "help" into the Microphone **275**, or input the word "help" into the Communicator Controller **350** via the keypad **240** to make the Emergency Dialer **260** and/or a Location Transmitter **270** operational. Simply speaking or verbalizing the predetermined call for assistance, such as a word or phrase, e.g., "help" into the Microphone **275**, such that the Communicator Controller **350** may drive the kit **205** or the Mobile Communicator **370** to call the Emergency Service Provider **180** and/or notify the Location Transmitter **270** when the user speaks the predetermined word or phrase into the Microphone **275** or inputs the word or phrase into the Communicator Controller **350** via the keypad **240**.

Causes for such a call to the Emergency Service Provider **180** for help may include calls for any assistance, such as when hiking if the user may be lost and may need directions to find a safe resting place, or to be rescued because of unexpected weather or that there isn't time to return to safety before nightfall. Alternatively the user may be experiencing an emergency, such as a medical emergency or because of a threat against the user's safety.

The Communicator Controller **350** may drive an Emergency Dialer **260** and a Location Transmitter **270** for automatically dialing for example, 911, in the United States, and transmitting a location of the kit **205** or the Mobile Communicator **370** to an Emergency Service Provider **180**. The Emergency Dialer **260** may communicate with the Emergency Service Provider **180** via a wire **270** or wirelessly. The Location Transmitter **270** may communicate with the Emergency Service Provider **180** via a wire **265** or wirelessly. The outgoing call to the Emergency Service Provider **180** may trigger the Location Transmitter **270**. The Location Transmitter **270** may be activated by a cell phone signal provider, such as the Emergency Service Provider **180**, resulting in a Locator Beacon **213** emitting a locator signal. Alternatively, the Enabling System **360** may contain preprogrammed commands and appropriately designated telephone numbers, e.g., "help, 911," or "call home, XXX-XXXX," or "call Emergency Service Provider, 911," or "police, XXX-XXXX," or "emergency, 911," so that the Enabling System **360** may enable all functions of the Mobile Communicator **370** including audible receiving and transmitting functions **680** and data retrieval and inaudible receiving functions **685** for communicating with the designated telephone number holders and trigger the Location Transmitter **270**, so that a user may override the need to determine whether the conditions **420-480** have been satisfied by applying the yes/no logic of the Enabling Circuit **250** if they utter the command into the

Microphone **275**. The command may be a user identifying sound(s) or a verbal password that may be recognized by the Voice Recognition System **273**, or a written command or password inputted into the Communicator Controller **350** via the keypad **240**, and if the command has been determined to be essentially identical to or matches the preprogrammed or recorded command, the Enabling Circuit **250** may activate the Communication Controller **350** to enable the transmitting and audible receiving functions **680** of the Mobile Communicator **370**, including triggering the Emergency Dialer **260** and/or the Location Transmitter **270**. The Location Transmitter **270** may communicate with the Locator Beacon **213** via a wire **276** or wirelessly.

The Communicator Controller **350** may also drive the Emergency Dialer **260** and a Location Transmitter **270** when the user's voice or identifying sound(s) making the outgoing call to the Emergency Service Provider **180** has been authenticated by the Voice Recognition System **230**. The voice recognition system **230** may recognize user identifying sound(s) described herein. Satisfaction of the at least one condition for enabling the Mobile Communicator's **370** audible receiving and transmitting functions **680** may require authentication of a user's voice by voice recognition or sound(s) recognition or password recognition. Entry of a password via a keypad **240** or authentication by the Voice Recognition System **230** may provide identification of the user to the Emergency Service Provider **180** and enabling of the Locator Beacon **213**.

Referring to the Communicator Controller **350** driving the Location Transmitter **270**, it may become necessary for a user to activate the Locator Beacon **213** in order to find the Mobile Communicator **370** if it may be lost or misplaced or obscured from view. Alternatively, when the kit **205** or the Mobile Communicator **370** may be lost or stolen a user may report this to any service provider or to the Emergency Service Provider **180** and a specific signal can be sent to the kit **205** or the Mobile Communicator **370** by the service provider or the Emergency Service Provider **180** which may activate the Location Transmitter **270** to transmit a location provided by the GPS Receiver **210** so the phone may be recovered.

In one embodiment, the user may call in to the Mobile Communicator **370** and instruct the Enabling Circuit **250** of the Enabling System **360** to drive the Communicator Controller **250** to trigger the Location Transmitter **270** and/or the Locator Beacon **213**. The Enabling System may require the user to be voice or sound or password authenticated. If there is an interference from background noise that may interfere with reception from the microphone **275** when voice or sound or password authentication is used to trigger the Location Transmitter **270** and/or the Locator Beacon **213**, the Location Transmitter **270** and/or the Locator Beacon **213** may be triggered by an input from the keypad **240**, such as a password.

Adding the Enabling System **360** to a kit **205** or a Mobile Communicator **370**, such as commercially available cell phones, may be an inexpensive improvement having improved functionality that may be easily implemented. The issue today is not does something need to be done to address the safety and privacy issues inappropriate cell phone use represents, but how to do it. One solution to these the safety and privacy issues is legislation requiring cell phones to be disabled whenever they pose safety or privacy risks. Communication devices disclosed in the prior art may be complicated and expensive so that using them to implement these legislative objectives would be politically impractical due to the hardship it would place on the general population. The low cost and simplicity of this device in conjunction with its improvements in emergency use and owner protection from unauthorized use or misuses if the Mobile Communicator **370** may be lost or stolen, makes such needed legislation feasible.

The Enabling System **360** of the kit **205** or the Mobile Communicator **370** may be designed so that the Enabling System **360** may enable a default state so that certain functions of the Mobile Communicator **370** may be disabled when use of the Mobile Communicator **370** may be unsafe or an intrusion upon the personal privacy of bystanders. Enabling the default state and its operation requires no generation of radio or other signal transmission that could create health risks or impinge on other types of communication.

The kit **205** or the Mobile Communicator **370** having the Enabling System **360** may be an improvement over cell phones that depend on a disabling signal of some type to be received in order for the phone to be disabled. Such cell phones may be subject to blocking systems or other workarounds being developed which would result in the cell phones remaining functional because they require a disabling signal, and preventing that signal from getting through may leave such cell phones enabled. In contrast, the Enabling System **360** of the kit **205** or the Mobile Communicator **370** may enable the Default Disabled State when certain required conditions, such as receiving a global positioning system (GPS) signal or receiving a privacy signal, may not be satisfied. Therefore, the Enabling System **360** that enables the enabled state of the Mobile Communicator **370** may not be subject to blocking systems or other workarounds being developed, because blocking the GPS signal or privacy signal in the Mobile Communicator **370** enables the Default Disabled State.

At no time does the function of the Enabling System **360** interfere, or create a condition which could interfere with receiving signals. On the contrary, the Enabling System **360** may require that the GPS Receiver **210** receive a GPS signal. In addition, the Enabling System **360** may also require voice, password or sound(s) authentication for enablement of the Mobile Communicator's **370** calling in/out and/or other functions. The Enabling System **360** may disable certain functions deemed inappropriate or unsafe if no GPS signal is received by the GPS processor **220** and the Enabling Circuit **250**. Therefore, the Enabling System **360** that enables the enabled state of the Mobile Communicator **370** may not be subject to blocking systems or other workarounds being developed, such as disablement of the microphone **275**, because blocking the microphone **275** in the Mobile Communicator **370** may enable the Default Disabled State.

At present the loss of communicators that rely on satisfying a security requirement to be disabled may result in the owner being exposed to the risks of unauthorized use delineated above. The Mobile Communicator **370** of the present invention may eliminate that risk without adversely impacting convenience or the ability to make emergency calls immediately.

In emergency situations the Mobile Communicator **370** of the present invention not only provides for less likelihood of operator error due to emergency, but also provides for a way to locate where the emergency call is coming from, since the GPS Receiver **210** may provide a geographic location of the Mobile Communicator **370**. The kit **205** or the Mobile Communicator **370** having the Enabling System **360** may be a major improvement over cell phones that do not have the Enabling System **360** because the kit **205** or the Mobile Communicator **370** having the Enabling System **360** may lower risk of deploying emergency personnel to a wrong location, but it also allows emergency personnel to be immediately deployed to where help is required even if the person in need of help is only able to initiate the call due to becoming physi-

cally incapacitated or endangered. This approach offers significant improvements over cell phones not equipped with the Enabling System **360** of the present invention. Since at no time does the kit **205** or the Mobile Communicator **370** remain in the Default Disabled State **410** due to lack of GPS signal or inaudible sound(s). In emergency situations the kit **205** or the Mobile Communicator **370** can have audible receiving and transmitting functions **680** without concern of a stray signal or occurrence unintentionally disabling it as is possible with cell phones without the Enabling System **360** of the present invention. In an emergency situation, where time is of the essence, not having to try and push buttons will result not only in time savings but eliminate mistakes due to panic.

FIG. **2** depicts embodiments of a method **400** for enabling the Mobile Communicator **370** using the Enabling System **360** to enable the kit **205**, the Mobile Communicator **370** or similar communication device. In a step **650** of the method **400**, notice that a GPS signal has been received by GPS Receiver **210** may be transmitted to the Enabling Circuit **250** via connection wire **247**, or wirelessly, wherein the GPS Processor **220** may have received the GPS signal from the GPS Signal Amplifier **190** via connection wire **200**, or wirelessly. Alternatively, notice that the GPS signal has been received by GPS Signal Amplifier **190**, may be transmitted to the Enabling Circuit **250** by the GPS Signal Amplifier **190** via the wire **243**, or wirelessly. The GPS signal from the GPS Processor **220** may be digital or analog. In the step **650** of the method **400**, said receiving of the GPS signal may be an at least one condition **420** for enabling the kit **205** or the Mobile Communicator **370**, and wherein outgoing calls to an Emergency Service Provider **180** are always enabled by the Enabling System **360**. The Enabling Circuit **250** may enable calls from the kit **205** or the Mobile Communicator **370** to the Emergency Service Provider **180** by providing a contact closure that completes an electrical circuit in the Enabling Circuit **250** that may notify the Communicator Controller **350** that the GPS signal has been received, via a wire **225**, or wirelessly, wherein the Communicator Controller **350** may enable the Emergency Dialer **260** to make the outgoing calls to the Emergency Service Provider **180**.

In a step **660** of the method **400**, a user may activate the Start Switch **203** on the kit **205** or the Mobile Communicator **370** that may enable the call to the Emergency Service Provider **180** and/or the Location Transmitter **270** of the kit **205** or the Mobile Communicator **370**, if an at least one condition, e.g., that there is an emergency, has been satisfied. In the step **660**, a logic of the Enabling Circuit **250** of the Enabling System **360** of the kit **205** or the Mobile Communicator **370** asks "There is an Emergency?" **430**. If the emergency condition **430** has been satisfied, e.g., the user has spoken a word or command such as "help" into the Microphone **275**, or input a message "emergency" via the Keypad **240**, the user may be able to change the state of the kit **205** or the Mobile Communicator **370**, from an initial Default Disabled State **410**, as in step **660** "Start", to a 911 Enabled & Locator Triggered state **450** because such a word or command or input satisfies the at least one condition that there be an emergency, i.e. as in step **590** of the method **400**. Hereinafter, a user calling or speaking a preprogrammed word, e.g., "help", or phrase, e.g., "this is an emergency", or "get help", into the Microphone **275** or inputting the preprogrammed word or phrase into the Communicator Controller **370** via the keypad **240** may signify there is an emergency and satisfies the condition that there be an emergency. In the step **590**, the Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350** via a wire **225**, or wirelessly, that there has been an emergency. The Communicator Controller **350** may then trigger the Emergency Dialer **260** to call **911** and the Location Transmitter **270** to trigger the Locator Beacon **213**.

In the methods **400**, **450**, and **465** described infra, the Start Switch **203** may be the contact closure, providing a contact closure to the Communicator Controller **350**, via the wire **201**, or wirelessly and completing an electrical circuit that may include the Communicator Controller **350** and at least one other component of the Enabling System **360**, such as the Enabling Circuit **250**, via the wire **225**, or wirelessly, the Emergency Dialer **260**, via the wire **235**, or wirelessly, or the Location Transmitter **270**, via the wire **255**, or wirelessly. Completing the electrical circuit may enable the Communicator Controller **350** to change the state of the kit **205** or the Mobile Communicator **370** from a Default Disabled State **410** to an Enabled State **510**, and to drive the receiving or transmitting functions of the kit **205** or the Mobile Communicator **370** depending that certain conditions **420**, **430**, **440**, **450**, **460**, and **480** (**420-480**) may be satisfied. That the conditions **420-480** have been satisfied for the Mobile Communicator **370** may be periodically ascertained by a logic contained in the Enabling Circuit **250** of the Enabling System **360** as "yes, the condition has been satisfied, as in **495**, **515**, **525**, **570**, **575**, **580**, **590**, **600**, **707**, **775**, **790**, **795**, **797**, **807**, **875**, **895**, and **897**. Alternatively, not satisfying the conditions **420-480** for the Mobile Communicator **370** may be periodically ascertained by a logic contained in the Enabling Circuit **250** of the Enabling System **360** as "no, the condition has not been satisfied, as in **490**, **500**, **510**, **520**, **530**, **700**, **730**, **790**, **800**, **830**, and **890**. The answers to questions **495**, **515**, **525**, **570**, **575**, **580**, **590**, **600**, **707**, **775**, **790**, **795**, **797**, **807**, **875**, **895**, and **897**, and **490**, **500**, **510**, **520**, **530**, **700**, **730**, **790**, **800**, **830**, and **890** may be provided periodically by the Enabling Circuit **250** via a connection wire **225**, or wirelessly, to the Communicator Controller **350**. Hereinafter, the process by which the Enabling Circuit **250** arrives at the answers to questions **495**, **515**, **525**, **570**, **575**, **580**, **590**, **600**, **707**, **775**, **790**, **795**, **797**, **807**, **875**, **895**, and **897**, and **490**, **500**, **510**, **520**, **530**, **700**, **730**, **790**, **800**, **830**, and **890** is the Enabling Circuit Logic. An example of the Enabling Circuit Logic is periodically ascertaining that the conditions **420-480** exist for the Mobile Communicator **370**, as in embodiments of the methods **400**, **450** and **465**, infra. Hereinafter periodically means at a prescribed frequency. In embodiments of the methods **400**, **450** and **465**, infra, if the answer to questions querying the conditions **420-480** are "Yes," then the state of the Mobile Communicator **370** may become the Enabled State **510**, as in steps **495**, **515**, **525**, **570**, **575**, **580**, **590**, **600**, **707**, **775**, **790**, **795**, **797**, **807**, **875**, **895**, and **897**. Alternatively, if the answers to questions querying the conditions **420-480** are "No," then the Mobile Communicator **370** may become a Default Disabled State **410**, as in steps **490**, **500**, **510**, **520**, **530**, **700**, **730**, **790**, **800**, **830**, and **890**. Periodic querying that the conditions **420-480** have been satisfied enables the Mobile Communicator **370** to alternate between states **510** and **410**, depending on the length of time of the period. In embodiments of the methods **400**, **450**, and **465** the Enabling Circuit **250** may perform periodic querying that the conditions **420-480** have been satisfied for periods from about a second to about a minute. In the methods **400**, **450**, and **465**, the Enabling Circuit **250** may perform periodic querying that the conditions **420-480** have been satisfied for periods from about 0.01 seconds to about 0.1 minutes. In the methods **400**, **450**, and **465**, the Enabling Circuit **250** may perform periodic querying that the conditions **420-480** have been satisfied for periods from about 0.001 seconds to about 0.01 minutes.

In the method **400**, if it may be ascertained, as in step **500** of the method **400**, that there is no emergency, changing the kit **205** or the Mobile Communicator **370** from the initial Default Disabled State **410** to the Enabled State **510** may depend on satisfying a condition **420**, i.e., "GPS signal has been received?". Hereinafter, enabling the transmitting and audible receiving functions **680** of the Mobile Communicator **370** is equivalent to changing the Mobile Communicator **370** from a Default Disabled State to an Enabled State. In a step **650**, of the method **400**, a GPS signal has been received by the GPS Signal Amplifier **190**. In the step **650**, if the GPS Processor **220** receives the GPS signal from the GPS Signal Amplifier **190**, the GPS Receiver **210** may provide the GPS signal or a processed signal to the Enabling Circuit **250**. The Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350** via a wire **225**, or wirelessly, that the GPS signal has been provided to the Enabling Circuit **250**. Receiving the GPS signal, as in the step **660** of the method **400**, by the GPS Receiver **210** and/or notice that the GPS signal has been received by the Communicator Controller **250** of the Mobile Communicator **370** may be an at least one condition for enabling the kit **205** or the Mobile Communicator **370**, wherein outgoing calls from the Emergency Dialer **260** to an Emergency Service Provider **180** are always enabled by the Communication Controller **350**. Hereinafter, references in this discussion to Mobile Communicator **370**, mobile phone, cell phone, or mobile communication device are intended to refer to the encompassing meaning of a cell phone and/or mobile communication device under certain enabling conditions, wherein the Mobile Communicator **370** may default to the Disabled State **410** unless the at least one aforementioned conditions **420-480** are satisfied, and wherein that outgoing calls from the Emergency Dialer **260** to an Emergency Service Provider **180** and/or from the Location Transmitter **270** are always enabled by the Communication Controller **350**.

In the step **495** of the method **400**, if the Enabling System **360** of the kit **205** or the Mobile Communicator **370** determines that the condition **420** may be satisfied, i.e., that a GPS signal has been received and/or the Communicator Controller **350** has been notified that the GPS signal has been received by the Enabling Circuit **250**, then the Enabling System **360** may enable an Enabled State **510** of the kit **205** or the Mobile Communicator **370**, as in the step **495** of the method **400**.

Alternatively, in the step **490** of the method **400**, if the Enabling Circuit **250** of the kit **205** or the Mobile Communicator **370** determines, conversely, that the condition **420** has not been satisfied, i.e., that no GPS signal has been received by the Enabling Circuit **250**, and/or the Communicator Controller **350** has not been notified that the GPS signal has been received by the Enabling Circuit **250**, then the Enabling System **360** may enable a Default Disabled State **410** of the Mobile Communicator **370**, as in the step **490** of the method **400**.

FIG. **3** depicts a continuation of FIG. **2**, depicting embodiments of the method **400**. If the Enabling System **360** has ascertained, as in the step **500** of the method **400**, as depicted in FIG. **2** and described in associated text herein, that there is no emergency, and that a GPS signal has been received, in the step **600**, instead of enabling the Mobile Communicator **370**, as in the step **495**, the Enabling System **360** may require that a condition **440**, i.e., that a speed, $s_{f,i}$, of the Mobile Communicator **370**, an average speed, s_{avg}, of the Mobile Communicator **370**, or a normalized speed, ns, of the Mobile Communicator **370**, may be less than or equal to ("≦") a setpoint speed. Hereinafter, "speed of the kit **205** or the Mobile Communicator **370**" refers to each speed selected from the group consisting of the speed, $s_{f,i}$, of the kit **205** or the Mobile Communicator **370**, an average speed, s_{avg}, of the kit **205** or the Mobile Communicator **370**, or a normalized speed, ns, of the kit **205** or the Mobile Communicator **370**.

A motion detector **228**, such as a laser doppler non-contact speed and length gauge (Proton Products, 10 Aylesbury End, Beaconsfield, Bucks.HP9 LW1, England), may determine if the Mobile Communicator **370** may be in motion. Photo radar systems usually operate on the K-band at 24.15 GHz. The motion detector **228** may measure a speed of a vehicle in which the kit **205**, or the Mobile Communicator **370** is used, using any appropriate speedometer typically used to determine the speed of a vehicle. The output from the speedometer may be provided to the Motion Detector **228** by the vehicle's speedometer **279** via mechanical, electrical signal, hydraulic or pneumatic means through a conduit or wire **272**, or wirelessly.

IR Pulsed Laser Diode, available from Ingram Technologies, LLC, Rt 2, Box 2169, 6721 West, 4000 South Roosevelt, Utah 84066, to measure speed, distance and direction is the new generation replacement for the older Photo-Radar systems. By using beam width of less than one-degree, an accuracy level is achieved that can not be reached by the older radar systems. As the beam crosses the traffic lanes, it can only target one vehicle at a time and minimize the possibility of false readings. The beam can also be "gated" so that only vehicles within a set of distances will be read. The other feature of IR Pulsed Laser Diode is that a vehicle traveling in only one direction can be captured by the system, if desired.

The speed, $s_{f,i}$, of the kit **205** or the Mobile Communicator **370** may be determined by the GPS processor **220**, such as a GPSTran (available from 5 Little Balmer, Buckingham Industrial Park, Buckingham MK18 1TF, United Kingdom), designed to provide a digital speed pulse output for use by other equipment. Because satellite GPS is used to measure speed, the GPSTran is suitable for use in many applications where normal speed sensing methods will not work. The update rate of the pulse output is 5 Hz with an accuracy of ±0.1 kmh. The pulse per meter setting is configurable to suit most applications.

The GPS Processor **220** may provide an initial p_i and a final p_f geographical position of the GPS Processor **220** for an initial time t_i and a final time t_f, wherein a difference (t_f-t_i) between the initial and final times t_i, t_f, represent a time interval, $x_{f,i}$, wherein $x_{f,i}$ may be any postive integer. Alternatively, the time interval $x_{f,i}$, may be from about 1 mili second to about 1×10^3 mili seconds. Alternatively, the time interval, $x_{f,i}$, may be from about 1 micro second to about 1×10^6 micro seconds. Alternatively, the time interval, $x_{f,i}$, may be from about 1 nano second to about 1×10^9 nano seconds. The time interval, $x_{f,i}$, may be from about 1 minute to about 5 minutes and a difference between the initial geographical position p_i of the GPS Processor **220** and the final geographical position p_f of the GPS Processor **220** may be from about 0.016 miles to about 2.5 miles. The speed, $s_{f,i}$, of the Mobile Communicator **370** may be represented by formula 1, as follows:

$$s_{f,i}=(p_f-p_i)/x_{f,i} \qquad \text{Formula 1}$$

The average speed, s_{avg}, of the Mobile Communicator **370**, for a time interval, x_j, wherein j=1, 2, 3, . . . j, may be determined by the GPS processor **220**, wherein the GPS Processor **220** may provide an initial geographical position, p_i, and a final geographical position, p_f, of the GPS Processor **220** for each time interval, x_j, and an initial time t_i and a final time t_f for each time interval, x_j, wherein a sum of the differences $\Sigma(t_f-t_i)_j$ for each initial and final time, t_i, t_f, for each time

interval, x_j, may be represented as a sum of the time intervals, Σx_j. A sum of the differences $\Sigma(p_f-p_i)_k$, where k=1, 2, 3, . . . k, between the initial and final geographical positions p_i, p_f, may represent a total distance that the kit **205** or the Mobile Communicator **370** may have traveled in each time interval x_j. The average speed, s_{avg}, of the Mobile Communicator **370** may be represented by formula 2, as follows:

$$s_{avg}=\Sigma(p_i-p_f)_j/\Sigma x_j \qquad \text{Formula 2}$$

The normalized speed, ns of the Mobile Communicator **370**, for a time interval, x_m, where m=1, 2, . . . m, determined by the GPS processor **220**, wherein the GPS Processor **220** may provide an initial speed s_i of the Mobile Communicator **370**, and a fraction of time at the initial speed s_i, and a final speed, s_f, of the Mobile Communicator **370**, and fraction of time at the final speed, s_f. The time, t_{si}, may be the time at speed s_i and the time t_{sf} may be the time at speed s_f. Therefore, the fraction of time at the first speed s_i may be represented as $t_{si}/(t_{si}+t_{sf})$. In like manner, the fraction of time at the second speed s_f may be represented as $t_{sf}/(t_{si}+t_{sf})$. The GPS processor **220** may calculate the normalized speed, ns, of the Mobile Communicator **370** as in the following Formula 3:

$$ns=s_i\times\text{fraction of time at } s_i+s_f\times\text{fraction of time at } s_f \qquad \text{Formula 3}$$

A logic of the Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350** via a wire **225**, or wirelessly, that the Motion Detector **228** has provided confirmation that the speed of the kit **205** or the Mobile Communicator **370** is ≦the setpoint speed to the Enabling Circuit **250** via wire **229**, or wirelessly, based on the Motion Detector **228** receiving a speed of the kit **205** or the Mobile Communicator **370** from the speedometer **279** via a wire **272**, or wirelessly. Said completion of the electrical circuit and confirmation that the speed of the kit **205** or the Mobile Communicator **370** is ≦the setpoint speed to the Enabling Circuit **250** via a wire **223**, or wirelessly, may be the at least one condition for enabling the Enabling System **360** of the kit **205** or the Mobile Communicator **370**, and wherein outgoing calls from the Emergency Dialer **260** to an Emergency Service Provider **180** may always be enabled by the Communication Controller **350**.

In the step **515** of the method **400**, if the Enabling System **360** of the kit **205** or the Mobile Communicator **370** determines that the condition **440** may be satisfied, i.e., that the Mobile Communicator **370** speed may be ≦the setpoint, then the Enabling System **360** may enable an Enabled State **510** of the Mobile Communicator **370**, as in the step **515** of the method **400**.

Alternatively, in the step **510** of the method **400**, if the Enabling System **360** of the kit **205** or the Mobile Communicator **370** determines, conversely, that the condition **440** may not be satisfied, i.e., that the Mobile Communicator **370** speed not be ≦the setpoint speed, then the Enabling System **360** may enable a Default Disabled State **410** of the Mobile Communicator **370**, as in the step **510** of the method **400**.

FIG. **4** depicts a continuation of FIG. **3**, depicting embodiments of the method **400**. If the Enabling System **360** has ascertained as in the step **500** of the method **400**, as depicted in FIG. **2** and described in associated text herein, that there is no emergency, and that the GPS signal has been received, in the step **580**, instead of enabling the Mobile Communicator **370**, as in the step **515**, the Enabling System **360** may require that a condition **460**, i.e. that a user of the kit **205** or the Mobile Communicator **370** be authorized. In the step **580**, if the voice recognition system **230** receives a user identifying sound(s) such as a user's identifying voice or identifying frequency or tone (hereinafter user-identifying sound(s) from the microphone **275**. If the user identifying sound(s) match or have the same frequencies as a preprogrammed voice or preprogrammed frequency, the voice recognition system **230** may provide confirmation of voice recognition to the Enabling Circuit **250**. The preprogrammed user identifying sound(s) may be in a frequency range that may be audible or inaudible to humans. For example, a dog whistle may emit sound(s) that may be inaudible to humans. Humans hear frequencies between about 20 cycles/sec to 20,000 cycles/sec at 130 db (very loud). This shrinks to a range of about 700 cycles/sec to 6000 cycles/sec at 0 db (very faint).

Alternatively, the user identifying sound(s) may be a tone from a tuning fork that naturally resonates at an established frequency or set of frequencies, i.e., sound(s), such as the note C in the key of C major that is equivalent to middle C on a standard piano, may be audible to humans.

A logic of the Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350** via a wire **225**, or wirelessly, that the Voice Recognition System **230** has provided confirmation of the voice recognition to the Enabling Circuit **250** via wire **223**, or wirelessly. Said completion of the electrical circuit and confirmation of the voice recognition to the Enabling Circuit **250** via a wire **223**, or wirelessly, may be the at least one condition for enabling the Enabling System **360** of the kit **205** or the Mobile Communicator **370**, and wherein that outgoing calls from the Emergency Dialer **260** to an Emergency Service Provider **180** may always be enabled by the Communication Controller **350**.

In the step **525** of the method **400**, if the Enabling System **360** of the kit **205** or the Mobile Communicator **370** determines that the condition **460** may be satisfied, i.e., that the user has been authorized, then the Enabling System **360** may enable the Enabled State **510** of the Mobile Communicator **370**, as in the step **525** of the method **400**.

Alternatively, in the step **520** of the method **400**, if the Enabling System **360** of the kit **205** or the Mobile Communicator **370** determines, conversely, that the condition **460** may not be satisfied, i.e., that the user has not been authorized, then the Enabling System **360** may enable a Default Disabled State **410** of the Mobile Communicator **370**, as in the step **520** of the method **400**.

FIG. **5** depicts embodiments of a method **400** for enabling the Mobile Communicator **370** using the Enabling System **360** to enable the kit **205**, the Mobile Communicator **370** or similar communication device. If the Enabling System **360** has ascertained as in the step **500** of the method **400**, as depicted in FIG. **2** and described in associated text herein, that there is no emergency and that the GPS signal has been received, in the step **570**, instead of enabling the Mobile Communicator **370**, as in the step **525**, the Enabling System **360** may require that a condition **480**, i.e. "No Privacy Signal Has Been Received", be satisfied, so that the Enabling Circuit **250** may communicate to the Communicator Controller **350** to drive audible receiving and transmitting functions **680**, thereby enabling the Enabled State **510** of the kit **205** or the Mobile Communicator **370**.

In the step **570**, if the Privacy Receiver System **273** receives a privacy signal from the Privacy Signal Generator **271**, the Privacy Receiver System **273** may provide the privacy signal or a processed signal to the Enabling Circuit **250**. In the step **570**, the Enabling System **360** may or may not receive a privacy signal. A logic of the Enabling Circuit **250** may determine that the condition **480**, i.e., "No Privacy Signal Has Been Received?", has been satisfied, as in step **575** or is not

satisfied, as in the step **530**. If the condition **480** has not been satisfied, as in the step **530**, i.e., a privacy signal has been received, e.g., when privacy is desirable or when piracy of trade secrets, for example, is to be discouraged, the Enabling Circuit **250** communicates that the condition **480** has not been satisfied to the Communicator Controller **350**. Alternatively, if the condition **480** has been satisfied, i.e. no privacy signal may have been detected by the Privacy Signal Receive System **273**, as in the step **575**, the Communicator Controller **350** may enable the Enabled State **510** and the phone becomes enabled.

A purpose of defeating or working around the privacy signal condition **480** may be to make an outgoing phone call. Embodiments in which enabling the Enabled State **510** of the kit **205** or the Mobile Communicator **370** may be conditioned on satisfying the condition **480**, i.e. that No Privacy Signal Has Been Received, may be an improvement over cell phones that require a privacy signal for enablement because no privacy signal may be needed to enable the Enabled State **510** of the kit **205** or the Mobile Communicator **370**. Conditioning enablement of the kit **205** or the Mobile Communicator **370** on satisfying the condition **480**, i.e. that No Privacy Signal Has Been Received, may be an improvement over cell phones that require a privacy signal for enablement because a user seeking to block the privacy signal that disables the kit **205** or Mobile Communicator **370** must also block the Microphone **275**, thus defeating the ability to make the outgoing call because both the user's voice and the privacy signal may be received by the Microphone **275** in order for the user to make the outgoing call.

In the enabled Default Disabled State **410**, the receiving or transmitting functions of the kit **205** or the Mobile Communicator **370** may remain disabled, even though the Start Switch **203** has been activated in the step **660** of the method **400**, as depicted in FIG. **2**, and described in associated text, herein. Conditioning disablement of the kit **205** or the Mobile Communicator **370** on receiving the privacy signal through the Microphone **275** instead of through wire **268** or wirelessly from the antenna **274** of the Privacy Signal Generator **278** may avoid the majority of the privacy and piracy (theft of trade secrets or business confidential information) issues because audible receiving and transmitting functions **680** of the kit **205** or the Mobile Communicator **370** may remain in the Default Disabled State **410** unless the Enabling System **360** of the kit **205** or the Mobile Communicator **370** does not receive the privacy signal. Alternatively, privacy and piracy incidents may be avoided during indoor usage of the kit **205** or the Mobile Communicator **370** since the GPS signal also may not be available due to indoor blocking of the line of sight to the source of the GPS signal, such as a GPS satellite. Transmitting and receiving functions of the kit **205** and the Mobile Communicator **370** my remain disabled because the at least one condition for enabling the Enabling System **360** of the kit **205** or the Mobile Communicator **370**, i.e., receiving a GPS signal, has not been satisfied, and wherein that outgoing calls from the Emergency Dialer **260** to an Emergency Service Provider **180** may always be enabled by the Communication Controller **350**. During indoor usage, if a GPS signal has not been received by the GPS Receiver **210**, the Default Disabled State **410** of the kit **205** or the Mobile Communicator **370** may be enabled as in the step **490** of the method **400**. In the unlikely situation a GPS signal is available in a building (GPS typically requires line of sight to work) and the owner/occupants wish to disable phones in this area this can be done by the installation of a wide range of inexpensive and readily available blocking devices that will allow them to create a no GPS signal area. For example, a Cell-Block-R Control Unit, available from Quiet Cell Technologies Inc., 57 Waterford Drive, Ottawa ON K2E 7V4: CANADA, may act as a kind of decoy cellular tower. Where its use may no be prohibited, the Cell-Block-R Control Unit may remove the kit **205** or the Mobile Communicator **370** from a regular cell phone service provider by supplying a decoy communication signal. Any incoming calls may be referred to voice mail.

In the method **400** for using the kit **205** or the Mobile Communicator **370**, a logic of the Enabling Circuit **250** may condition enablement of the Enabled State **510** on the Enabled Circuit **250** not receiving the privacy signal or processed privacy signal from the Privacy Signal Receiver **273** via Microphone **275**. Conditioning enabling the Enabled State **510** on the Enabled Circuit **250** on not receiving the privacy signal or processed privacy signal from the Privacy Signal Receiver **273** via the Microphone **275** will also prevent most usage of the Mobile Communicator **370** in ground passenger vehicles or carriers such as cars, trucks, trains, buses and the like, or in airplanes if use of the kit **205** or the Mobile Communicator **370** may interfere with the passengers enjoyment of their quiet and solitude or if trade secrets, confidential or proprietary information may be improperly disclosed because the privacy signal could be provided when it may be improper to use the Mobile Communicator **370** in such vehicles or carriers. When prevention of indoor use of the kit **205** or the Mobile Communicator **370** is desired, and the kit **205** or the Mobile Communicator **370** has received a GPS signal from, for example, the antenna **271** being in the line of sight of the GPS signal from the GPS satellite, a Privacy Signal Generator **278** may provide a privacy signal to the Privacy Receiver System **273** for indoor enablement of the Default Disabled State **410** of the kit **205** or the Mobile Communicator **370**, as in the step **530** of the method **400**. Any appropriate system for enhancing the GPS signal may be used to provide the GPS signal to the GPS Receiver **210** during indoor or other applications where the GPS antenna **271** may not be in the line of sight of the GPS signal from the GPS Satellite.

In the method **400** for using the kit **205** or the Mobile Communicator **370**, a logic of the Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350** via a wire **225**, or wirelessly, that the Enabling Circuit **250** may not have received the privacy signal or a processed privacy signal from the Privacy Receiver System **273** via the wire **241**, or wirelessly. Said completion of the electrical circuit and confirmation of notice to the Communicator Controller **350** by the Enabling Circuit **250** via a wire **225**, or wirelessly, may be the at least one condition for enabling the kit **205** or the Mobile Communicator **370**, and wherein outgoing calls from the Emergency Dialer **260** to an Emergency Service Provider **180** may always be enabled by the Communication Controller **350**.

It has been stated that the Enabling System **360** of the kit **205** or the Mobile Communicator **370** may be an improvement over mobile communicators that may be disabled by receiving a disabling signal because the disabling signal of such devices may be blocked or interfered with or they may fail, leaving the mobile communicator in an Enabled State because that is the default state when the disabling signal is not received. Conversely, the Enabling System **360** may be an improvement because the default state of the Mobile Communicator **370** may be a Default Disabled State **410** because the kit **205** or the Mobile Communicator **370** may be disabled if the GPS Signal Amplifier **190** does not receive a GPS signal, as in the step **490** of the method **400**, as described in FIG. **2** and associated text, supra.

The GPS signal may be any standard GPS signal. GPS satellites transmit two low power radio signals, designated L1 and L2. Civilian GPS uses the L1 frequency of 1575.42 MHz in the UHF band. The signals travel by line of sight, meaning they will pass through clouds, glass and plastic but will not go through most solid objects such as buildings and mountains. In the step **650**, the Enabling System **360** may or may not receive a GPS signal. The logic of the Enabling Circuit **250** may determine that the condition **420**, i.e., "GPS signal has been received?", is satisfied, as in step **495** or is not satisfied, as in the step **490**. If no GPS signal is available (typically indoors or in most vehicles), the Enabling Circuit **250** communicates that the condition **420** is satisfied to the Communicator Controller **350**. If the GPS signal is not detected, as in the step **490**, the Communicator Controller **350** may enable the Default Disabled State **410** and the Mobile Communicator **370** remains disabled. This embodiment is an improvement over cell phones not having the Enabling System **360** in that if for any reason (intentional or unintentional) the GPS signal is not available in the step **650**, the Mobile Communicator **370** stays in its default disabled mode **410**.

Conditioning enablement of the Mobile Communicator **370** on receiving the GPS signal, instead of conditioning disablement on receiving a disabling signal, as in cell phones not having the Enabling System **360**, may avoid the majority of the privacy and piracy (theft of trade secrets or business confidential information) issues, since privacy and piracy issues arise mostly in indoor usage of the Mobile Communicator **370**, where the GPS signal usually is not available. In the unlikely situation a GPS signal is available in a building (GPS typically requires line of sight to work) and the owner/occupants wish to disable phones in this area this can be done by the installation of a wide range of cheap and readily available blocking materials that will allow them to create a privacy area. This feature will also prevent most usage in cars and airplanes where it would be a safety hazard because a GPS signal is most often not available in cars or airplanes. When indoor use of the Mobile Communicator **370** is desired, an antenna **271** may provide a GPS signal to the GPS Signal Amplifier **190** for indoor enablement of the Mobile Communicator **370**. Alternatively, the antenna **271** may provide better reception for the GPS Signal Amplifier **190** than an internal antenna with which most GPS Receivers **210** may be equipped.

Referring to FIG. **2**, although there are unlimited applications for the Enabling System **360**, the inventor of the present invention submits the following three embodiments for employing the method **400** and the Enabling System **360**, as depicted in FIG. **1**, supra, to enable the states **410**, **450**, and/or **510** of the Mobile Communicator **370**.

In Example 1, if the Enabling System **360** of the kit **205** or the Mobile Communicator **370** determines that the condition **440** may be satisfied, i.e., that the Mobile Communicator **370** speed may be ≦the setpoint, then transmitting and audible receiving functions **680** of the Mobile Communicator **370** may be enabled, as described in Example 1, as follows.

EXAMPLE 1

Enabling the Kit **205** or the Mobile Communicator **370** in a Moving Vehicle

Referring to FIG. **2**, and associated text, herein, in a step **650** of the method **400** for enabling the kit **205**, the Mobile Communicator **370** or similar communication device, notice that a GPS signal has been received by GPS Receiver **210** may be transmitted to the Enabling Circuit **250** via connection wire **247**, or wirelessly, wherein the GPS Processor **220** may have received the GPS signal from the GPS Signal Amplifier **190** via connection wire **200**, or wirelessly. Alternatively, notice that a GPS signal has been received by GPS Signal Amplifier **190** may be transmitted by the GPS Signal Amplifier **190** to the Enabling Circuit **250** via connection wire **243**, or wirelessly. The GPS signal from the GPS Processor **220** may be digital or analog. In the step **650** of the method **400**, said receiving of the GPS signal may be an at least one condition **420** for enabling the kit **205** or the Mobile Communicator **370**, and wherein outgoing calls to an Emergency Service Provider **180** may always be enabled by the Enabling System **360**. The Enabling Circuit **250** may enable calls from the kit **205** or the Mobile Communicator **370** to the Emergency Service Provider **180** by providing a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350** that the GPS signal has been received, via a wire **225**, or wirelessly, wherein the Communicator Controller **350** may enable the Emergency Dialer **260** to make the outgoing calls to the Emergency Service Provider **180**.

In a step **660** of the method **400**, a user may activate the "Start Switch" **203** on the kit **205** or the Mobile Communicator **370** that may enable the call to the Emergency Service Provider **180** and/or the Location Transmitter **270** of the kit **205** or the Mobile Communicator **370**, if an at least one condition, e.g., that there is an emergency, has been satisfied. In the step **660**, a logic of the Enabling Circuit **250** of the Enabling System **360** of the kit **205** or the Mobile Communicator **370** asks "There Is an Emergency?" **430**. If the emergency condition **430** has been satisfied, e.g., the user has spoken a word or command such as "help" into the Microphone **275**, or input a message "emergency" via the Keypad **240**, the user may be able to change the state of the kit **205** or the Mobile Communicator **370**, from an initial Default Disabled State **410**, as in step **660** "Start", to a 911 Enabled & Locator Triggered state **450** because such a word or command or input satisfies the at least one condition that there be an emergency, i.e. as in step **590** of the method **400**. In the step **590**, the Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350** via a wire **225**, or wirelessly that may trigger the Emergency Dialer **260** to call 911 and the Location Transmitter **270** to trigger the Locator Beacon **213**.

Referring to FIG. **3** and described in associated text herein, if the Enabling System **360** has ascertained as in the step **500** of the method **400**, as depicted in FIG. **2** and described in associated text herein, that there is no emergency, and that a GPS signal has been received, in the step **600**, instead of enabling the Mobile Communicator **370**, as in the step **495**, the Enabling System **360** may enable audible receiving and transmitting functions **680** of the kit **205** or the Mobile Communicator **370** if a condition **440**, i.e., that a speed, $s_{f,i}$, of the Mobile Communicator **370**, an average speed, s_{avg}, of the Mobile Communicator **370**, or a normalized speed, ns, of the Mobile Communicator **370**, may be less than or equal to ("≦") a setpoint speed, wherein the setpoint may be a maximum speed such as any speed from about 0 to about 10 mph. Alternatively, the setpoint may be from about 0 to about 30 mph. It has been found that only enabling Mobile Communicator **370**, e.g., cell phone, use in moving vehicles when the vehicles are moving at a speed ≦the setpoint may be a major public safety need that may be advanced by use of the kit **205** or the Mobile Communicator **370** and the Enabling System **360**, in accordance with the method **400**.

Transmitting and audible receiving functions **680** of the Kit **205** or the Mobile Communicator **370** may be enabled when the condition **480**, i.e., that no privacy signal has been received by the Privacy Receiver System **273** has been satisfied, as described in Example 2, as follows.

EXAMPLE 2

Enabling the Kit **205** or the Mobile Communicator **370** when Privacy or Security May Be an Issue

When Privacy or Security May be an Issue a method **450** for enabling the Mobile Communicator **370** using the Enabling System **360** to enable the kit **205**, the Mobile Communicator **370** or similar communication device. In a step **750** of the method **450** for enabling the kit **205**, the Mobile Communicator **370** or similar communication device, notice that a GPS signal has been received by GPS Receiver **210** may be transmitted to the Enabling Circuit **250** via connection wire **247**, or wirelessly, wherein the GPS Processor **220** may have received the GPS signal from the GPS Signal Amplifier **190** via connection wire **200**, or wirelessly. Alternatively, notice that the GPS signal has been received by GPS Signal Amplifier **190**, may be transmitted to the Enabling Circuit **250** by the GPS Signal Amplifier **190** via the wire **243**, or wirelessly. The GPS signal from the GPS Processor **220** may be digital or analog. In the step **750** of the method **450**, said receiving of the GPS signal may be an at least one condition **420** for enabling the kit **205** or the Mobile Communicator **370**, and wherein outgoing calls to an Emergency Service Provider **180** may always be enabled by the Enabling System **360**.

The Enabling Circuit **250** may enable calls from the kit **205** or the Mobile Communicator **370** to the Emergency Service Provider **180** by providing a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350** that the GPS signal has been received, via a wire **225**, or wirelessly, wherein the Communicator Controller **350** may enable the Emergency Dialer **260** to make the outgoing calls to the Emergency Service Provider **180**.

In a step **760** of the method **450**, a user may activate the "Start Switch" **203** on the kit **205** or the Mobile Communicator **370** that may enable the transmitting and receiving functions of the kit **205** or the Mobile Communicator **370**, if an at least one condition, e.g., that there is an emergency, has been satisfied. In the step **760**, a logic of the Enabling Circuit **250** of the Enabling System **360** of the kit **205** or the Mobile Communicator **370** asks "There is an Emergency?" **430**. In the step **797**, if the emergency condition **430** has been satisfied, e.g., the user has spoken a word or command such as "help" into the Microphone **275**, or input a message "emergency" via the Keypad **240**, the user may be able to change the state of the kit **205** or the Mobile Communicator **370**, from an initial Default Disabled State **410**, as in step **760** "Start", to a 911 Enabled & Locator Triggered state **450** because such a word or command or input satisfies the at least one condition that there be an emergency, i.e. as in step **790** of the method **450**. In the step **797**, the Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350**, via a wire **225**, or wirelessly, that may trigger the Emergency Dialer **260** to call **911** and the Location Transmitter **270** to trigger the Locator Beacon **213**.

Alternatively, if there is no emergency, as in the step **700** of the method **450**, the audible receiving and transmitting functions **680** of the kit **205** or the Mobile Communicator **370** may be enabled, as in the step **795**, if the Enabling System **360** of the kit **205** or the Mobile Communicator **370** determines that the condition **420** may be satisfied, i.e., that a GPS signal has been received. In the step **795**, the Enabling Circuit **250** notifies the Communicator Controller **350** that the GPS signal has been received from the GPS Receiver **210**. The Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350**, via a wire **225**, or wirelessly, that the GPS signal has been provided to the Enabling Circuit **250**. In the step **795**, the Enabling System **360** may enable the audible receiving and transmitting functions **680** of the kit **205** or the Mobile Communicator **370** by changing the state of the kit **205** or the Mobile Communicator **370** from the Default Disabled State **410** to the Enabled State **510**.

Alternatively, in the step **790** of the method **450**, the Enabling Circuit **250** of the kit **205** or the Mobile Communicator **370** has determined, conversely, that the condition **420** has not been satisfied, i.e., that no GPS signal has been received by the Enabling Circuit **250**. In the step **790**, the state of the kit **205** or the Mobile Communicator **370** remains in the Default Disabled State **410** so audible receiving and transmitting functions **680** of the kit **205** or the Mobile Communicator **370** may not be enabled.

In the steps **795** and **790**, a logic of the Enabling Circuit **250** may determine that the condition **420**, i.e., "GPS signal has been received?", has been satisfied, as in step **795** or is not satisfied, as in the step **790**. In the step **790**, if no GPS signal has been received, e.g., when the GPS signal is not in line of sight of the GPS Signal Amplifier **190**, e.g., when the GPS Signal Amplifier **190** may be indoors in a building, automobile, or airplane, the Enabling Circuit **250** communicates that the condition **420** has not been satisfied to the Communicator Controller **350**. If no GPS signal may be detected, as in the step **790**, the Communicator Controller **350** may enable the Default Disabled State **410** and the Mobile Communicator **370**, e.g., the cell phone, remains disabled.

Referring to FIG. **6**, if the Enabling System **360** has ascertained as in the step **700** of the method **450**, that there is no emergency, and that the GPS signal has been received, in the step **707**, instead of enabling the Mobile Communicator **370**, as in the step **795**, the Enabling System **360** may require that a condition **480**, i.e. that the Privacy Receiver System **273** of the kit **205** or the Mobile Communicator **370** has not received a privacy signal.

In the step **707** of the method **450**, the Enabling System **360** may or may not receive a privacy signal. In the step **707**, if the Privacy Receiver System **273** receives a privacy signal from the Privacy Signal Generator **271**, the Privacy Receiver System **273** may provide the privacy signal or a processed signal to the Enabling Circuit **250**. A logic of the Enabling Circuit **250** may determine that the condition **480**, i.e., "No Privacy Signal Has Been Received?", has not been satisfied, as in step **730** of the method **450**. If a privacy signal has been received, e.g., when privacy is desirable or when piracy of trade secrets, for example, is to be discouraged, the Enabling Circuit **250** communicates that the condition **480** has not been satisfied to the Communicator Controller **350**.

Alternatively, if no privacy signal may be detected, as in the step **775** of the method **450**, the Communicator Controller **350** may enable the Enabled State **510** and the audible receiving and transmitting functions **680** of the Mobile Communicator **370**, e.g., a cell phone, may be enabled. Examples of areas where kit **205** or the Mobile Communicator **370** use may be appropriate, safe, or not a security risk include airplanes before takeoff, non-private places outside doctor's offices, outside locker rooms, outside sensitive corporate or private public buildings, outside theatres, and the like.

Examples of areas where kit **205** or Mobile Communicator **370** use may be appropriate, safe, or not a security risk include any public or private place that for privacy or safety reasons needs to have kit **205** or Mobile Communicator **370**, e.g., cell phone, usage controlled.

Alternatively, if a privacy signal has been not been received, e.g., when privacy is not needed or when use of the kit **205** or the Mobile Communicator **370**, for example, may be encouraged, the Enabling Circuit **250** communicates that the condition **480** has been satisfied to the Communicator Controller **350**. If the privacy signal may not be detected, as in the step **775**, the Communicator Controller **350** may enable the Enabled State **510** and the audible receiving and transmitting functions **680** of the Mobile Communicator **370**, e.g., the cell phone, may be enabled.

Transmitting and audible receiving functions **680** of the Kit **205** or the Mobile Communicator **370** may be enabled when the condition **460**, i.e., that the user has been confirmed by the Voice Recognition System **230** has been satisfied, as described in Example 3, as follows.

EXAMPLE 3

Enabling the Kit **205** or the Mobile Communicator **370** when User Authorization May Be an Issue

FIG. **7** depicts embodiments of a method **465** for enabling the Mobile Communicator **370** using the Enabling System **360** to enable the kit **205**, the Mobile Communicator **370** or similar communication device. In a step **850** of the method **465** for enabling the kit **205**, the Mobile Communicator **370** or similar communication device, notice that a GPS signal has been received by GPS Receiver **210** may be transmitted to the Enabling Circuit **250** via connection wire **247**, or wirelessly, wherein the GPS Processor **220** may have received the GPS signal from the GPS Signal Amplifier **190** via connection wire **200**, or wirelessly. Alternatively, notice that the GPS signal has been received by GPS Signal Amplifier **190**, may be transmitted to the Enabling Circuit **250** by the GPS Signal Amplifier **190** via the wire **243**, or wirelessly. The GPS signal from the GPS Processor **220** may be digital or analog. In the step **850** of the method **465**, said receiving of the GPS signal may be an at least one condition **420** for enabling the kit **205** or the Mobile Communicator **370**, and wherein outgoing calls to an Emergency Service Provider **180** may always be enabled by the Enabling System **360**.

The Enabling Circuit **250** may enable calls from the kit **205** or the Mobile Communicator **370** to the Emergency Service Provider **180** by providing a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350** that the GPS signal has been received, via a wire **225**, or wirelessly, wherein the Communicator Controller **350** may enable the Emergency Dialer **260** to make the outgoing calls to the Emergency Service Provider **180**.

In a step **860** of the method **465**, a user may activate the "Start Switch" **203** on the kit **205** or the Mobile Communicator **370** that may enable the transmitting and receiving functions of the kit **205** or the Mobile Communicator **370**, if an at least one condition, e.g., that there is an emergency, has been satisfied. In the step **860**, a logic of the Enabling Circuit **250** of the Enabling System **360** of the kit **205** or the Mobile Communicator **370** asks "Is There an Emergency" **430**. If the emergency condition **430** has been satisfied, e.g., the user has spoken a word or command such as "help" into the Microphone **275**, or input a message "emergency" via the Keypad **240**, the user may be able to change the state of the kit **205** or the Mobile Communicator **370**, from an initial Default Disabled State **410**, as in step **860** "Start", to a 911 Enabled & Locator Triggered state **450** because such a word or command or input satisfies the at least one condition that there be an emergency, i.e. as in step **797** of the method **465**. In the step **797**, the Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350**, via a wire **225**, or wirelessly, that may trigger the Emergency Dialer **260** to call 911 and the Location Transmitter **270** to trigger the Locator Beacon **213**.

Alternatively, if there is no emergency, as in the step **800** of the method **465**, the audible receiving and transmitting functions **680** of the kit **205** or the Mobile Communicator **370** may be enabled, as in the step **895**, if the Enabling System **360** of the kit **205** or the Mobile Communicator **370** determines that the condition **420** may be satisfied, i.e., that a GPS signal has been received. In the step **895**, the Enabling Circuit **250** notifies the Communicator Controller **350** that the GPS signal has been received from the GPS Receiver **210**. The Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350**, via a wire **225**, or wirelessly, that the GPS signal has been provided to the Enabling Circuit **250**. In the step **895**, the Enabling System **360** may enable the audible receiving and transmitting functions **680** of the kit **205** or the Mobile Communicator **370** by changing the state of the kit **205** or the Mobile Communicator **370** from the Default Disabled State **410** to the Enabled State **510**.

Alternatively, in the step **890** of the method **465**, the Enabling Circuit **250** of the kit **205** or the Mobile Communicator **370** has determined, conversely, that the condition **420** has not been satisfied, i.e., that no GPS signal has been received by the Enabling Circuit **250**. In the step **890**, the state of the kit **205** or the Mobile Communicator **370** remains in the Default Disabled State **410** so audible receiving and transmitting functions **680** of the kit **205** or the Mobile Communicator **370** may not be enabled.

In the steps **895** and **890**, a logic of the Enabling Circuit **250** may determine that the condition **420**, i.e., "GPS signal has been received?", has been satisfied, as in step **895** or is not satisfied, as in the step **890**. In the step **890**, if no GPS signal has been received, e.g., when the GPS signal is not in line of sight of the GPS Signal Amplifier **190**, e.g., when the GPS Signal Amplifier **190** may be indoors in a building, automobile, or airplane, the Enabling Circuit **250** communicates that the condition **420** has not been satisfied to the Communicator Controller **350**. If no GPS signal may be detected, as in the step **890**, the Communicator Controller **350** may enable the Default Disabled State **410** and the Mobile Communicator **370**, e.g., the cell phone, remains disabled.

Referring to FIG. **7**, if the Enabling System **360** has ascertained as in the step **800** of the method **465**, that there is no emergency, and that the GPS signal has been received, in the step **807**, instead of enabling the Mobile Communicator **370**, as in the step **895**, the Enabling System **360** may require that a condition **460**, i.e. that a user of the kit **205** or the Mobile Communicator **370** be authorized or authenticated. In the step **807**, if the voice recognition system **230** receives a user's identifying voice or identifying frequency or tone (hereinafter user-identifying sound(s)) from the microphone **275**, that matches a preprogrammed voice or preprogrammed frequency that has been preprogrammed into the Enabling System **360**, the voice recognition system **230** may provide confirmation of voice recognition to the Enabling Circuit **250**. Hereinafter, "authorizing a user" or "authenticating a user" describes a designed property or function of the Voice Rec-

ognition System's **230** to determine (ascertain) that a user's identifying voice or identifying frequency or tone (hereinafter user-identifying sound(s) from the microphone **275**), matches the preprogrammed voice or preprogrammed frequency or sound(s) or passwords that have been preprogrammed into the Enabling System **360**. The preprogrammed sound(s) may be in a frequency range that may be audible or inaudible to humans. For example, a dog whistle may emit sound(s) that may be inaudible to humans. Humans hear frequencies between about 20 cycles/sec to 20,000 cycles/sec at 130 db (very loud). This shrinks to a range of about 700 cycles/sec to 6000 cycles/sec at 0 db (very faint).

Alternatively, a tone from a tuning fork that naturally resonates at an established frequency or set of frequencies, i.e., sound(s), such as the note C in the key of C major that is equivalent to middle C on a standard piano, may be audible to humans.

In the step **807**, a logic of the Enabling Circuit **250** may provide a contact closure that completes an electrical circuit in which the Enabling Circuit **250** notifies the Communicator Controller **350**, via a wire **225**, or wirelessly, that the Voice Recognition System **230** has provided confirmation of the voice recognition to the Enabling Circuit **250** via wire **223**, or wirelessly. Said completion of the electrical circuit and confirmation of the voice recognition to the Enabling Circuit **250** via a wire **223**, or wirelessly, may be the at least one condition for enabling the Enabling System **360** of the kit **205** or the Mobile Communicator **370**, and wherein that outgoing calls from the Emergency Dialer **260** to an Emergency Service Provider **180** may always be enabled by the Communication Controller **350**. In the step **807**, the Enabling System **360** may or may not receive a privacy signal. The logic of the Enabling Circuit **250** may determine that the condition **460**, i.e. that a user of the kit **205** or the Mobile Communicator **370** be authorized, has been satisfied, as in step **875** or is not satisfied, as in the step **830**. If no confirmation from the Voice Recognition System **230** has been received by the Enabling Circuit **250**, e.g., when the user is not authorized, such as when the user is using the kit **205** or the Mobile Communicator **370** without permission or when the user's voice, sound(s) or password may not be authenticated, the Enabling Circuit **250** communicates that the condition **460** has not been satisfied to the Communicator Controller **350**. If no confirmation from the Voice Recognition System **230** may be received by the Enabling Circuit **250**, as in the step **830**, the Communicator Controller **350** may enable the Default Disabled State **410** and the Mobile Communicator **370**, e.g., the cell phone, remains disabled.

Alternatively, if confirmation from the Voice Recognition System **360** has been received, e.g., when audible receiving and transmitting functions **680** of the kit **205** or the Mobile Communicator **370**, for example, may be authorized, the Enabling Circuit **250** communicates that the condition **480** has been satisfied to the Communicator Controller **350**. If the confirmation from the Voice Recognition System **360** has been received, as in the step **875**, the Communicator Controller **350** may enable the Enabled State **510** and the audible receiving and transmitting functions **680** of the Mobile Communicator **370**, e.g., the cell phone, may be enabled.

In the method **465**, in the step **875**, outgoing call to the Emergency Service Provider may be authenticated by the Voice Recognition System **230**. In the method **465**, in the step **875**, the Voice Recognition System **230** may recognize each sound selected from the group of sounds consisting of sounds audible to a human ear and sounds inaudible to a human ear. In the method **465**, in the step **875**, entry of a password or authentication by voice recognition may provide identification of the user to the Emergency Service Provider and triggering the Locator Beacon.

Unauthorized use of the kit **205** or the Mobile Communicator **370**, e.g., the cell phone, may be undesirable for two reasons: A) unauthorized use may result in unauthorized charges to an authorized user's charge account with a provider of the kit **205** or the Mobile Communicator **370**, e.g., the provider of the cell phone; and B) unauthorized use may result in unauthorized access to the authorized user's personal calling lists, that may include respective names and phone numbers of persons on the list who may want to limit access by others to their names and phone numbers, such as by the unauthorized user. Unauthorized use of the kit **205** or the Mobile Communicator **370**, e.g., the cell phone, may result in unauthorized access to the authorized user's secured information, such as, for example, passwords, personal identification numbers (PIN) and the like. As a number of types of secured information stored in the kit **205** or the Mobile Communicator **370**, e.g., the cell phone increases, unauthorized access to the secured information stored in the kit **205** or the Mobile Communicator **370**, e.g., the cell phone may become a concern. An example of the increased number of secured information types may be a politician's or corporate executive's stored confidential phone numbers and other like secured information. A purpose of embodiments of the present invention may be to protect the owner of the kit **205** or the Mobile Communicator **370**, e.g., the cell phone from an unauthorized user accessing the secured information if their phone were lost or stolen as well as providing features that would aid in recovering the kit **205** or the Mobile Communicator **370**.

Referring to FIG. **8**. and FIG. **9**, an embodiment of the present invention may comprise a mobile communicator apparatus **470**, wherein the mobile communicator **470** may include a locational tracking unit **610**, a disabling circuit **550**, a microphone **375**, a voice recognition system **630**, a memory storage device **620**, a keypad **340**, and an emergency service system **290**. The emergency service system **290** may further include a location transmitter **570** and a locator beacon **313**. The locational tracking unit **610** of the mobile communicator apparatus **470** may utilize a network of signal transceivers **310** to determine the location of the mobile communicator **470**.

Referring to FIG. **9**, the network of signal transceivers **310** may comprise of a number of signal transceivers, such as cell towers **320** *a-c*. A cell tower **320** *a-c* is a wireless communications station installed at a fixed and known location that transmits and receives signals to and from mobile communicators **470**. Those of ordinary skill in the art may interpret a base station, a cell site, a mobile phone mast, or various other terms to mean a cell tower **320** *a-c* for these purposes. The cell towers **320** *a-c* may transmit signals **330** *a-c* in a radially outward direction to the mobile communicator **470**. Moreover, the cell towers **320** *a-c* may receive signal **335** transmitted from the mobile communicator **470**. The location of the mobile communicator **470** may be tracked by the intersection cell tower signals **330** *a-c*.

Although FIG. **9** provides three cell towers **320** *a-c* in the network of signal transceivers, the network of signal transceivers **310** may comprise additional cell towers **320** *a-c*. The more cell towers **320** *a-c* the network **310** is comprised of, the more accurate the tracking of the location of the mobile communicator **470**.

As in FIG. **8**, the mobile communicator apparatus may contain a locational tracking unit **610** that utilizes the surrounding network of signal transceivers **310** to determine the

location of the mobile communicator **470**. The locational tracking unit **610** may be positioned within the mobile communicator **470**. The locational tracking unit **610** may be connected to the disabling circuit **550**. The disabling circuit **550** may comprise a logic circuit that performs non-arithmetic operations including, but not limited to: OR, AND, NOR, NAND, and NOT. The disabling circuit **550** may disable the mobile communicator apparatus if the at least one condition is satisfied. In this embodiment, the at least one condition may comprise either: 1) receiving a privacy signal; or 2) determining speed of the mobile communicator **470** to be greater than a pre-determined setpoint. The setpoint may be a speed determined by state or federal law.

A privacy signal may be received by the mobile communicator **470** in certain locations that prohibit the transmission and retrieval of signals through the mobile communicator **470** for specific reasons. Some locations that may require the disablement of a mobile communicator **470** may include a theater, a sports tournament, a hospital, a church, a waiting room, a library, a locker room, a classroom, a vehicle, a business area that houses trade secrets and/or confidential information, or a conference room in which trade secrets or confidential proprietary information are discussed. A vehicle may be any transportation device that carries passengers, such as, but not limited to, an airplane, an automobile, or a seat on a train. Also, in the case of a terrorist situation or any other situation dealing with national defense, a privacy signal may be executed according to protocol dependent upon security levels ascertained by an entity. Regardless, a location that may require the disablement of a mobile communicator **470** may be any area in which privacy and/or silence may be desired

Referring further to FIG. **8**, the mobile communicator apparatus **470** may contain a microphone **375** for inputting a voice, sound(s), and/or passwords into the mobile communicator **470**. The microphone **375** may be any device that operates as an acoustic to electric transducer or sensor. That is, the microphone **375** may be any device that converts sound signals into electrical signals. The mobile communicator apparatus **470** may also contain a voice recognition system **630** and a memory storage device **620**. The voice recognition system **630** may be configured to be connected to the microphone **375** so that the voice, sound(s), and/or password inputted into the microphone **375** can be authenticated by the voice recognition system **630** by determining each sound(s) provided by the user match a pre-programmed or user-recorded identifying sound stored in the memory storage device **620**. The mobile communicator apparatus **470** may further contain a keypad **340** configured to allow a user to input alphanumeric combinations such as, but not limited to, passwords, names, phone numbers, and text messages into the mobile communicator **470**.

The mobile communicator apparatus **470** may also comprise an emergency service system **290**. The emergency service system **290** may include a location transmitter **570** and a locator beacon **313**. The location transmitter **570** may be configured to transmit the location of the mobile communicator **470** to the emergency service provider **280**, while the locator beacon **313** is connected to the location transmitter **570** and is configured to emit a locator signal, such as an alarm, a flashing light, or an audible sound, as to the geographic location of the mobile communicator. The locational tracking unit **610** may be connected to the location transmitter **570** and the locator beacon **313** in order to provide the components of the emergency service system **290** with the location of the mobile communicator **470**. The location transmitter **570** and the locator beacon **313** may further be connected to an emergency service provider **280**. Therefore, the location of the mobile communicator **470** may be transmitted to the emergency service provider **280** in an emergency and a locator beacon **313** may be emitted to aid the emergency service provider **280** in locating the user in an emergency.

Another embodiment of the present invention is related to a mobile communicator disabling system **300**, as illustrated in FIG. **9**. The mobile communicator disabling system **300** may comprise a mobile communicator **470** and a network of signal transceivers **310**. The mobile communicator **470** may further include a locational tracking unit **610** and a disabling circuit **550**. The locational tracking unit **610** may be configured to determine the location of the mobile communicator **470**. Moreover, the disabling circuit **550** may be configured to change the state of the mobile communicator **470** from an enabled state, wherein the audible receiving and transmitting functions of the mobile communicator **470** are enabled, to a disabled state, wherein the audible receiving and transmitting functions of the mobile communicator **470** are disabled. The locational tracking unit **610** may use a network of signal transceivers **310** to determine the location of the mobile communicator **470**.

As shown in FIG. **10**, the locational tracking unit **610** (FIG. **8**) of the mobile communicator **470** may communicate with signal transceivers, such as the cell towers **320** *a,b*, to determine the location of the mobile communicator **470** using triangulation. The locational tracking unit **610**, of the mobile communicator **470**, may determine the incident angle θ_1, θ_2 with cell towers **320***a, b*, respectively. The angles θ_1 and θ_2 may be determined by the known technique of Angle of Arrival (AoA). This technique uses the multiple antennas of a cell tower to determine the incident angle of an arriving signal. A second cell tower with the same technology may then also determine the direction of the signal and the incident angle of an arriving signal. AoA systems must be designed to account for multipath signals. Multipath signals occur when a signal bounces off other objects and may confuse the cell tower as to the location of the mobile communicator. The distance d between the cell towers **320***a,b* is a known distance since the locations of the cell towers **320***a,b* are fixed and known. The method of triangulation is the process of finding the location of a point, given measurements of various angles and sides of a triangle formed by that point and two other known reference points.

In this example, the point and the two other known reference points are the mobile communicator **470** and the cell towers **320***a,b*, correspondingly. Further, the distance d and the angles θ_1, θ_2 are known. Those with ordinary skill in the art would know that the sum of the three angles in any triangle is 180 degrees. Therefore, since the points of the mobile communicator **470** and the cell towers **320***a,b* form a triangle, the third angle θ_3 may be $180-\theta_1-\theta_2$. Using various trigonometric identities, the distance $\mathbf{1}_a$, $\mathbf{1}_b$ between the mobile communicator **470** and the cell towers **320***a,b* may be determined. Given either of these lengths, the sine and cosine can be used to calculate the offsets in both the north/south and east/west axes from the corresponding observation points at the cell towers **320***a,b* to the unknown point at the mobile communicator **470**. Hence, the location of the mobile communicator **470** will be determined. Further, since the locational tracking unit **610**, of the mobile communicator **470**, is continually and dynamically tracking the location of the mobile communicator **470** in substantial real time, the speed of the mobile communicator **470** may also be determined by analyzing the change of position over time.

In another embodiment of the system **300**, the locational tracking unit **610** (FIG. **8**) may use the trilateration method as depicted in FIG. **11** to determine the location of the mobile communicator **470**. Trilateration is a method of determining the relative position of an object using the geometry of triangles in a similar fashion as triangulation. However, unlike triangulation, which uses angle measurements to calculate an

object's location, trilateration uses the known locations of two or more reference points, and the measured distance between the object and each reference point. As shown in FIG. **11**, there is a coordinate system of the X and Y axes. The Z axis is not shown as the height in the Z direction is so minimal that it may be approximated to be zero. The location of the mobile communicator **470** is where the cell tower signals **330** *a-c* intersect.

Referring further to FIG. **11**, the cell tower **320***a* is located at the origin of the coordinate system. The cell tower **320***b* is located on the X-axis at a distance p away from the origin at cell tower **320***a*. Therefore, cell tower **320***b* has the same y-coordinate as cell tower **320***a*. The cell tower **320***c* is located in the fourth quadrant of the coordinate system, wherein the cell tower **320***c* is a distance i to the right of the Y-axis and a distance j below the X-axis. Although FIG. **11** depicts the mobile communicator system **300** in a specific configuration, the system **300** may comprise many different configurations of the cell towers **320** *a-c* and the mobile communicator **470**. Moreover, the mobile communicator disabling system **300** may further comprise additional cell towers **320***a-c* to provide a more accurate calculation of the mobile communicator **470** location.

As shown in FIG. **11**, each cell tower **320***a-c* emits a signal **330***a-c* in the shape of a sphere. For purposes of simplicity, FIG. **11** depicts the signals **330***a-c* as circles, rather than sphere; however, the derivation for the location of the mobile communicator **470** will assume the signals **330***a-c* are spheres. Since signals **330***a-c* travel with a known velocity, the distances r_1, r_2, and r_3 from each cell tower **320***a-c* to the mobile communicator **470** may be directly calculated from the time of arrival. The formula for the distance is: d=v*t.

With further reference to FIG. **11**, in order to derive the location of the mobile communicator **470**, the equations for each signal **330***a-c* sphere may be determined and set equal to one another to calculate the point at which all the signals **330***a-c* intersect. This intersection point is the location of the mobile communicator **470**. As previously mentioned, the z-coordinate of the signals **330***a-c* are approximated to be zero. The derivation for the location of the mobile communicator **470** is as followed:

The equation for signal **330***a* is:

$$r_1^2=x^2+y^2+z^2$$

The equation for signal **330***b* is:

$$r_2^2=(x-p)^2+y^2+z^2$$

The equation for signal **330***c* is:

$$r_3^2=(x-i)^2+(y-j)^2+z^2$$

Subtract the equation for signal **330***b* from the equation for signal **330***a*:

$$r_1^2-r_2^2=x^2-(x-p)^2=2*x*p-p^2$$

Solve for x:

$$x=\frac{r_1^2-r_2^2+p^2}{2*p}$$

Substitute x into the equation for signal **330***a*:

$$r_1^2=\frac{(r_1^2-r_2^2+p^2)^2}{4*p^2}+y^2+z^2$$

Solving for y^2+z^2 and substituting for x:

$$y^2+z^2=r_1^2-\frac{(r_1^2-r_2^2+p^2)^2}{4*p^2}=r_1^2-x^2$$

Solving for y^2+z^2 for signal **330***c* and setting it equal to the previous equation:

$$y^2+z^2=r_3^2-(x-i)^2+2*y*j-j^2=r_1^2-x^2$$

Solving for y:

$$y=\frac{r_1^2-r_3^2+i^2+j^2-2*x*i}{2*j}$$

Solving the equation for signal **330***a* for z with equation for x and y:

$$z=\sqrt{r_1^2-x^2-y^2}$$

Therefore, from the derivation above and reference to FIG. **11**, the location of the mobile communicator **470** may be determined by the method of trilateration.

With further reference to FIGS. **8** and **9**, the mobile communicator system **300** may operate as depicted in FIG. **12**. As provided in FIG. **12**, the mobile communicator **470** may be in an initial enabled state **100**. In this example of the mobile communicator disabling system **300**, the network of signal transceivers **310** may communicate with the locational tracking unit **610** of the mobile communicator **470** in order to determine the location of the mobile communicator **470**. Referring to FIG. **12**, if the at least one condition is not satisfied, the mobile communicator may remain enabled **160**. The locational tracking unit **610** may continually communicate with the network of signal transceivers **310** to determine if the at least one condition is satisfied. However, if the at least one condition is satisfied, the disabling circuit may disable the mobile communicator **110**. The at least one condition may comprise either of the retrieval of a privacy signal; or the present speed of the mobile communicator **470** may be greater than a pre-determined setpoint. As depicted in FIG. **12**, the mobile communicator may remain disabled for 30 seconds or any period of time **120**. Since the locational tracking unit **610** may continually determine the location of the mobile communicator **470** after the time period **120**, such as 30 seconds, has elapsed, if the at least one condition is still satisfied, the mobile communicator may remain disabled **130** and may remain disabled for an additional time period **120**, such as 30 seconds. However, if the at least one condition is not longer satisfied, the disabling circuit may re-enable the mobile communicator **140**. Additionally, if there is an emergency, the disabling circuit may enable the mobile communicator **150**.

A mobile communicator **470** disabling method **900**, as described with reference to FIGS. **8** and **13**, may comprise: providing a locational tracking unit **610** and a disabling circuit **550** to a mobile communicator **470**, wherein the mobile communicator **470** is in an initial enabled state **910**; determining the location **920** of the mobile communicator **470**; determining that at least one condition for disablement of the mobile communicator **470** is satisfied **930**; and disabling **940** the mobile communicator **470**.

With continued reference to FIGS. **8** and **13**, and with further reference to FIG. **9**, determining the location **920** of the mobile communicator **470** may comprise of the locational

tracking unit **610** communicating with a network of signal transceivers **310**. The determination of the location **920** may further include triangulation, trilateration, multilateration, GPS positioning, cell identification, enhanced cell identification, etc.

Multilateration is a process of locating an object by accurately computing the Time Difference of Arrival (TDoA) of a signal emitted from the object to three or more receivers. TDoA uses the time it takes for a signal to travel as an indirect method of calculating distance. With a minimum of three base stations of signal transceivers, such as cell towers **320***a-c*, receiving a signal from a mobile communicator **470**, the difference in time it takes for the signal **335** to reach each tower **320***a-c* can be used to determine the position of the mobile communicator **470**.

Cell identification is a method that determines the position of a mobile communicator **470**, based on signal strength. This is a simple method that provides a rough estimate of the location of the mobile communicator **470**. The location of a cell tower **320***a-c* that is in communication with a mobile communicator **470** and is closest to the mobile communicator **470** is determined to be the rough location of the mobile communicator. The cell tower **320***a-c* that receives the strongest signal **335** from the mobile communicator **470** is closest to the mobile communicator **470**.

This simple method is often used in conjunction with other techniques in order to increase the precision of the mobile positioning, such as the Global Positioning System (GPS) or Time of Arrival (ToA). ToA is similar to the TDoA technique, but differs in that it uses the absolute time of arrival at a certain base station, rather than the difference between stations.

Determining that at least one condition for disablement of the mobile communicator **470** is satisfied **930** may include the at least one condition for disablement to be either the retrieval of a privacy signal or the determination that the speed of the mobile communicator **470** is greater than a pre-determined setpoint.

Moreover, the initial enablement of the mobile communicator **910** may further comprise authenticating a user's voice and/or password with a voice recognition system **630** or determining the location of the mobile communicator **470** with the locational tracking unit **610**.

The method for disabling a mobile communicator **900** may also comprise re-enabling the mobile communicator **470** as depicted in FIG. **12**. The mobile communicator **470** may be enabled if the at least one condition is no longer satisfied **140**. Further, if there is an emergency, the disabling circuit enables the mobile communicator **150**. In one example, the method for disabling a mobile communicator **900** may also comprise enabling the mobile communicator in an emergency by speaking or verbalizing a word, e.g. "help," into a microphone **375** or inputting "help" via a keypad **340**. In another example, this may also notify the location transmitter **570** to trigger the locator beacon **313**. Moreover, an example may include enabling the mobile communicator **470** in an emergency in order for a user to call an emergency service provider **280** and the emergency service provider **280** may activate the locator beacon **313**. Additionally, the emergency service provider **280** may be notified of the authorized user of the mobile communicator **470**.

The foregoing description of the embodiments of this invention has been presented for purposes of illustration and description. It is not intended to be exhaustive or to limit the invention to the precise form disclosed, and obviously, many modifications and variations are possible. Such modifications and variations that may be apparent to a person skilled in the art are intended to be included within the scope of this invention as defined by the accompanying claims.

I claim:

1. A Mobile Communicator having an initial Default Disabled State, comprising:

a contact operable between an open configuration and a closed configuration and positioned to complete an electric circuit when the contact is in the closed position thereby activating the Mobile Communicator and providing the Mobile Communicator with functionality;

a display;

a notification mechanism for alerting a user;

a user interface configured for allowing a user to enter a plurality of destination inputs, the plurality of destination inputs each associated with at least one of:

numbers;

letters; and

numbers and letters;

a transmitter in operable communication with the user interface and configured to send a transmission from the mobile communicator to a destination corresponding with the destination input;

a receiver capable of receiving a transmission from a transmitting device; and

an Enabling System, wherein the Enabling System includes an Enabling Circuit, wherein a logic of the Enabling Circuit has changed the initial Default Disabled State of the Mobile Communicator, wherein at least one of the display, the notification mechanism, the user interface, the transmitter and the receiver is disabled, to an Enabled State, wherein the at least one of the display, the notification mechanism, the user interface, the transmitter and the receiver become enabled, because an at least one condition has been satisfied;

wherein the Mobile Communicator remains in the initial Default Disabled State, wherein at least one of the display, the notification mechanism, the user interface, the transmitter and the receiver is disabled, if the at least one condition is not satisfied, even when the contact is in the closed position and the activating electrical circuit is complete.

2. The apparatus of claim **1**, wherein the at least one condition is that there is an emergency.

3. The apparatus of claim **1**, wherein the at least one condition is that a GPS Receiver receives a GPS Signal.

4. The apparatus of claim **1**, wherein the at least one condition is that the Mobile Communicator has a speed ≦a setpoint.

5. The apparatus of claim **4**, wherein the speed is determined by at least one of triangulation, trilateration, multilateration, or GPS positioning.

6. The apparatus of claim **1**, wherein the Mobile Communicator includes a privacy signal receiver configured to receive a privacy signal and wherein at least one condition is that the Mobile Communicator does not receive a Privacy Signal.

7. The apparatus of claim **6**, wherein not receiving the privacy signal enables audible receiving and transmitting functions of the Mobile Communicator in a restricted use area.

8. The apparatus of claim **7**, wherein each restricted use area is selected from the group consisting of a theater, a sports tournament, a hospital, a waiting room, a library, a spa, a passenger vehicle, a locker room, a business area housing trade secrets or confidential information, a conference room in which trade secrets or confidential proprietary information are discussed and combinations thereof.

9. The apparatus of claim 1, wherein a user of the Mobile Communicator speaking or verbalizing a predetermined word into a Microphone or inputting the predetermined word via a keyboard into the Enabling System, makes the Mobile Communicator operational to call an Emergency Service Provider and/or notify a Location Transmitter to trigger a Locator Beacon.

10. The apparatus of claim 9, wherein the Locator Beacon can be activated by the Emergency Service Provider resulting in the Locator Beacon emitting a locator signal.

11. The apparatus of claim 1, wherein the Mobile Communicator is configured to authenticate a voice of a user with a Voice Recognition System.

12. The apparatus of claim 11, wherein the Voice Recognition System authenticates the voice of the user by determining that each sound(s) provided by the user essentially matches a preprogrammed or recorded user identifying sound(s).

13. The apparatus of claim 1, wherein the at least one condition is that a user's voice and/or password is authenticated.

14. The apparatus of claim 13, wherein authenticating the voice or the password of the user identifies an authorized user of the Mobile Communicator to the Emergency Service Provider.

15. The apparatus of claim 1, wherein a name of a person to be called has been preprogrammed or recorded in an address book of the Enabling System.

16. The apparatus of claim 1, wherein when the at least one condition is that no privacy signal has been received, each privacy signal is selected from the group consisting of signals from broadcast and pager systems, signals from optical/infrared system, signals from acoustic/ultrasonic systems, 2.4 GHz, audible sounds, inaudible sounds and combinations thereof.

17. A kit for enabling a Mobile Communicator, comprising:

a Mobile Communicator having:

a contact operable between an open configuration and a closed configuration and positioned to complete an electric circuit when the contact is in the closed position thereby activating the Mobile Communicator and providing the Mobile Communicator with functionality;

a display;

a notification mechanism for alerting a user;

a user interface configured for allowing a user to enter a plurality of destination inputs, the plurality of destination inputs each associated with at least one of:

numbers;

letters; and

numbers and letters;

a transmitter in operable communication with the user interface and configured to send a transmission from the mobile communicator to a destination corresponding with the destination input; and

a receiver capable of receiving a transmission from a transmitting device;

further wherein the Mobile Communicator includes an initial Default Disabled State, wherein at least one of the display, the notification mechanism, the user interface, the transmitter and the receiver is disabled; and

an Enabling System, wherein the Enabling System includes an Enabling Circuit, and wherein a logic of the Enabling Circuit has enabled the Mobile Communicator, wherein transmitting and audible receiving functions become enabled, because an at least one condition has been satisfied; and

wherein the Mobile Communicator remains in the initial Default Disabled State if the at least one condition is not satisfied, wherein at least one of the display, the notification mechanism, the user interface, the transmitter and the receiver is disabled, even when the contact is in the closed position and the activating electrical circuit is complete.

18. The kit of claim 17, wherein the at least one condition is that the Mobile Communicator has a speed ≦a setpoint and wherein the speed is determined by at least one of triangulation, trilateration, multilateration, or GPS positioning.

19. A method for enabling a Mobile Communicator having an initial Default Disabled State wherein transmitting and audible receiving functions are disabled, the method comprising:

providing an Enabling System in the Mobile Communicator, the Mobile Communicator comprising:

a display;

a notification mechanism for alerting a user;

a user interface configured for allowing a user to enter a plurality of destination inputs, the plurality of destination inputs each associated with at least one of:

numbers;

letters; and

numbers and letters;

a transmitter in operable communication with the user interface and configured to send a transmission from the mobile communicator to a destination corresponding with the destination input; and

a receiver capable of receiving a transmission from a transmitting device;

wherein the Mobile Communicator is in the Default Disabled State, wherein at least one of the display, the notification mechanism, the user interface, the transmitter and the receiver is disabled, and wherein the Mobile Communicator includes a contact operable between an open configuration and a closed configuration and positioned to complete an electric circuit when the contact is in the closed position thereby activating the Mobile Communicator and providing the Mobile Communicator with functionality;

satisfying an at least one condition for enablement of the Mobile Communicator; and

enabling the Mobile Communicator, wherein at least one of the display, the notification mechanism, the user interface, the transmitter and the receiver become enabled;

wherein the Mobile Communicator remains in the initial Default Disabled State, wherein at least one of the display, the notification mechanism, the user interface, the transmitter and the receiver is disabled, if the at least one condition is not satisfied, even when the contact is in the closed position and the activating electrical circuit is complete.

20. The method of claim 19, wherein the at least one condition is that the Mobile Communicator has a speed ≦a setpoint and wherein the speed is determined by at least one of triangulation, trilateration, multilateration, or GPS positioning.

* * * * *