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(54) **DISASTER RESPONSE SYSTEM FOR CONVEYING A SITUATION STATUS AND LOCATION OF SUBSCRIBERS AND FOR INITIATING PRECONFIGURED RESPONSE PLANS**

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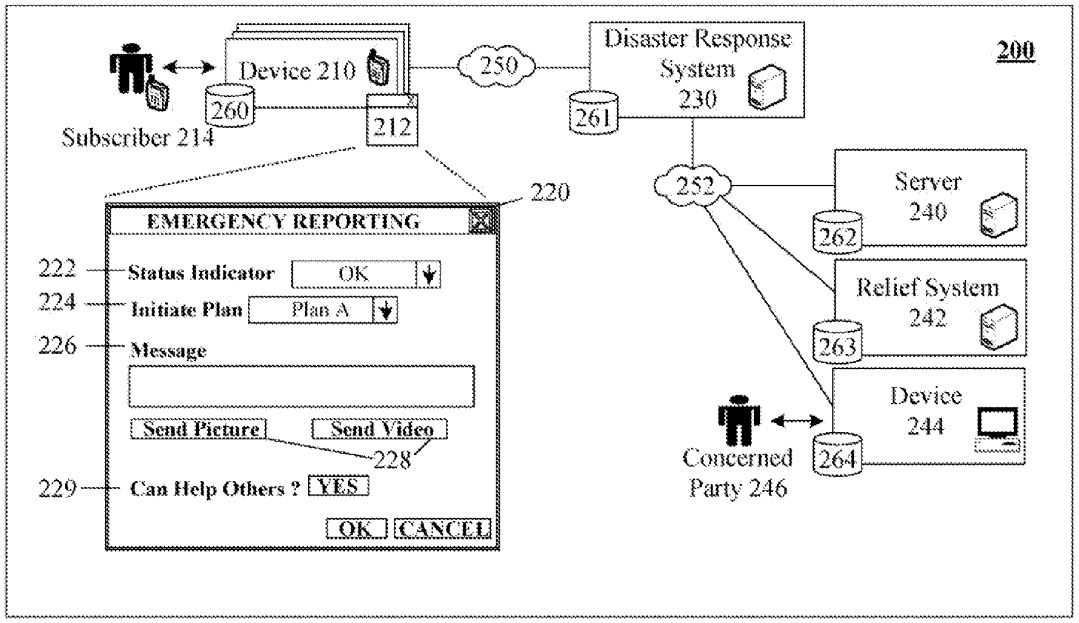
(57) **ABSTRACT**

The present solution includes a method for reporting a status indicator using a mobile device during a disaster. In the method, a status indicator can be entered into a mobile communication device. The status indicator can he communicated to a disaster response system. The disaster response system can also automatically determine a location of the mobile communication device. The disaster response system can make the status indicator and the location available to concerned parties. The location and status indicators can be continuously updated for a duration of a disaster allowing the concerned parties to receive current information about subscribers. In one embodiment, a set of previously established actions associated with user developed disaster response plan can be initiated by the disaster response system.



Meta EX1005
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IPR2026-00100

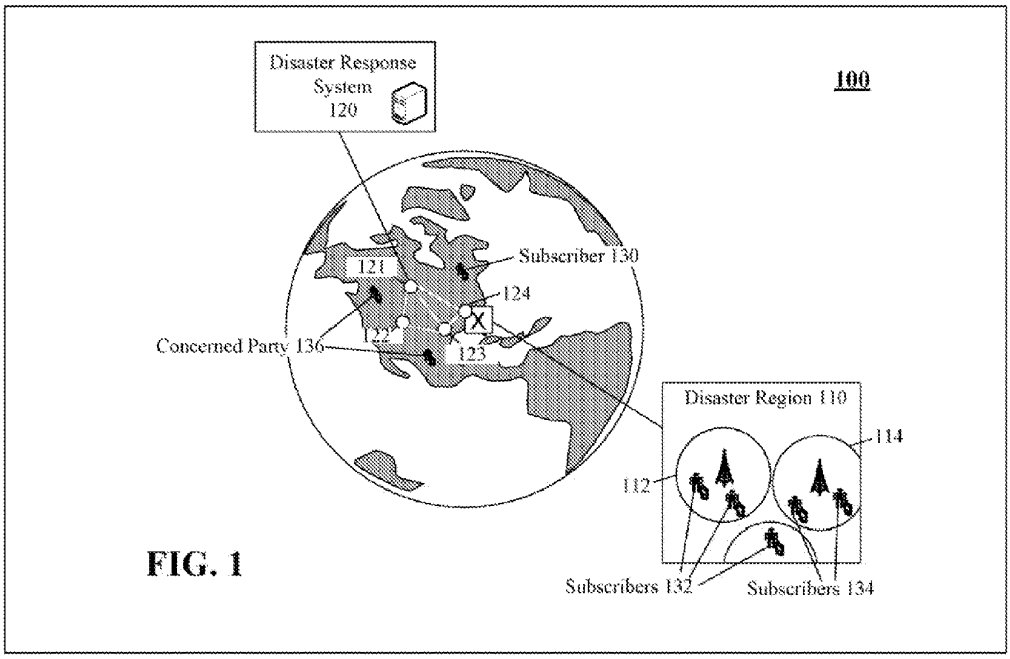
Disaster Response System 120
100
Subscriber 130
121
124
122
123
Concerned Party 136
Disaster Region 110
114
112
Subscribers 132
Subscribers 134

FIG. 1

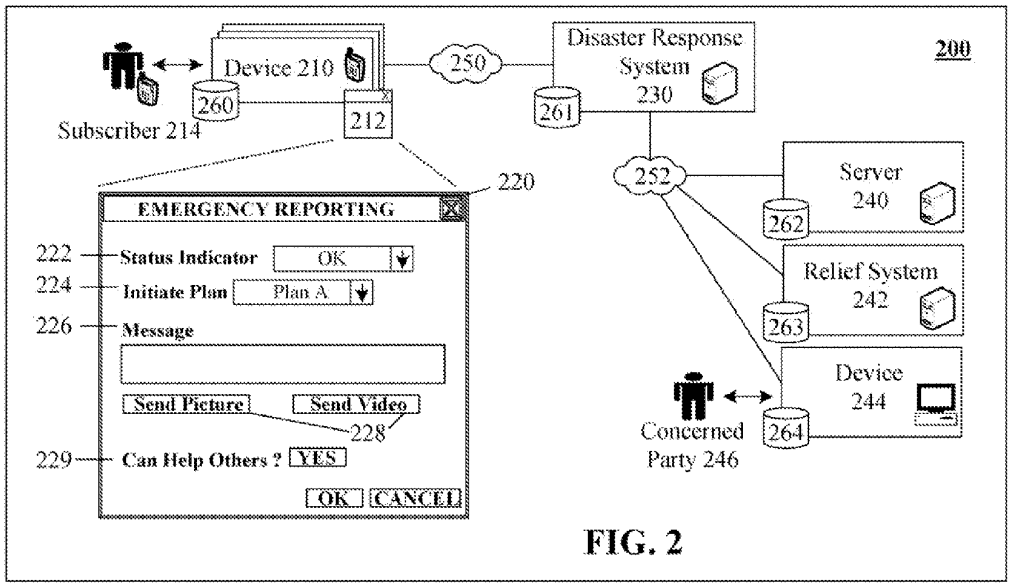
Device 210
250
Disaster Response System 230
200
Subscriber 214
260
212
261
220
EMERGENCY REPORTING
222
Status Indicator
OK
224
Initiate Plan
Plan A
226
Message
Send Picture
Send Video
228
229
Can Help Others ?
YES
OK
CANCEL
252
Server 240
262
Relief System 242
263
Device 244
264
Concerned Party 246

FIG. 2

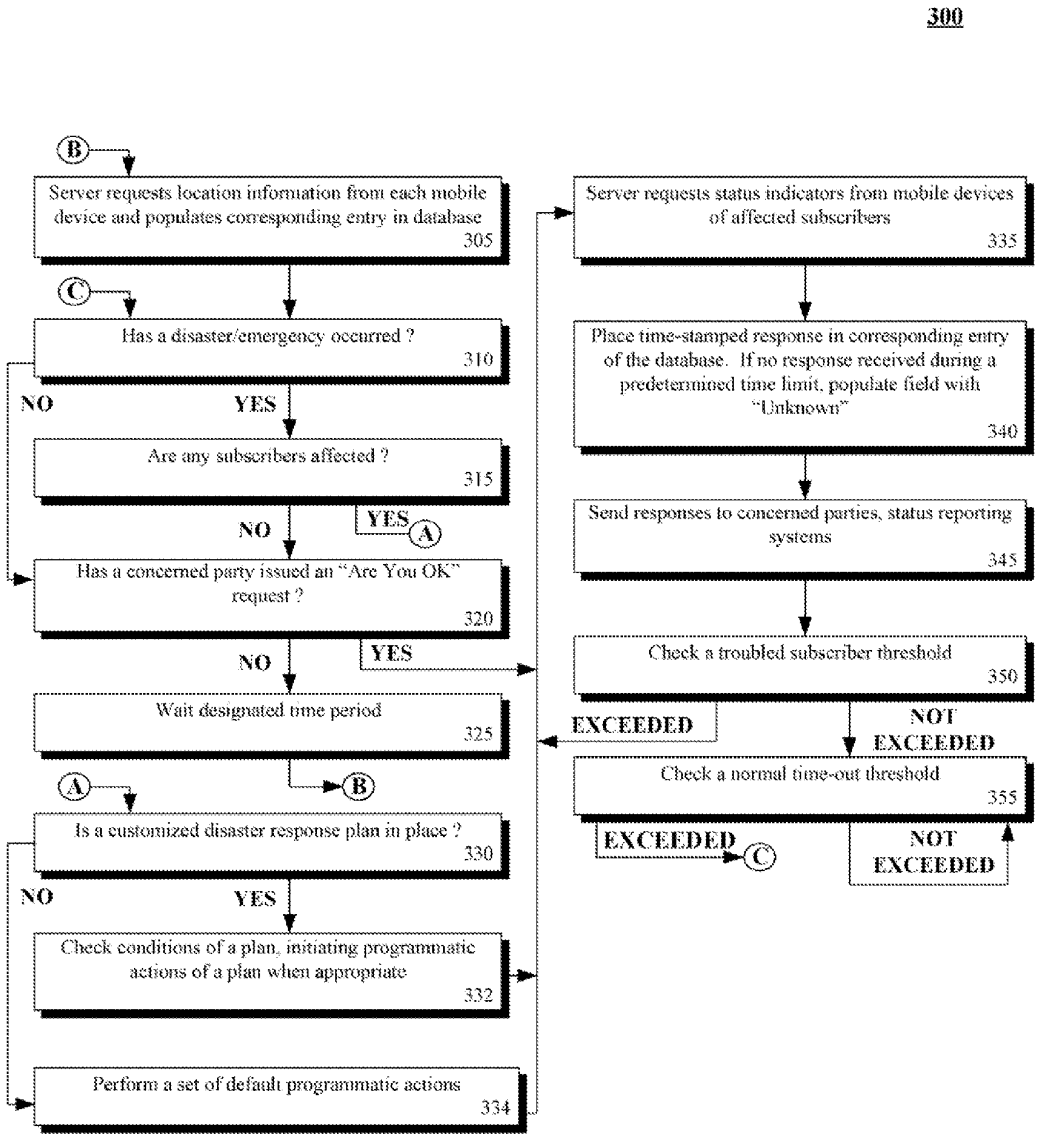
300
B
Server requests location information from each mobile device and populates corresponding entry in database
305
C
Has a disaster/emergency occurred ?
310
NO
YES
Are any subscribers affected ?
315
NO
YES
A
Has a concerned party issued an "Are You OK" request ?
320
NO
YES
Wait designated time period
325
A
B
Is a customized disaster response plan in place ?
330
NO
YES
Check conditions of a plan, initiating programmatic actions of a plan when appropriate
332
Perform a set of default programmatic actions
334
Server requests status indicators from mobile devices of affected subscribers
335
Place time-stamped response in corresponding entry of the database. If no response received during a predetermined time limit, populate field with "Unknown"
340
Send responses to concerned parties, status reporting systems
345
Check a troubled subscriber threshold
350
EXCEEDED
NOT EXCEEDED
Check a normal time-out threshold
355
EXCEEDED
C
NOT EXCEEDED

FIG. 3

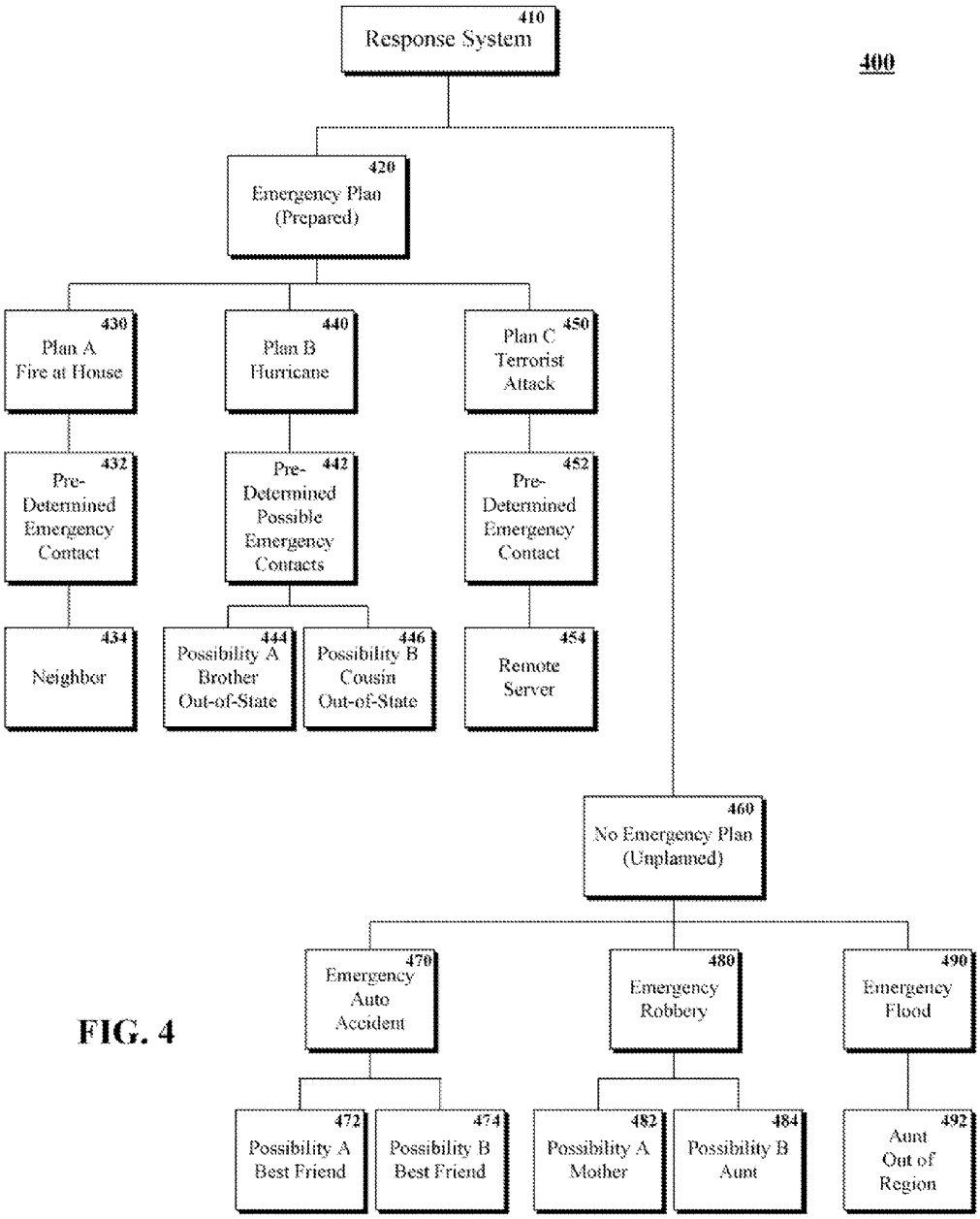
400
410
Response System
420
Emergency Plan (Prepared)
430
Plan A Fire at House
440
Plan B Hurricane
450
Plan C Terrorist Attack
432
Pre-Determined Emergency Contact
442
Pre-Determined Possible Emergency Contacts
452
Pre-Determined Emergency Contact
434
Neighbor
444
Possibility A Brother Out-of-State
446
Possibility B Cousin Out-of-State
454
Remote Server
460
No Emergency Plan (Unplanned)
470
Emergency Auto Accident
480
Emergency Robbery
490
Emergency Flood
472
Possibility A Best Friend
474
Possibility B Best Friend
482
Possibility A Mother
484
Possibility B Aunt
492
Aunt Out of Region

FIG. 4

DISASTER RESPONSE SYSTEM FOR CONVEYING A SITUATION STATUS AND LOCATION OF SUBSCRIBERS AND FOR INITIATING PRECONFIGURED RESPONSE PLANS

BACKGROUND

[0001] 1. Field of the Invention

[0002] The present invention relates to emergency communications and, more particularly, to emergency notification systems for mobile telephone users within a disaster region to quickly and efficiently convey situational status indicators to concerned parties.

[0003] 2. Description of the Related Art

[0004] Widespread disaster occurrences, such as hurricanes, floods, and terrorist attacks result in communication networks being disabled and/or saturated. A significant portion of the call volumes are associated with friends and loved ones communicating with others located within or proximate to a disaster region to determine whether those they care for are safe or are in need of assistance. The typical communications, which overload communication networks, are person to person voice communications, which consume a relative large amount of bandwidth of a telecommunications infrastructure.

[0005] A few emergency contact centers and/or systems have been established in an attempt to assure loved ones in a manner less burdensome to a communication infrastructure. TextOK.com has established a server that allows users to register their mobile phone numbers and a set of contacts. When a text message of "OK" is sent to an established number, each contact in the established set is sent a message indicating that the registered user is alright. Other services permit a user to send an "OK" message to a centralized server, which others can contact to see whether the OK message has been sent that indicates the user is not in danger.

[0006] All of these existing systems require that a user communicates with a messaging site, which may not be possible if communication networks are down or saturated or if a person is suffering as a result of a disaster. Further, concerned parties are provided with no information other than a message or a lack of message for an unknown reason. Even if a concerned party desires to assist a disaster sufferer, they are not aware of where aid is to be rendered or what type of aid is needed. Moreover, a concerned party is not able to enlist assistance from rescue personnel, since a need is too uncertain. That is, the potential disaster sufferer may have forgotten to send an OK message during the chaotic period during or after a disaster. Another very realistic possibility is that a user in an affected area is unable to communicate out of a disaster region due to network saturation, mobile telephony device problems, or due to a mobile communication network being down.

[0007] Another problem that occurs in the aftermath of a disaster relates to deployment of rescue personnel and properly targeting relief resources to areas having the greatest need. Recent disasters, such as Hurricane Katrina and the Sep. 11, 2001 terrorists attacks, illustrate that government agencies and public service organizations lack a means to assess areas and people in need of assistance immediately following a disaster. Aggravated hardships, increased injury, and loss of life can result from disaster sufferers not receiving timely aid. What is needed is a system that permits aid to be quickly targeted to those having the greatest need. What is also needed is a means for communicating situational status to concerned parties in a manner that conserves limited communication resources present after a disaster and that provides sufficient information to be helpful to those who wish to aid disaster sufferers.

SUMMARY OF THE INVENTION

[0008] The present invention discloses a solution for providing a situational status and a location of a subscriber potentially affected by a disaster to concerned parties. The situational status and location can be obtained by querying a centralized disaster response system, which is presumed to be outside a disaster region, thereby providing information to concerned parties without burdening a communication infrastructure of an affected area. In one arrangement the disaster response system can automatically initiate a set of preconfigured, subscriber configurable actions. Different actions can be initiated depending upon disaster type, subscriber location, a status indicator of a subscriber, and other parameters.

[0009] More specifically, when a disaster is detected, mobile devices of subscribers can be queried for location and wireless connectivity by a centrally located disaster response system. When a subscriber is away from a disaster area, this information can be recorded and it can be presumed that the subscriber is alright. When a subscriber is proximate to a disaster area, the subscriber's device can be queried for a status indicator and for an optional user provided message. This status indicator and message can be provided at any time by the subscriber, who is not forced to fight for a communication connection with the disaster response system during a time where dedicated mobile communication channels can be difficult to obtain. Instead, a user can enter their status indicator and optional message, which is thereafter automatically conveyed to the disaster response system using either a polling or a pushing methodology.

[0010] In one embodiment, a special communication channel can be reserved for the disaster response system to obtain the situational status indicators and messages, which can consume relatively little bandwidth compared to voice communications. Further, when communications are intermittent, the disaster response system can automatically and repetitively query mobile devices for desired status information. When the disaster response system contacts a mobile device and no status information has been recorded, the system can record a location of the device and can prompt a user to enter status information. When a mobile device is unable to be contacted, the disaster response server can look-up a last known location of user and to ascertain whether mobile communications are down in that area. Further, a last known activity for the mobile device can be ascertained and compared against disaster related times. This can be an indicator of whether the mobile device was left uncharged, turned off, or unconnected due to some disaster independent reason. All of this information can be recorded and reported to concerned parties.

[0011] In one contemplated scenario, the disaster response system can determine areas and/or subscribers in greatest need of relief based upon subscriber status indicators and subscriber locations. For example, if eighty percent of subscribers in a first region report a situational status indicator that the subscribers are in dire need of aid and if ninety percent of subscribers in a second region report that they are alright, then relief workers can be directed towards the first region. Further, location information of subscribers and mes-

sages relating to relief needs can be used to further focus disaster relief efforts. In one embodiment, media capabilities of mobile phones can be utilized for disaster assessment purposes. For instance, one or more subscribers can use a camera, a video capture feature, an audio capture feature, and the like of their mobile device to convey disaster details to the disaster response system.

[0012] It should be noted that various aspects of the invention can be implemented as a program for controlling computing equipment to implement the functions described herein, or a program for enabling computing equipment to perform processes corresponding to the steps disclosed herein. This program may be provided by storing the program in a magnetic disk, an optical disk, a semiconductor memory, or any other recording medium. The program can also be provided as a digitally encoded signal conveyed via a carrier wave. The described program can be a single program or can he implemented as multiple subprograms, each of which interact within a single computing device or interact in a distributed fashion across a network space.

[0013] The method detailed herein can also be a method performed at least in part by a service agent and/or a machine manipulated by a service agent in response to a service request.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] There are shown in the drawings, embodiments which are presently preferred, it being understood, however, that the invention is not limited to the precise arrangements and instrumentalities shown.

[0015] FIG. **1** is a schematic diagram of a disaster response system for informing concerned parties of a situation status of subscribers, who may have been effected by a disaster.

[0016] FIG. **2** is a schematic diagram of a subscriber status reporting system configured for use during disasters.

[0017] FIG. **3** is a flow chart of a method of one possible process that can be used by a disaster response system in accordance with one embodiment of the inventive arrangements disclosed herein.

[0018] FIG. **4** is a chart showing a set of disaster response plans established for a subscriber and initiated by a disaster response system in accordance with an embodiment the inventive arrangements disclosed herein.

DETAILED DESCRIPTION OF THE INVENTION

[0019] FIG. **1** is a schematic diagram of a disaster response system **100** for informing concerned parties **136** of a situation status of subscribers **130-134**, who may have been effected by a disaster. In system **100**, a disaster, such as a hurricane, flood, fire, tsunami, and the like can affect a disaster region **110**. The disaster region **110** can include multiple mobile communication zones **112-114** within which included subscribers **132-134** can communicate a status indicator, which indicates whether the subscriber **132-134** is alright or is in need of help due to the disaster. A location of each subscriber **130-134** can also be automatically obtained, through either a Global Position System (GPS) component or through triangulation based upon a relative position of a mobile device within a wireless mobile communication network. When a subscriber, such as subscriber **130**, is outside disaster region **110**, system **120** can assume that the subscriber **130** is alright and is not in need of disaster related assistance.

[0020] Concerned parties **136** can communicate with the disaster response system **120** to obtain the status indicator and location of queried subscribers **132-134**. For example, a mother (e.g., concerned party **136**) can contact the emergency response system **120** to determine whether her daughter (e.g., one of subscribers **130-134**) is alright in the aftermath of a disaster,

[0021] In one embodiment, data obtained from the subscribers **130-134** can be aggregated and used for disaster relief purposes. For example, subscribers **130-132** can predominately submit status indicators to server **120** indicating that they are alright while subscribers **134** can predominantly submit status indicators indicating that they are in need of assistance. The aggregated data can be reported to disaster relief workers and/or agencies to let these workers/agencies know that timely attention is needed for zone **114** associated with subscribers **134** but that other zones in region **110** appear to be in less need. In general, the aggregated data can help the relief workers and/or agencies determine a response order and/or to proportion relief resources based upon need. Specific locations of subscribers **130-134** in need of assistance can also be provided from system **120** to disaster relief workers/agencies along with any other relevant information.

[0022] It should be appreciated that during a disaster, a communication infrastructure of a disaster region **110** can be crippled and/or saturated making communications into and out of region **110** difficult. The disaster response system **120** is designed to alleviate a portion of the burden place upon the communication infrastructure of region **110** by handling communications using resources outside the affected region **110**.

[0023] For example, status indicators and locations of subscribers **132-134** can be exchanged between system **120** and concerned parties **136** using unaffected telecommunication resources. To ensure that the disaster response system **120** is external to region **110**, a series or cluster of linked communication resources can be geographically dispersed, shown by system elements **121-124**. Any elements, such as **124**, which are included in disaster region **110**, can be disabled for a particular disaster. Therefore, for the disaster region **110** shown in system **100**, the disaster response system **120** would actively utilize only system elements **121-123**.

[0024] Various additional measures can be taken to ensure that subscribers **132-134** in region **110** are able to communicate with system **120**. In one embodiment, a communication channel of a mobile telephony system can be reserved specifically for communications between subscribers **130-134** and system **120**, which helps resolve network saturation issues. Reserving a communication channel for status information can have a relatively insignificant effect on an overall communication infrastructure as data exchanges consume relatively few resources.

[0025] In one embodiment, multiple communication/information transmission options can be established to enable subscribers **130-134** to communicate with system **120**. For example, mobile telephony and push-to-talk (PTT) channels of mobile devices can both be used for sending status indicators to system **120**. It is also contemplated that ad hoc networks can be dynamically established (i.e., through BLUETOOTH functionality of mobile telephones) to enable subscribers **130-134** to convey status and location information when wide area network (WAN) communications are unavailable. Local wireless data networks, such as WIMAX networks and WIFI networks can also be used for relaying

status information to system **120**, when other communication channels are unavailable. Moreover, it is contemplated that relief workers can deploy communication access points, such as WIFI access points, for the purpose of receiving situation status information from areas that are otherwise disconnected from system **120**.

[0026] FIG. **2** is a schematic diagram of a subscriber status reporting system **200** configured for use during disasters. In system **200**, a device **210** associated with a subscriber **214** can be linked to disaster response system **230** via network **250**. System **230** can be linked to server **240**, relief system **242**, and device **244** via network **252**. Device **244** can be a device associated with concerned party **246**. The various computing devices in system **200** can be associated with data stores **260-264** as shown.

[0027] Software **212** on device **210** can permit subscriber **214** to report situation status information to system **230**. Interface **220** shows one contemplated reporting interface. Using interface **220**, a user can select a status indicator **222**, such as OK, NEED HELP, and IN CRITICAL NEED. In one configuration, an option indicating whether subscriber **214** can help others **229** can be included.

[0028] Additionally, in one embodiment, a previously designed plan can be selectively initialized **224**. The plan can be one that was previously established with system **230**. For example, if subscriber **214** is a parent unable to pick-up a child due to the disaster, a previously designated party **246** can be tasked with the child's well being, whenever Plan A is selected. A message **226** entry option can also exist that permits the subscriber **214** to send a message detailing a situation to the system **230**.

[0029] In another embodiment, options to utilize specialized sensors and/or components of the device **210** can be present in interface **220**. For example, options **228** can exist to utilize a built-in camera or video feature of the device **210** to send a picture or video of the post-disaster situation to system **230**.

[0030] Communications between device **210** and system **230** can utilize a push and/or pull methodology. For example, device **210** can push data to system **230** over network **250**, or data can be pulled from device **210** by system **230**. When a network **250** connection is intermittent, repeated communication attempts, possibly using different communication channels, can be automatically performed until system **230** receives information from device **210**.

[0031] In one arrangement, system **230** can combine data obtained from one or more devices **210** with information obtained from other sources, such as server **240**, in order to create a more comprehensive situation assessment. For example, server **240** can provide satellite images of a disaster region, which can be combined with a subscriber location so that a concerned party **246** is able to see not only a status indicator and a location for a subscriber **214**, but a picture of that area as well. Disaster response system **230** can convey data to one or more disaster relief systems **242**, which can provide assistance to needful subscribers **214**.

[0032] Device **210** can be any computing device capable of communicating status and location information to system **230**. Device **210** can include a mobile telephone, a computer, a personal data assistant (PDA's), a two-way radio, a GPS device, a media player, an entertainment system, a wearable computing device, and the like. Different communication modes can be available to the device **210**, which can permit information to be shared over a personal area network (PAN) and/or a Wide Area Network (WAN).

[0033] Networks **250** and **252** can include any hardware/software/and firmware necessary to convey digital content encoded within carrier waves. Digital content can be contained within analog or digital signals and conveyed though data or voice channels. Networks **250-252** can include network equipment, such as routers, data lines, hubs, and intermediary servers which together form a data or telephony network. Networks **250-252** can include mobile communication components, such as cellular communication towers, two-way radio transceiving components, and the like.

[0034] Data stores **260-264** can each be a physical or virtual storage space configured to store digital information. Each of data stores **260-264** can be physically implemented within any type of hardware including, but not limited to, a magnetic disk, an optical disk, a semiconductor memory, a digitally encoded plastic memory, a holographic memory, or any other recording medium. The data stores **260-264** can be a standalone storage unit as well as a storage unit formed from a plurality of physical devices. Additionally, information can be stored within each data store **260-264** in a variety of manners. For example, information can be stored within a database structure or can be stored within one or more files of a file storage system, where each file may or may not be indexed for information searching purposes. Further, data stores **260-264** can utilize one or more encryption mechanisms to protect stored information from unauthorized access.

[0035] FIG. **3** is a flow chart of a method **300** of one possible process that can be used by a disaster response system in accordance with one embodiment of the inventive arrangements disclosed herein. Method **300** is provided for illustrative purposes and the invention is not to be construed as limited in this regard.

[0036] The method can begin in step **305**, where a server can request location information from mobile devices. Corresponding database entries can be populated using this information. In step **310**, a determination can be made as to whether a disaster has occurred. If so, the method can proceed from step **310** to step **315**, where a determination can be made as to whether any subscribers have been affected by the disaster. This determination can be based on the location information of step **305**. One factor that, can be considered in step **315** is a quantity of subscribers who have manually activated an emergency response plan. That is, a subscriber having an unknown affected status that is proximately located to a set of other subscribers, who have each manually activated an emergency response plan, can be presumed to be affected by an emergency. Further, sufficient subscriber emergency plan activation in a given area can cause step **310** to be automatically evaluated as true for that area. If results of step **310** or step **315** are negative, then method can proceed to step **320**, where a check can he performed to determine if anyone issued an "Are You OK" request. If not, the method can wait for a specified period, as shown in step **325**, after which the method can repeat step **305**.

[0037] If in step **315** one or more subscribers are affected by a disaster, the method can proceed to step **330**, where a disaster response system can determine whether conditions have been satisfied for a user defined plan. If so, programmatic actions associated with that plan can be initiated, as shown by step **332**. Otherwise, a set of default actions for the subscriber can be taken, as noted in step **334**. For example, a

master contact can be contacted and informed of the status indicator and the location information of the mobile device. Other contacts associated with the subscriber can also be contacted. In another example, a Web site containing subscriber status information can be updated with the subscriber's status indicator and location. Concerned parties, such as family members, can be granted access to the Web site, through which they can look-up the last known location and situational status of the subscriber.

[0038] An affirmative response for step **320** can lead to step **335**, as can completed steps **332** and **334**. In step **335**, a server of a disaster response system can request conditions for each affected or queried subscriber. In step **340**, a time-stamp response to each of these queries can be placed in a corresponding database entry. If no response is received within a predetermined time period, the response field can be populated with an "Unknown" indication. In step **345**, when all responses are determined, responses can be sent to each concerned party and/or to status reporting systems, such as the aforementioned Web site.

[0039] In step **350**, a troubled subscriber timeout threshold can be checked. This threshold can be associated with potentially threatened subscribers, which includes users having an "Unknown" status and subscribers who set a status indicator to indicate that they were not alright. When the threshold is exceeded, the method can loop to step **335**, where the server can request condition information for the potentially threatened subscribers. In step **355**, a normal timeout threshold can be checked. When this threshold is exceeded, the method can loop back to step **310**, where the method can check to see if the disaster has ended, if not, status information for ail subscribers can be updated.

[0040] FIG. **4** is a chart **400** showing a set of disaster response plans established for a subscriber and initiated by a disaster response system in accordance with an embodiment the inventive arrangements disclosed herein. The chart **400** can, for example, represent the plans associated with plan element **224** of system **200**. Each plan is associated with a set of conditions, such as a disaster type, a subscriber location, a subscriber status, and the like. When these conditions occur, a set of predefined programmatic actions are automatically initiated. Different sub-elements of an overall plan can be selectively triggered or adjusted depending upon whether related conditions have occurred.

[0041] For example, a rescue plan during a fire can specify that a closest relative to the fire is to assist children near the tire. Each of the plan specified relatives can be associated with a mobile telephony device having location determination capabilities. A disaster response system can determine which of the family members is closest to the fire by querying each device. The nearest device can then be contacted, its user apprised of the situation, and informed of their assigned duties regarding the children.

[0042] The top level of chart **400** is a basic response system **410**. The response system **410** can be manually triggered by an authorized user or automatically triggered based upon a disaster being detected. Prepared response plans are shown in block **420**. These plans **420** can include Plan A for a fire at a house **430**, Plan B for a hurricane **440**, and Plan C for a terrorist attack **450**,

[0043] When a fire at a house is detected **430**, a pre-determined emergency contact can be contacted **432**. If this contact is unavailable, a set of backup contacts can be iteratively contacted. One of the contacts can include a neighbor **434** proximate to the house.

[0044] When a hurricane is detected **440**, a potentially different set of predetermined possible emergency contacts **442** can be notified. These contacts can include an out of state brother **444** and an out of state cousin **446**,

[0045] When a terrorist attack is detected **450**, a predetermined contact set can be contacted **452**. Further a remote server **454**, such as an FBI server or a police server, can be provided all known information.

[0046] Unplanned emergencies **460** can include an emergency auto accident **470**, a robbery **480**, and a flood **490**. During an auto accident **470** one or more friends **472-474** can be contacted. For a robbery **480**, a mother **482** and/or an aunt **484** can be notified of the situation. The mother **482** and/or aunt **484** can, for instance, be watching a business traveler's residence when he is away on a long trip. When a flood **490** occurs, an aunt **492** outside of a threat region can be contacted.

[0047] The present invention may be realized in hardware, software, or a combination of hardware and software. The present invention may be realized in a centralized fashion in one computer system or in a distributed fashion where different elements are spread across several interconnected computer systems. Any kind of computer system or other apparatus adapted for carrying out the methods described herein is suited. A typical combination of hardware and software may be a general purpose computer system with a computer program that, when being loaded and executed, controls the computer system such that it carries out the methods described herein.

[0048] The present invention also may be embedded in a computer program product, which comprises all the features enabling the implementation of the methods described herein, and which when loaded in a computer system is able to carry out these methods. Computer program in the present context means any expression, in any language, code or notation, of a set of instructions intended to cause a system having an information processing capability to perform a particular function either directly or after either or both of the following: a) conversion to another language, code or notation; b) reproduction in a different material form.

[0049] This invention may be embodied in other forms without departing from the spirit or essential attributes thereof. Accordingly, reference should be made to the following claims, rather than to the foregoing specification, as indicating the scope of the invention.

What is claimed is:

1. A method for reporting a status indicator using a mobile communication device during a disaster comprising:

entering a situation status indicator in a mobile communication device;

communicating the status indicator to a disaster response system;

the disaster response system automatically determining a location of the mobile communication device; and

the disaster response system making the status indicator and the location available to a plurality of concerned parties.

2. The method of claim **1**, further comprising;

iteratively repeating the communicating, determining, and making steps for a duration of a disaster, wherein the disaster response system provides a continuously

updated status indication and location of a subscriber associated with the mobile communication device to the plurality of concerned parties.

3. The method of claim **1**, further comprising;

the disaster response system polling a plurality of mobile communication devices, which include the mobile communication device, to acquire status indicators and mobile communication device locations; and

associating an identifier for the mobile communication device and corresponding location and status indicators within a database structure.

4. The method of claim **3**, further comprising:

iteratively repeating the communicating, determining, and making steps for a duration of a disaster for each of the plurality of mobile communication devices, wherein the disaster response system provides a continuously updated status indication and location of each subscriber associated with one of the mobile communication devices to the plurality of concerned parties.

5. The method of claim **3**, further comprising:

aggregating data from the plurality of mobile communication devices to determine areas and people affected by a disaster, which are in need of assistance; and

providing the aggregated data to at least one of an entity and agency in charge of providing disaster relief.

6. The method of claim **1**, further comprising:

a subscriber associated with the mobile communication device establishing a plurality of conditional disaster plans with the disaster response system;

each of the disaster response plans including a set of user-configured programmatic actions to be automatically taken responsive to an occurrence of associated conditions;

responsive to a disaster, the disaster response system determining whether the associated conditions have occurred based at least in part upon the determined location and the status indicator; and

when a set of conditions has occurred, automatically initiating the associated set of programmatic actions.

7. The method of claim **6**, further comprising:

entering a plan triggering command in the mobile communication device;

communicating the plan triggering command to the disaster response system; and

automatically initiating the set of programmatic actions associated with the plan triggering command.

8. The method of claim **1**, wherein the status indicator is one of a set of system defined situation status indicators, said set including at least one indicator signifying that a mobile communication device user is alright and including at least one indictor signifying that the mobile communication device user is in need of assistance, said method further comprising;

entering a textual message into the mobile communication device;

communicating the textual message to the disaster response system; and

the disaster response system making the textual message available to the plurality of concerned parties.

9. The method of claim **1**, further comprising*.

using an input capture mechanism of the mobile communication device, capturing input to create a media document, said media document comprising at least one of audio, video, and an Image;

communicating the media document to the disaster response system; and

the disaster response system making the media document available to the plurality of concerned parties.

10. The method of claim **1**, further comprising:

one of the concerned parties contacting the disaster response system to query the disaster response system about a subscriber associated with the mobile communication device;

the disaster response system initiating the communicating and the determining steps in response to the contacting step; and

the disaster response system providing the concerned party the status indicator and the location in response to the query.

11. The method of claim **1**, further comprising:

the communicating step failing to establish communications with the mobile communication device that results in the automatically determining step failing;

the disaster response system automatically determining a last known location for the mobile communication device and an associated time;

the disaster response system making the last known location and the time available to the plurality of concerned parties.

12. The method of claim **1**, the making step further comprising:

automatically conveying an electronic document to each of the concerned parties associated with a subscriber of the mobile communication device, said electronic message including the status indicator and the location.

13. The method of claim **1**, the making step further comprising:

updating an automated system with the status indicator and the location for the mobile communication device, which is associated with a subscriber;

permitting each of the plurality of concerned parties to contact the automated system and to identify the subscriber; and

automatically providing the status indicator and the location to each of the concerned parties after the subscriber has been identified.

14. The method of claim **1**, wherein said steps of claim **1** are steps performed by at least one machine in accordance with at least one computer program stored within a machine readable memory, said computer program having a plurality of code sections that are executable by the at least one machine.

15. A method for conveying situation status indicators of subscribers to concerned parties during a disaster comprising:

detecting an occurrence of a disaster affecting a region;

determining a set of mobile telephony devices associated with the region, each mobile telephony device being associated with a subscriber;

determining a location for each of the mobile telephony devices:

attempting to obtain a situation status indicator from each of the mobile telephone devices;

storing results of the attempting step and the determined locations in a data store that relates the results and the locations to a corresponding one of the mobile telephony devices; and

providing stored information to concerned parties, wherein each concerned party receives the stored results and the determined location for at least one corresponding subscriber.

16. The method of claim **15** wherein the providing step further comprises performing one action from a set of actions consisting of an action of automatically sending electronic messages to a set of previously designated contact points associated with each of the subscribers wherein the electronic messages include the stored results and the determined locations, and an action of establishing an automated system that the concerned parties are able to access wherein the automated system is able to process queries pertaining to particular ones of the subscribers and to provide query results comprising the determined location and the stored results that correspond to queried subscribers.

17. The method of claim **15** further comprising:

identifying a set of disaster responses associated with the subscribers, which were previously configured by the subscribers, each disaster response being a data driven response that varies depending upon ascertainable conditions, said ascertainable conditions comprising a disaster type, a value of a situation status indicator, and a location of an associated mobile telephony device;

for each subscriber, automatically determining the ascertainable conditions; and

for each subscriber, automatically initiating at least one disaster response appropriate for the determined conditions.

18. The method of claim **15** wherein the method provides real-time status information about the subscribers to the concerned parties utilizing telecommunication infrastructure resources positioned outside of the region, and wherein when a mobile telephony device of a subscriber Is unable to be contacted, the stored results indicate this inability as well as an indication of whether mobile telephony service is available in a location in which the mobile telephony device is believed to be.

19. The method of claim **16** further comprising;

aggregating information for geographic portions of the region, said aggregated information being based upon values of situation status indicators received from mobile communication devices that are located within the geographic portion as ascertained from the determined locations; and

automatically providing the aggregated information to disaster relief personnel to help focus disaster relief efforts.

20. A disaster response system for reporting situational status indicators of subscribers to concerned parties comprising:

a plurality of mobile communication devices having an interface through which a user is able to enter a situation status indicator;

a disaster response system configured to dynamically and repetitively obtain the situation status indicators from the mobile communication devices and to dynamically and repetitively determine a location of the mobile communication devices during a disaster, wherein said disaster response system performs at least one programmatic action for subscribers associated with the mobile communication devices based upon the location of the mobile communication device and the status indicator received from the mobile communication device; and

a plurality of computing devices that are each associated with concerned parties, wherein the disaster response system provides a current status indicator and a location of the mobile communication device to the plurality of computing devices for computing devices previously associated with the mobile communication device and for computing devices responsive to a query of a subscriber associated with the mobile communication device.

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