

WIRELESS GROUP MESSAGING TECHNOLOGIES

SUPPLEMENTAL INFORMATION

A Patent Portfolio Acquisition Opportunity

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WIRELESS GROUP MESSAGING TECHNOLOGIES

A PATENT PORTFOLIO ACQUISITION OPPORTUNITY

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To further demonstrate the value of the Critical Response Systems Portfolio, this document provides publicly available information showing applicable industry usage on wireless group messaging and/or alerting technologies as they relate to the Portfolio. More specifically, research on publicly available materials suggests that some level of current use may exist within the mobile and web-based emergency service provider software market. This is an emerging market where several Internet and cloud-based software companies provide services for emergency responders such as fire, medical, police, governmental agencies, and more. A few exemplary companies and an overview of their related products are provided below.

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 - FIREQ RVS
 - GOGREEN MESSAGING

4. ONE CALL NOW INC.

- ONE CALL NOW EMERGENCY NOTIFICATION SERVICES

Several other companies offer mobile messaging apps and/or group alerting apps and products that are very similar in nature to the Technology. To further assist in your review of the patented technologies, a sampling of current leaders and products in the mobile group messaging market are provided below:



WIRELESS GROUP MESSAGING TECHNOLOGIES

A PATENT PORTFOLIO ACQUISITION OPPORTUNITY

- GROUPME (MICROSOFT)
- APPLE IMESSAGE
- FACEBOOK MESSENGER
- GOOGLE MESSENGER (PREVIOUSLY "GOOGLE HUDDLE")
- GOOGLE+ HANGOUTS
- MessageMe
- WECHAT (TENCENT)
- TANGO
- KIK MESSENGER
- WHATSAPP MESSENGER (FACEBOOK)

SECTION 1

1. EMERGENCY SERVICES MARKETING CORPORATION (DEWITT, NEW YORK)

Product: IamResponding.com

IamResponding.com is a cloud-based emergency response management system offered by Emergency Services Marketing Corporation. The service communicates by both internet enabled devices, smartphones, and regular cell phones over a wireless network to allow emergency responders the ability to view who has responded to an emergency call, along with interaction to group members. For the purpose of this analysis, we will focus on the mobile wireless (smartphone) interaction with department or group members.

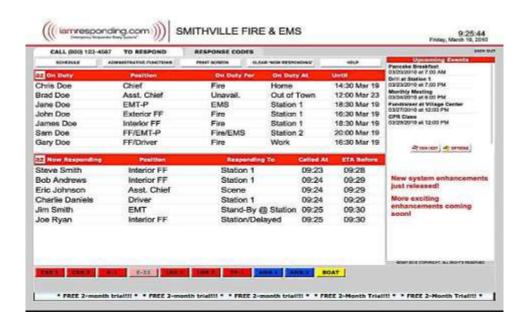
U.S. Patent No. 8.588,207 – Claim 1 (claim language shown in orange)

1. A method of alerting a group of recipients over a wireless network and providing acknowledged group messaging, each recipient comprising at least one mobile device capable of transmitting and receiving data, the method comprising the steps of:



Source: http://www.iamresponding.com/v3/Pages/Default.aspx#

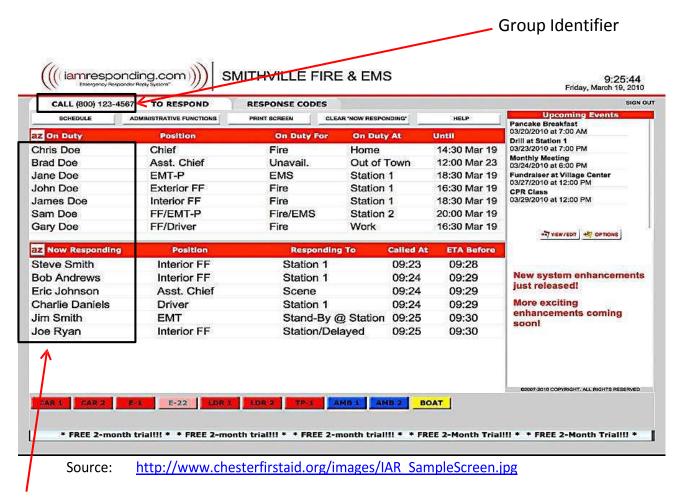
IamResponding is a cloud based system that provides for a method of alerting a group of recipients over their mobile phones (wireless network) and providing group acknowledged messaging. As shown below, each recipient mobile device (smartphone) is capable of receiving and transmitting data.



Source: http://www.chesterfirstaid.org/images/IAR SampleScreen.jpg

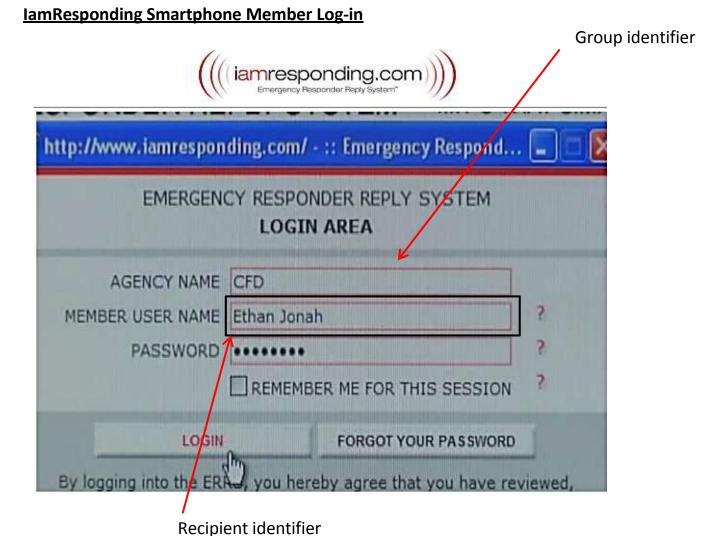
storing data relating to recipients, groups and group members, in a memory device, the data comprising a recipient identifier for each of a plurality of recipients, one or more group identifiers corresponding to each of respective groups of recipients, the groups each comprising selected ones of the plurality of recipients, and group membership data comprising the recipient identifiers of the selected recipients corresponding to each of the group identifiers;

The IamResponding.com server stores data relating to recipients, groups, and group members in a memory device within its cloud based servers. Group membership data of the recipients that belong to a fire station group named "Smithville Fire & Rescue" is shown below, with the group identifier being the unique call-in number assigned 800-123-4567 in this case.



Recipient Identifiers

In addition, at log-in on each member's smartphone, as shown below in the next picture, each member must log-in with his or her agency name. The agency name is associated with the unique call-in number on IamResponding server's "group identifier" and member user name ("recipient identifier") in this example. Multiple fire departments and emergency responders are also stored in the system.



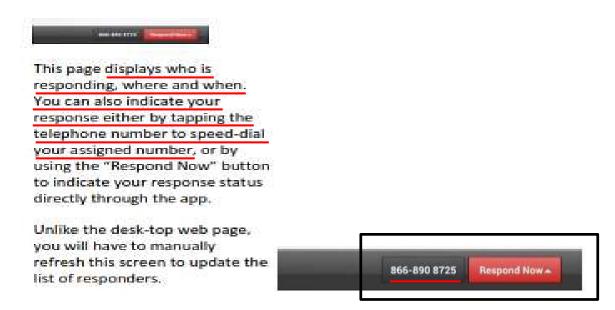
"Your agency has been assigned a unique call-in number, which has been provided to your system administrator, and which is also displayed on your agency's home page once you have logged in to this system. That is the telephone number that all members of your agency will need to call in order to report that they are responding to an event."

Source: http://www.iamresponding.com/Pages/Help.aspx

providing the mobile device corresponding to each of the plurality of recipients with at least a subset of the data stored in the memory device, the subset of the data being stored in the mobile device and comprising its corresponding recipient identifier and the group identifier of each group to which that recipient belongs as a group member;

IamResponding provides each member of the department (plurality of recipients) that has an IamResponding "IAR" smartphone with a subset of data stored in the memory device. In this scenario, the subset of data is each members' recipient identifier (subscriber name) and group identifier, the unique callin phone number for each department (group), and the unique number that relates to "Smithville Fire & EMS" 800-123-4567 in our example.

This is also seen in IAR's mobile Android device manual. Each member and status is displayed (although not shown in the screen for some reason) and a unique number to call 866-890-8725 (group identifier) is provided to the mobile device which the recipient belongs as a member to respond.



Source: IamResponding, Android App Quick Start Guide, page #6



Source: http://www.iamresponding.com/v3/Pages/Default.aspx#

wirelessly transmitting a group message to the mobile device corresponding to each recipient in a selected group of recipients, each of the mobile devices being configured to receive the group message and send a response when the group message is determined to be for a group to which that recipient belongs as a group member;

The IAR system can wirelessly transmit a group message to each mobile device, including department dispatches where each of the recipient's mobile devices is configured to receive the messages:



Source: http://www.iamresponding.com/v3/Pages/Demonstration.aspx

Step 6:

In order to receive push notifications to your phone of dispatch messages (if such messages are currently processed through your department's lamResponding system), you need to go into your member profile (on-line via a desktop computer; not via the app), and make 3 entries in the "Dispatch Information" section of your member profile:

- Select where else you want your dispatch messages sent. You must choose at least one
 other destination, in addition to push notifications to your app.
- 2. Click "Yes" to have push notifications sent to your app.
- 3. Select the type(s) of dispatches you want pushed to your app.



Source: lamResponding, Android App Quick Start Guide, page #5



Source: lamResponding, Android App Quick Start Guide, page #6

However, the recipient's mobile device is not configured to send a response when the group message is determined to be for a group to which that recipient belongs as a group member. The recipient instead calls the unique number "866-890-8725" in this case, or hits "respond now" button on his or her mobile smartphone, as shown above.

monitoring for responses to the group message from the group members; and

IamResponding does monitor for responses from the group members - from dispatches or messages sent - as seen in the following screenshot.

IamResponding example screenshot



Source: http://www.iamresponding.com/v3/Pages/Demonstration.aspx

storing acknowledgement data in the memory device for each of the group members, the acknowledgement data comprising a listing of each of the group members and an indication of response for each of the group members, the indication of response comprising at least one of an indication of no response when that group member has not yet responded to the group message, and an indication of response when a response sent by the mobile device of that group member has been received.

As shown in the screenshot above, IamResponding on its cloud servers does store acknowledgement of data in a memory device for each of the group members and an indication of response. However, IamResponding may or may not store an indication of no response if the member has not yet responded to the group message in a memory device. However, it should be noted that IamResponding does have a control module (e.g. – "a dispatch center module").

SECTION 2

2. ZIPIT WIRELESS INC. (GREENVILLE, SOUTH CAROLINA)

Product: Zipit Critical Messaging Platform

Zipit Wireless is a cloud-based wireless and internet messaging platform for individuals and enterprises with smartphones, Zipit wireless messaging devices, pagers, and Internet connected devices. The Zipit Wireless Paging device with the Zipit Enterprise Messaging Solution and Zipit Remote Administration Portal (RAP) provides two-way paging nationwide via the Verizon wireless backbone. This is very similar to Critical Response's SparkGAP paging system, which forms the basis of the '207 patent and other two family members.

U.S. Patent No. 8.588,207 – Claim 1 (claim language shown in orange)

1. A method of alerting a group of recipients over a wireless network and providing acknowledged group messaging, each recipient comprising at least one mobile device capable of transmitting and receiving data, the method comprising the steps of:

As shown in the Zipit product and website illustrations below, the Zipit messaging solution provides for a method of alerting a group of recipients over a wireless network (Verizon 3G network). Each recipient can comprise one mobile device (Zipit Messaging Device) with the capability of both receiving and transmitting data.

Zipit RAP Quick Start User Guide

Zipit® Enterprise Critical Messaging Solution™ Zipit RAP™ Quick Start User Guide

Getting Started

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550 S. MAIN ST | SUITE 525 | GREENVILLE, SC 29601 | WWW.ZIPITWIRELESS.COM | P 864.451.5500 | F 864.451.5505

Initial Configuration for Administrators

Zipit initially configures the RAP, for each customer, with three pre-defined roles that can be assigned to administrators (aka operators, dispatchers, and true administrators):

Super Administrator - An administrator with this right can manage all administration functions, including imports, address book creation, group creation, user settings, sending page alerts, software updates, Wi-Fi access points and can access and run reports.

Paging Admin - An administrator with this role has access to the messaging interface and can send page

<u>alerts to all users or groups of users</u>. This administrator can also create /edit existing paging groups that are visible to all other administrators, but cannot perform any other tasks.

Device Paging – This administrator role is reserved for users who have been granted the ability to initiate page alerts from their devices (currently reserved for Zipit Confirm Users only).

Source: http://www.zipitwireless.com/wp-content/themes/zipit/lib/download.php?file=2013/03/Zipit-RAP-Quick-Start-User-Guide.pdf

Zipit Critical Messaging Platform

Overview

"Zipit worked for over three years to create a solution for enterprises that would solve their basic communications problems faced during circumstances <u>requiring critical messaging capability</u>.

The Zipit Enterprise Critical Messaging SolutionTM is purposely designed to address all issues that hamper critical message delivery, including uncertainty, connectivity, speed, and accountability.

Working with leading hospitals across the country, Zipit defined, developed, validated and then deployed a solution that not only is already in everyday use by over 250 hospitals, hotels, EMS providers, and other organizations, but is undergoing extensive trials by hundreds more that are eager to solve their critical messaging problems with a solution that meets 100% of the HIPAA Compliant Mobile Communications Standard.

Prior to the deployment of Zipit's solution, organizations were forced to deal with coverage issues caused by: building infrastructure, 1-way "send and pray" paging based on decaying 40+ year old technology, the inability to securely communicate in real time, lack of support for traditional workflow methodology and no ability to hold people accountable.

The Zipit Enterprise Critical Messaging Solution solves all of these problems, and provides a solid foundation for the future, using patented, best-in-class software, device, and cloud-based technologies that will grow with the needs of the enterprise."

Zipit® Now™ Nationwide 2-way Wireless Messaging Device w/Quarterly service plan selected

MFR#: zipitnowquar

Manufacturer: Zipit Wireless



The Zipit® NowTM, the Ultimate Wireless Messaging Device with a Quarterly service plan selected is the newest in wireless messaging becoming our most asked for product offering in our 2013 lineup. It's the Ultimate PagersDirect wireless messaging device as it covers all of the bases in messaging including:

- Nationwide Numeric Paging includes local pager phone number
- 2-Way Paging Nationwide (message back and forth between Zipit® NowTM devices as well as cellphones via text messaging)
- Unlimited Text Messaging Nationwide
- Authorized Email Messaging (configurable upon request)
- Assured Messaging (never miss a page)
- Complete accountability with HIPAA Compliance web based module available
- Optional Smartphone App (Zipit® ConfirmTM) for Android or iPhone allows you to send and receive messages via your smartphone
- Quick (much faster sending and receiving of messages compared to old school 2-way pagers)
- Brand New with rechargeable battery and AC adapter/charger
- With the included Zipit® RapTM (Remote Administration Portal), you can log on from any internet connected computer to view all messages (text, emails and pages) sent to and from your Zipit® NowTM Device(s) as well as to and from the Zipit® ConfirmTM smartphone app.

<u>Imagine being able to run reports of when messages were sent, received and read in real time</u>! Zipit® RapTM takes the guesswork out of paging!

Click Here for complete technical specifications of the Zipit® NowTM

The Zipit® Now™ device is powered by the nation's largest 3G data network so coverage is better than most of today's paging networks. The Zipit Now also works on wi-fi networks and will switch automatically between 3G and Wi-Fi, depending on network availability within your location.

The Zipit® NowTM device is about the size of two Motorola Advisor Elite Alpha Numeric Pagers stacked on top of each other. It's bigger by design. When using this device, you won't need to go fumbling around little buttons and mistakenly enter wrong characters. The keyboard is designed for ease of use for quick and efficient typed messages and numbers during urgent and critical situations for your personal, business, and/or healthcare messaging requirements.

Source: http://www.pagersdirect.net/zipit-now-nationwide-2way-wireless-messaging-device-wquarterly-service-plan-selected-p-384.html#.UwhNBtiYaUk



Example of the system administrator sending an alert message to a group of Zipit users, utilizing a Zipit messaging device.

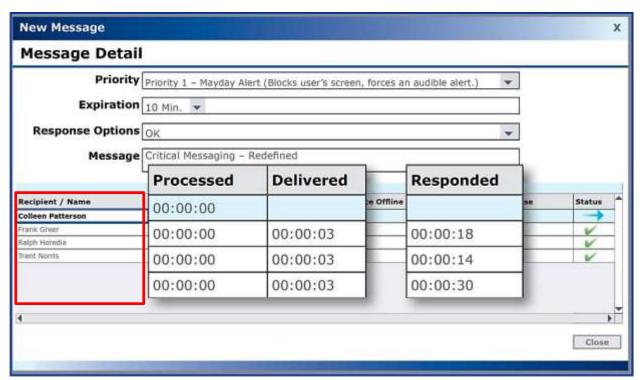
storing data relating to recipients, groups and group members, in a memory device, the data comprising a recipient identifier for each of a plurality of recipients, one or more group identifiers corresponding to each of respective groups of recipients, the groups each comprising selected ones of the plurality of recipients, and group membership data comprising the recipient identifiers of the selected recipients corresponding to each of the group identifiers;

Zipit Wireless Enterprise Messaging solution is a cloud-based service where the system administrator can store data relating to recipients, groups, and group members as illustrated below. In addition, data information resides on the Zipit servers comprising a recipient identifier (employee name, or employee ID) for a member of any organization, group identifiers for each recipient because the system administrators are able to create groups within their organization and send alert messages to these groups; group membership must be defined for this to occur.



Source: http://www.zipitwireless.com/solutions/

As an example, shown below are the results of a message sent by a Zipit system administrator. Since the administrator can create and send an alert to all users, or to a select group of users within a company and can also send a department address book of departments or group members, the Zipit messaging system records responses of all members within these groups by member/user name (recipient identifier in this case). The Zipit Messaging System and RAP stores a group identifier for all the recipient identifiers (employee name / user names) and associated group identifiers (department or group name) on the group address book.



Source: Zipit ECMS – Zipit RAP V3 Brochure, page #1, August 2012

providing the mobile device corresponding to each of the plurality of recipients with at least a subset of the data stored in the memory device, the subset of the data being stored in the mobile device and comprising its corresponding recipient identifier and the group identifier of each group to which that recipient belongs as a group member;

The Zipit system administrator can define a user sub-group, create and send both contact lists and a sub-group list of contacts to a defined group of users with Zipit Mobile Wireless Messaging, which meets the criteria of sending a subset of data in the memory device (Zipit cloud server running the Zipit Wireless Enterprise Messaging Solution and RAP).

In our example, the system administer creates a contact list with Zipit (user names – recipient identifiers) and a department address book, naming the department address book (group identifier) and then sends it to each department member issued a Zipit Wireless Messaging Device as per the group recipients; hence meeting the claim elements - each mobile device corresponding to each plurality of recipients is provided with a subset of the data stored in the Zipit Enterprise Messaging server which comprises a memory device. The address book comprises each recipient identifier in the group (user name) and the group identifier (department address book name) stored in each mobile user's address book and local memory under the department name in their contact list.

Zipit® Enterprise Critical Messaging Solution™

Zipit RAP™ Quick Start User Guide

Users Main Function

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Address Books

An address book is a collection of users that can easily be downloaded to a user's device or mobile application in one step – simplifying the process of populating each user's Contact List.

Typically, an address book is made up of members that share some common trait. For example, if you have multiple departments and it is common for end users to want to communicate with other members in their department, you may want to setup an address book for each department. As soon as an address book is imported or created, end users that have a Zipit Now device or a Zipit Confirm mobile application can search for and add the address book to their Contact List or it can be pushed down to specific users by their administrator. You can also use the "Address Bulk Edit" button on the main User listing screen to assign or unassign an address to all users at one time. If changes are made to an address book (using the Details button), the changes will automatically be pushed down to all end users that have that address book in their Contact List.

Follow these steps to create an address book from within the RAP:

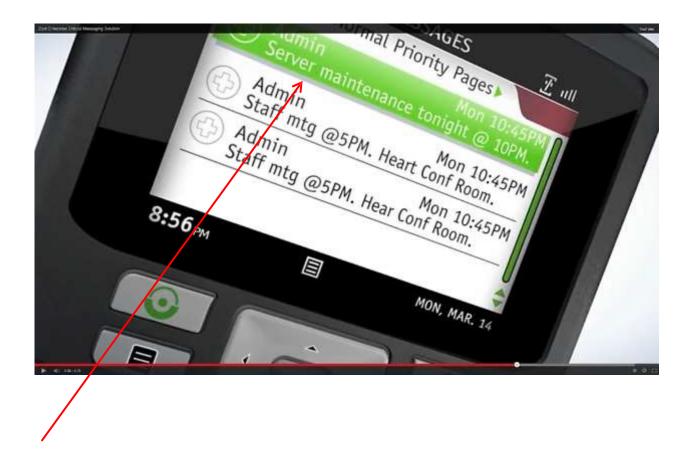
- 1. Click the Add button in the upper left hand corner. Enter a name and description if desired. Click the Save Changes button to the left of the new address book to save the address book.
- 2. <u>To assign users to this address book</u>, click the Details button next to the address book you just created. Select the "Add / Remove Members" button to display a list of all users to choose from. Place a check in each

<u>check box to select desired address book members</u> or place a check in the top left check box to add all users (up to 250 users) to your address book. Apply filters to help locate desired users.

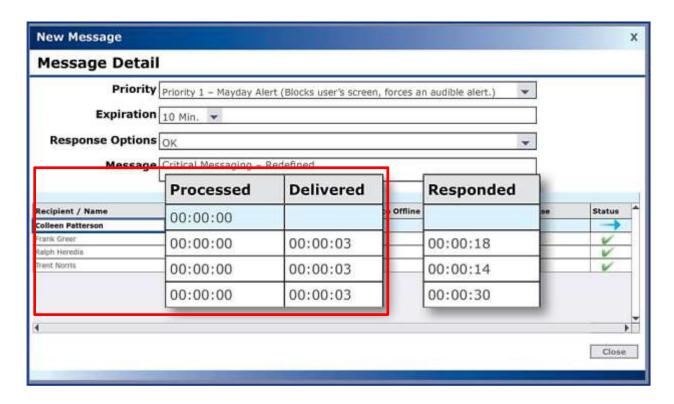
Source: http://www.zipitwireless.com/wp-content/themes/zipit/lib/download.php?file=2013/03/Zipit-RAP-Quick-Start-User-Guide.pdf

wirelessly transmitting a group message to the mobile device corresponding to each recipient in a selected group of recipients, each of the mobile devices being configured to receive the group message and send a response when the group message is determined to be for a group to which that recipient belongs as a group member;

Here the Zipit administrator can wirelessly transmit a group message to each recipient of a selected group, say the department group just created or a larger group of an upcoming system maintenance alert tonight, for example. The administrator of the Zipit system selects priority and other features of the message, plus each mobile Zipit wireless devices sends a response back (shown in the next table).



Shown above is an example of the system administrator sending an alert message to a group of Zipit users.

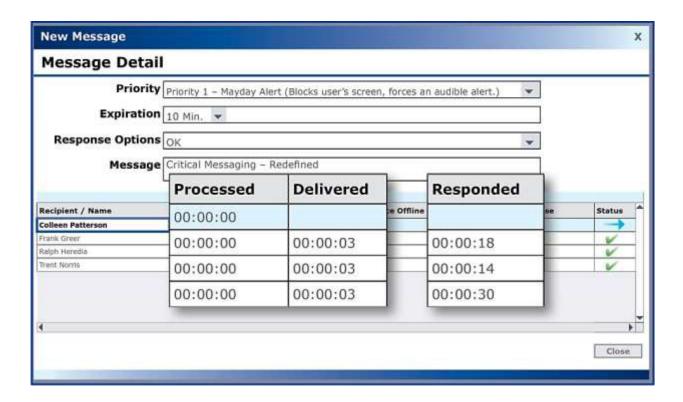


Source: Zipit ECMS – Zipit RAP V3 Brochure, page #1, August 2012

Each group member device sends back a confirmation response to the administrator. Although this example is a little shaky if the response being sent is based on the device being a member of the designated group, it appears a response is sent as soon as the message has been delivered regardless if the selected receiving device is actually a member of the designated group.

monitoring for responses to the group message from the group members; and

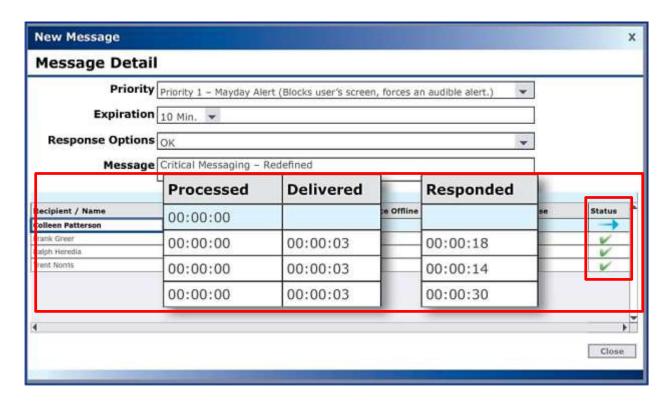
The Zipit Enterprise Message Solution suite and RAP does monitor for responses from group members for the group message sent as shown below.



Source: Zipit ECMS – Zipit RAP V3 Brochure, page #1, August 2012

storing acknowledgement data in the memory device for each of the group members, the acknowledgement data comprising a listing of each of the group members and an indication of response for each of the group members, the indication of response comprising at least one of an indication of no response when that group member has not yet responded to the group message, and an indication of response when a response sent by the mobile device of that group member has been received.

Zipit Enterprise Message Solution suite and the RAP meet the last claim element in Claim 1: Zipit Enterprise stores acknowledgement data in the memory device, because you can retrieve it from the message sent. In addition, the software stores data for each group member where the acknowledgement includes a listing of each group member (shown below), and an indication of response when no response has been received to the group message as seen in the table for Colleen Patterson, where a blue arrow is shown next to status signifying no response has been received, as well as those users who have sent back a response, signified by the three green check marks in the far right column.



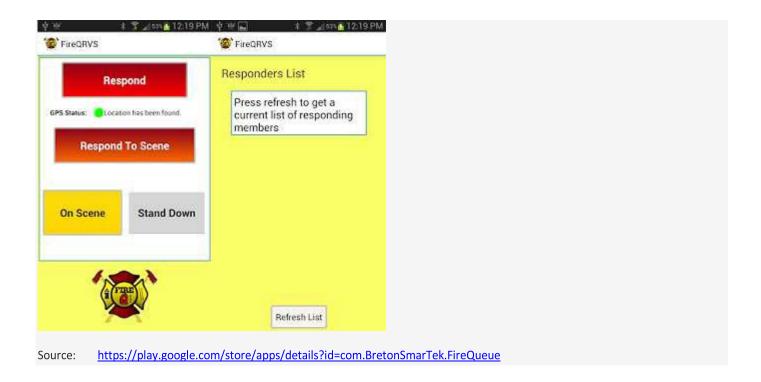
Source: Zipit ECMS – Zipit RAP V3 Brochure, page #1, August 2012

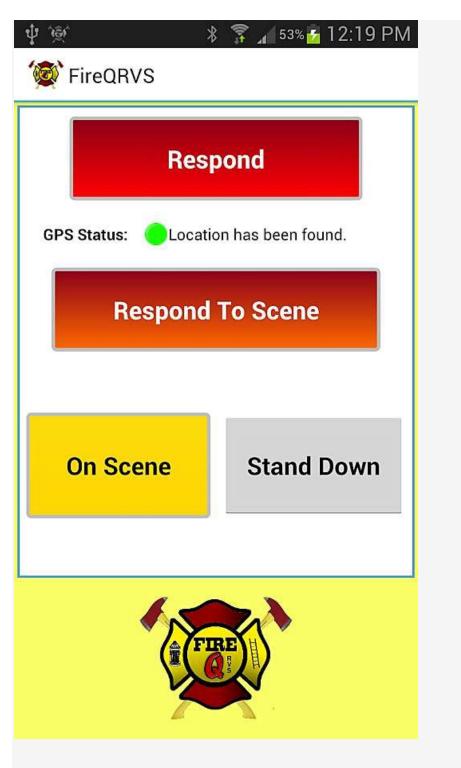
SECTION 3

3. THUH COMPANY (BOLINGBROOK, ILLINOIS)

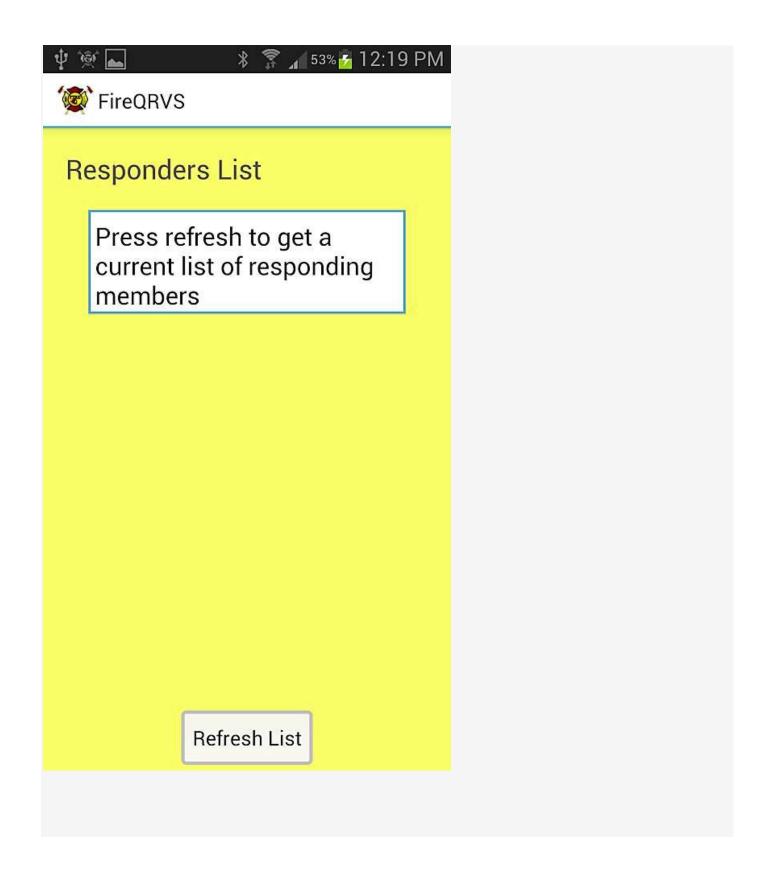
Product: FireO RVS

FireQ RVS is a communication and service mobile app provided by the Thuh Company. The emergency group messaging FireQ app is designed to connect volunteer firefighters via their mobile phones. For each identified group, the messaging app provides for a list of responders to an event, group messages between members and the fire station, as well as group acknowledgement status.





Source. https://piay.googie.com/store/apps/details?id=com.bretonomariek.rireQuede



Description

The Fire-Q RVS app is one part of a two-part firefighter response verification and fire department management system. It has been created by professional firefighters to provide critical information to first responders during and after an incident. Fire- QRVS is an innovative solution that meets the specific needs of the volunteer fire service.

The Fire-QRVS system allows firefighters to use their smartphones to access real-time information about who is responding to an incident as well as their estimated time of arrival. The app provides additional functionality when the first member arrives on scene. The "On Scene" feature can be used to send a Google Maps link with the exact location of the incident to responding members.

Two additional quick communication features in the app ensure firefighters receive accurate and relevant information quickly. The console at the fire hall can send messages or call any members in the Fire-QRVS system and the app allows for quick text messaging back to the console. Additionally, a "Stand Down" feature communicates information regarding incident containment or a false alarm.

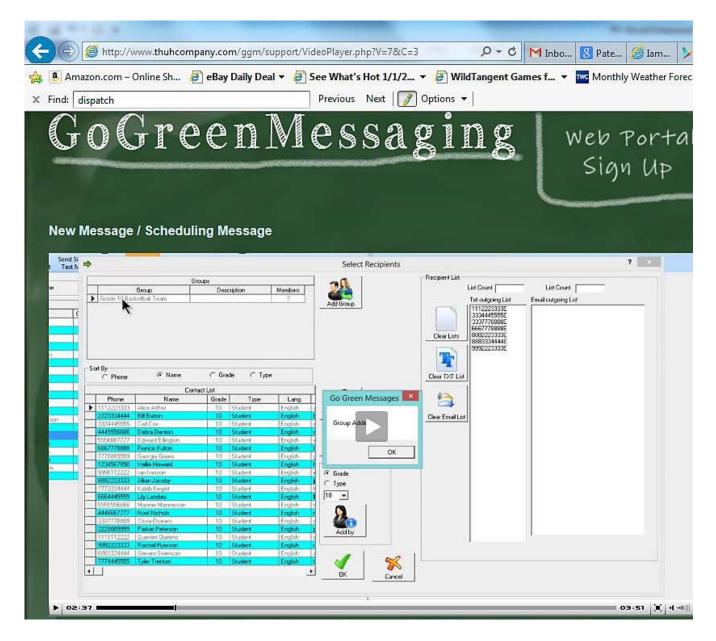
Firefighters continually risk their lives to protect the communities they serve. The Fire-QRVS system provides information that keeps firefighters safe and ensures that resources are deployed with maximum efficiency.

Source: https://play.google.com/store/apps/details?id=com.BretonSmarTek.FireQueue

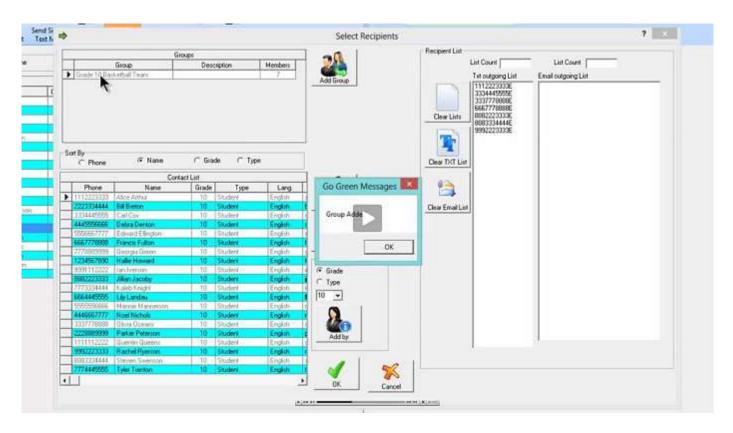
Product: GoGreen Messaging

Thuh Company offers another social and group messaging product named GoGreen Messaging - targeted for the educational market. GoGreen allows teachers and educators to communicate with students, parents, other teachers, and other administrators in a school district or designated group. This product illustrates the value of the patent outside of the emergency services provider market.

GoGreen allows a text message to be sent to a cell phone for individual groups. For example, "Grade 10 – Basketball Team", which could be considered the group identifier, and student names or phone numbers, which could be considered the recipient identifiers.



Source: http://www.thuhcompany.com/ggm/support/VideoPlayer.php?V=7&C=3



Source: http://www.thuhcompany.com/ggm/support/VideoPlayer.php?V=7&C=3

SECTION 4

4. ONE CALL NOW INC. (TROY, OHIO)

Product: One Call Now Emergency Notification Services

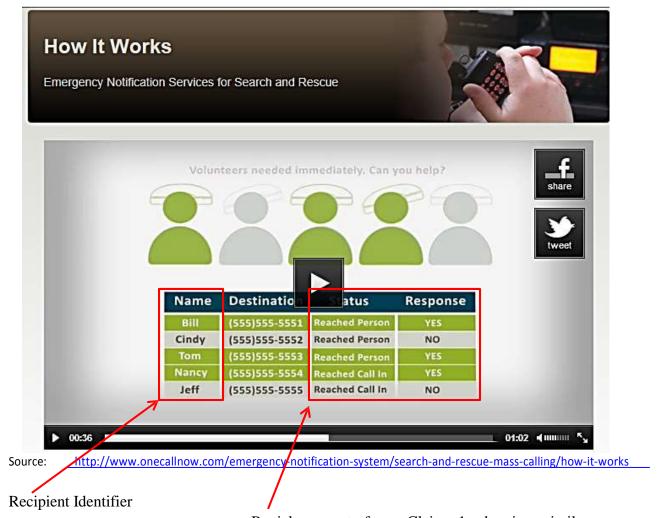
One Call Now is a cloud-based emergency group messaging and contact platform provided by One Call Now Inc. One Call Now provides voice, text, and email messages to a self-uploaded contact list and to smaller subgroups or groups of those contacts stored on their server.

One Call Now advertises that they provide messages to cell phone holders through a wireless network. In addition, One Call Now provides an acknowledgement of the response, an indication of no response when that group member has not yet responded to the group message, and an indication of response when a response sent by the mobile device of that group member has been received. This is shown in One Call Now's online video tutorial below.

See: http://www.onecallnow.com/emergency-notification-system/search-and-rescue-mass-calling/how-itworks

Further detail is provided below on the One Call Now Emergency Services Notification service and "How it Works".

How it Works Overview



Partial excerpt from Claim 1 showing similar commercial use: Acknowledgement data comprising a listing of the group members, response for each of the group members, including an indication of no response when that group member has not yet responded to the group message, and an indication of response when a response sent by the mobile device of that group member has been received.

"One Call Now Emergency Notification Services are powerful enough to alert entire cities and <u>versatile</u> enough to notify small teams, track <u>detailed information</u> and supply real-time reports. With One Call Now Emergency Notification Services, it's fast and easy to get the word out. Simple tools help you take control and make informed, life-saving decisions."

Source: http://www.onecallnow.com/emergency-notification-system/search-and-rescue-mass-calling/how-it-works

One Call Now Search & Rescue Brochure

| aximum voice messages to each number per year | UNLIMITED |
|---|------------|
| aximum email to PC's and email to Internet-enabled cell phones per year | UNLIMITED |
| aximum SMS text* messages sent to cell phones | UNLIMITED |
| aximum length of voice messages | 90 SECONDS |
| aximum characters in an SMS text* message | 130 |
| none numbers per contact (includes voice and text) | 6 |
| nail addresses per contact | 5 |
| aximum number of Subgroups | UNLIMITED |
| essages with high priority status | ALL |
| ext-to-Speech: your typed message is converted to a voice message | UNLIMITED |
| aller ID: you select an ID that let's recipients know it's an important call | YES |
| ultilingual: immediately translates typed messages and delivers in voice (18 languages) | UNLIMITED |



Source: One Call Now Search & Rescue Brochure, page #3

Source: One Call Now Online Video Tutorial, http://www.onecallnow.com/emergency-notification-system/search-and-rescue-mass-calling/how-it-works

[&]quot;Target messages to specific groups within your organization."