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SYSTEM, DEVICE AND METHOD FOR MOBILIZING A RESUSCITATION TEAM.

FIELD OF INVENTION

The present invention relates to a system, device and method for mobilizing a resuscitation team.

BACKGROUND

The provision of an effective resuscitation service for people who collapse in a hospital or a medical centre is essential. The passage of time drives all aspects of resuscitation. The final outcomes are determined by the intervals between collapse or onset of the emergency and the delivery of basic and advance interventions. The probability of survival declines sharply with each passing minute of cardiopulmonary compromise. Therefore, response time is critical. A resuscitation team should be able to arrive on the scene of a cardiac arrest within minutes to initiate treatment. The earlier that effective treatment is provided, the more likely the patient is to survive. The adequate performance of such a service has wide ranging implications with respect to standards of care, risk management and clinical governance. Early resuscitation saves lives.

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In one prior art system, when a patient collapses, a first nurse typically shouts for help, then the first nurse checks if the patient is responsive. Meanwhile, a second nurse activates a resuscitation team by shouting into a microphone. The second nurse is typically required to verbally provide the location details to the resuscitation team members. Meanwhile, a third has to push the mobile resuscitation trolley to the collapsed patient's location to commence resuscitation efforts. Unfortunately, this approach is time consuming. Furthermore, if there is a shortage of medical personnel, it is impossible to undertake these actions simultaneously.

In another prior art system, when a patient collapses, a first nurse typically shouts for help, then the first nurse checks if the patient is responsive. Meanwhile, a second nurse has to manually page a resuscitation number or a series of numbers. The second nurse is typically required to manually page the location details to the resuscitation team members. Meanwhile, a third nurse has to push the mobile resuscitation trolley to the collapsed patient's location to commence resuscitation efforts. Again, this approach is time consuming. Furthermore, if there is a shortage of medical personnel, it is impossible to undertake these actions simultaneously.

In yet another prior art system, when a patient collapses, a first nurse typically shouts for help, then the first nurse checks if the patient is responsive. Meanwhile, a second nurse has to manually telephone the hospital operator to trigger a resuscitation alert. The second nurse is typically required to verbally provide the location details to the hospital operator or the resuscitation team members. Meanwhile, a third has to push the mobile resuscitation trolley to the collapsed patient's location to commence resuscitation efforts. This approach is time consuming. Furthermore, if there is a shortage of medical personnel, it is impossible to undertake these actions simultaneously.

The resuscitation trolley typically stores most of the equipment and resuscitation medicines required by a resuscitation team. Each hospital typically uses a

standardized trolley. The standard trolley typically has equipment that is standardized throughout the hospital to aid familiarity.

A hospital typically has numerous mobile resuscitation trolleys distributed throughout the hospital and at least one resuscitation team on duty. Although a resuscitation trolley is mobile, it is heavy when fully equipped and is intended only to be pushed over a short distance, typically a few metres. Therefore, each resuscitation trolley serves a small area of the hospital. For example, a hospital ward accomodating ten to twenty patient beds will typically have one mobile resuscitation trolley assigned to the ward. This trolley is usually parked near the ward's nurses' station. The resuscitation trolley can be pushed to the patient's bedside when required. In the event of a resuscitation emergency, the medical personnel is required to push the mobile resuscitation trolley a short distance to the patient's bedside.

A resuscitation team comprises specially trained doctors and nurses who are typically assigned to resuscitation duties for a duty period. The members of the resuscitation team would typically carry a dedicated code pager or mobile phone by which they are activated. During this duty period, the resuscitation team members would normally be expected to continue with their usual clinical responsibilities pending activation.

Each resuscitation team member has a role, and must function as part of the resuscitation team. If activated, and a resuscitation team member is unable to response immediately for whatever reason, the resuscitation team member will have to notify a medical personnel. The medical personnel will then follow a written protocol and manually proceed to activate another suitably trained alternate resuscitation team member. During a resuscitation event, lack of awareness as to whether everyone in the team has arrived at the resuscitation location often results in unnecessary repeated paging or contacting by nurses. Not only is this undesirable because it wastes time and effort sorely needed elsewhere, but it furthermore

exposes the resuscitation team members to unnecessary distraction as pagers and mobile phones are unnecessarily activated again and again. Loss of life may result merely because of poor information. As hospitals increase in size and serve thousands of patients, the potential chaos that can result from continuing to manually telephone or to manually page to activate a resuscitation team is apparent.

In a resuscitation emergency, there is a need to mobilize the resuscitation team and to push the resuscitation trolley to the patient's location as soon as possible. Current methods of manually telephoning a hospital operator or manually paging a resuscitation team consumes valuable time in resuscitation emergencies. Therefore, a need exists for a new system, device and method for mobilizing a resuscitation team.

SUMMARY OF THE INVENTION

The present invention relates to a system, device and method for mobilizing a resuscitation team. More particularly, the present invention relates to a resuscitation trolley mounted responder mobilization device that is capable of initating the mobilization of a resuscitation team, and a related system and method therefor.

One aspect of the invention provides a system for mobilizing a resuscitation team, the system comprising a control station and a plurality of responder mobilization devices. Each responder mobilization device comprises a communications unit and a mobilization activation means. The mobilization activation means is coupled to the communications unit. Each responder mobilization device is capable of establishing a bi-directional communications link with the control station. Each responder mobilization device is mounted on to a resuscitation trolley. The user of the responder mobilization device is typically a medical personnel.

In another aspect of the system, the communications unit of the responder mobilization device comprises a control unit, a transceiver coupled to the control unit, a speaker means coupled to control unit, a microphone means coupled to the control unit, a display means coupled to the control unit, and an input means coupled to the control unit. The control unit comprises a processor, and a memory coupled to the processor. The memory functions for storing data, selected messages and programs. During the installation of the responder mobilization device on to the resuscitation trolley, the information regarding the parking location of the resuscitation trolley is programmed and stored into the memory as a selected message.

The present invention enables a single medical personnel to push the resuscitation trolley towards the emergency location, and to activate the mobilization of the resuscitation team by actuating the mobilization activation means. The user may actuate the mobilization activation means either before or while pushing the resuscitation trolley towards the collapsed patient's location. In response to the actuation of the mobilization activation means, the communication unit contacts the control station to mobilize the resuscitation team. Each responder mobilization device contacts the control station by establishing a two-way communication link capable of communicating audio, video and data signals.

In one embodiment, the communication link may configured to provide audio communication between the user of the responder mobilization device and a human operator located at the control station. In a resuscitation emergency, the user is able to push the resuscitation trolley towards the patient's location while simultaneously verbally coordinate with the operator to mobilize the resuscitation team.

In another aspect of the system, the responder mobilization device contacts the control station by establishing a bi-directional communications link between the responder mobilization device and the control station, and by transmitting a selected message from the responder mobilization device to the control station. The selected message is processed and interpreted by the control station to provide information regarding the general location where the resuscitation trolley is parked. During the mounting of the responder mobilization device on to the resuscitation trolley, the information regarding the parking location of the the resuscitation trolley is programmed and stored into the memory as "selected messages". The control station then mobilizes the resuscitation team by communicating mobilization notification messages to the members of the resuscitation team.

In yet another aspect of the system, the responder mobilization device further comprises a video camera coupled to the communications unit.

In yet another aspect of the system, the responder mobilization device further comprises an attendance checking means coupled to the communications unit. The attendance checking means functions for reading the unique identifier tag carried by each resuscitation team member. The attendance checking means after reading each unique identifier tag, sends the tag's unique identifier information to the communications unit for transmission to the control station, whereupon the control station processes the data to determine the attendance status of each member of the resuscitation team. One advantage provided by this aspect of the present invention is that the control station can monitor the attendance status of each resuscitation team member.

In another aspect of the invention, the system further comprises a plurality of responder communication devices capable of establishing communication links with the control station. Each responder communication devices is carried by a member of the resuscitation team. During a resuscitation emergency, the control station mobilizes the resuscitation team by communicating mobilization notification messages to the plurality of responder communication devices.

In another aspect of the system, the control station comprises a computer system operable by a human operator. The computer system comprises a control unit, a input device, a user interface and a communications interface and a plurality of software programs. The communications interface is capable of establishing communication links with the plurality of responder mobilization devices and the plurality of responder communication devices. The computer system is capable of receiving, interpreting, validating, and storing all the messages received from, and for generating messages for transmission to, the plurality of responder communication devices and plurality of responder mobilization devices. It will be

appreciated that a control station can be any emergency control centre. For example, the control station may comprise the hospital operations centre, or any other third-party command centre service. In addition, the control station may provide information and/or instructions to the resuscitation team.

Another aspect of the present invention provides a responder mobilization device for mobilizing a resuscitation team. The responder mobilization device is in the form of a stand-alone unit that is securely mounted on to a resuscitation trolley. In one preferred embodiment, the responder mobilization device comprises a mobilization activation means and a communications unit. The communications unit is coupled to the mobilization activation means. During a resuscitation emergency, the user actuates the mobilization activation means to activate the mobilization of the resuscitation team. The communication unit, in response to the actuation of the mobilization activation means, contacts a control station to mobilize the resuscitation team.

In another embodiment of the responder mobilization device, the communication unit comprises a control unit, a transceiver coupled to the control unit, a speaker means coupled to control unit, a microphone means coupled to the control unit, a display means coupled to the control unit, and an input means coupled to the control unit. The control unit comprises a processor, and a memory coupled to the processor. The memory stores data, selected messages and programs. The selected message contain information regarding the parking location of the resuscitation trolley. The information regarding the parking location is programmed and stored into the memory as "selected messages".

In another embodiment of the responder mobilization device, the responder mobilization device further comprises a video camera coupled to the communication unit. In yet another embodiment, the responder mobilization device

further comprises an attendance checking means coupled to the communications unit. The attendance checking means functions for reading the unique identifier tag carried by each member of said resuscitation team.

Another aspect of the invention provides a method for mobilizing the members of a resuscitation team. The method of the invention comprises the steps of detecting a mobilization activation event within the responder mobilization device, and contacting a control station in response to the mobilization activation event. The step of detecting the mobilization activation event includes detecting the actuation of the mobilization activation means. In response to the actuation of the mobilization activation means, the responder mobilization device contacts the control station.

The step of contacting the control station comprises the step of establishing a communication link with the control station.

In yet another aspect of the method, the step of contacting the control station comprises the step of establishing a two-way communication link with the control station, and the step of transmitting a selected message to the control station. The control station processes the selected message to determine the parking location of the resuscitation trolley, and initiates a contact sequence by which the resuscitation team members are mobilized. The control station when mobilizing the resuscitation team notifies and directs the resuscitation team to the parking location, and from there, each resuscitation team member can proceed the short distance to the patient's bedside.

The object of the invention is to provide something new.

One advantage of the present invention is that the invention enables a single medical personnel to activate the mobilization of the resuscitation team, and to push

the resuscitation trolley towards the patient's location. The user may actuate the mobilization activation means either before or while pushing the resuscitation trolley towards the patient's location.

None of the prior art systems achieve these results in the manner proposed by the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing aspects and many attendant advantages of this invention will become more readily appreciated as the same become better understood by reference to the following detailed description, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a schematic diagram showing a plurality of responder mobilization device capable of establishing communication links with a control station in accordance with one aspect of a system of the present invention;

FIG. 2 is a schematic block diagram of the components of a preferred embodiment of the responder mobilization device;

FIG. 3 is a schematic block diagram of a responder mobilization device communicating with a control station in accordance with the present invention;

FIG. 4 is a schematic block diagram of the components of one embodiment of the communications unit of the responder mobilization device;

FIG. 5 is a schematic block diagram of the components of another preferred embodiment of the responder mobilization device;

FIG. 6 is a schematic block diagram of the components of yet another preferred embodiment of the responder mobilization device; and

FIG. 7 is a schematic block diagram of one embodiment of the system of the invention, said system comprising a control station, a plurality of responder mobilization devices and a plurality of responder communication devices.

CROSS REFERENCES AND RELATED SUBJECT MATTER

This application is related to the subject matter contained in the following co-pending applications:

Singapore patent application titled "Responder mobilization device", filed on December 12, 2007,

Singapore patent application titled "System, device and method for mobilizing a resuscitation team", filed on December 12, 2007; and

Singapore patent application titled "Responder mobilization device", filed on December 12, 2007,

which are all incorporated by reference herein in their entirety.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention relates to a system, device and method for a resuscitation team. according to the present invention, there is provided a system for mobilizing a resuscitation team. As illustrated in FIG. 1, the system comprises a control station 50 and a plurality of responder mobilization devices 30. Each responder mobilization device 30 is capable of establishing a bi-directional communications link with the control station 50. Each responder mobilization device 30 is securely attached to a resuscitation trolley. The user of the responder mobilization device 30 is typically a medical personnel. As illustrated in FIG. 2, each responder mobilization device 30 comprises a communications unit 32 and a mobilization activation means 34. The mobilization activation means 34 is coupled to the communications unit 32.

During a resuscitation emergency, the user actuates the mobilization activation means 34 either before or while pushing the resuscitation trolley towards the patient's location. In response to the actuation of the mobilization activation means 34, the communication unit 32 contacts the control station 50 to mobilize the resuscitation team. As illustrated in FIG. 3, each responder mobilization device 30 contacts the control station 50 by establishing a two-way communication link capable of communicating audio, video and data signals. For example, in one embodiment, the communication link may configured to provide audio communication between the user of the responder mobilization device 30 and a human operator located at the control station 50. Therefore, using this embodiment, the user is able to push the resuscitation trolley towards the patient's location while simultaneously verbally coordinate with the operator to mobilize the resuscitation team.

In another aspect of the system, the responder mobilization device 30 contacts the control station 50 by establishing a bi-directional communications link with the control station 50, and by transmitting a selected message to the control station 50. The selected message is processed and interpreted by the control station 50 to determine the parking location of the resuscitation trolley. The control station 50 then mobilizes the resuscitation team by communicating mobilization notification messages to the resuscitation team members.

Referring to FIG. 4, the communications unit 32 of the responder mobilization device 30 comprises a control unit 36, a transceiver 38 coupled to the control unit 36, a speaker means 40 coupled to control unit 36, a microphone means 42 coupled to the control unit 36, an input means 44 coupled to the control unit 36, and a display means 46 coupled to the control unit 36. The control unit 36 comprises a processor, and a memory coupled to the processor. The memory functions for storing data, selected messages and programs.

Referring to FIG. 5, in yet another aspect of the system, the responder mobilization device 30 further comprises a video camera 48 coupled to the communications unit 32.

Referring to FIG. 6, in yet another aspect of the system, the responder mobilization device 30 further comprises an attendance checking means 52 coupled to the communications unit 32. The attendance checking means functions 52 for reading the unique identifier tag carried by each member of said resuscitation team. The attendance checking means 52 after reading each unique identifier tag, sends the tag's unique identifier information to the communications unit 32 for transmission to the control station 50, whereupon the control station 50 processes the unique identifier information to determine the attendance status of the resuscitation team member. The attendance checking means 52 is preferably tag reader. Suitable

examples for the tag reader comprise one of a bar code reader and a radio-frequency identification device reader.

As illustrated in FIG. 7, in another aspect of the invention, the system further comprises a plurality of responder communication devices 70 capable of establishing bi-directional communications links with the control station 50. Each responder communication device 70 is carried by a resuscitation team member. During a resuscitation emergency, the control station 50 mobilizes the resuscitation team by communicating mobilization notification messages to the responder communication devices 70 carried by the resuscitation team. In yet another aspect of the invention, each responder communication device 70 is wearable by the resuscitation team member. In yet another aspect of the invention, the responder communication devices 70 are portable information devices comprising cellular phones, a two-way pagers and wireless personal digital assistants.

In another aspect of the system, the control station 50 comprises a computer system operable by a human operator. The computer system comprises a control unit, a input device, a user interface and a communications interface and a plurality of software programs. The communications interface is capable of establishing communication links with the plurality of responder mobilization devices 30 and the plurality of responder communication devices 70. The computer system is capable of receiving, interpreting, validating, and storing all the messages received from, and for generating messages for transmission to, the plurality of responder communication devices 70 and plurality of responder mobilization devices 30. It will be appreciated that a control station 50 can be any emergency control centre. For example, the control station 50 may comprise the hospital operations centre, or any other third-party command centre service. In addition, the control station 50 may have medical consultants able to provide information and/or instructions to the resuscitation team.

The responder mobilization device 30 is mounted on to a mobile resuscitation trolley. Therefore, in the preferred embodiment, the bi-directional communications link is preferably a wireless bi-directional communications link. In another preferred embodiment, the communications link is a bi-directional communications link comprising a hardwired segment and a wireless segment. The hardwired segment is preferably coupled to the wireless segment through one or more access points. The access points coupled the hardwired segment to the wireless segment through antennas which transmit a signal to the wireless segment of the communications link. It will be understood to those of ordinary skill in the art that any number of wireless communications systems can be used for the wireless segment of the communications link. Furthermore, any of a number of known hardwired communication systems including local area networks and wide area networks can be used for the hardwired segments. Examples of suitable wired communications media/methods include, but are not limited to, wired digital data networks, such as the Internet or a local area network ("LAN"), co-axial cable, fiber optic cable and the like. Examples of suitable wireless communications media/methods include, but are not limited to, wireless telephony ("cellular") including analog cellular and wireless application protocol ("WAP"). Other suitable wireless communication media/methods include, but are not limited to, wireless digital data networks, such as 802.11 wireless LAN ("WLAN"). Further, some communication methods, either wired or wireless, include Internet protocol ("IP") addressing. Additionally, some embodiments can employ more than one type of hardwired segment and/or more than one type of wireless communication segments. The communications link may comprise only a wireless segment or a combination of a wireless segments and hardwired segments. One skilled in the relevant art will appreciate that additional or alternative communication media/methods may be practiced and are considered within the scope of the present invention.

Once a communications link has been established with control station 50, and the control station 50 has been notified of the resuscitation emergency event, the responder mobilization device 30 may continue transmitting signals/data to and receiving signals/data from the control station 50. The bi-directional communications link and the components of the responder mobilization device 30 allows the control station 50 to transmit and receive patient, medical, location and/or device information to and from the responder mobilization device 30. For example, such information may include, but is not limited to, patient identification data, ECG data, treatment data, operator instructions, emergency instructions, etc. Further, the control station 50 can send video, audio or textural instructions for use by the resuscitation team back to the responder mobilization device 30, which can then pass the instructions on to a user via its user interface. Accordingly, the control station 50 can remotely and in real-time assist the resuscitation team, thus saving valuable time and resources.

Furthermore, as the responder mobilization device 30 reads each unique identifier tag, the responder mobilization device 30 transmits confirmation of the member's attendance to the control station 50, which in turn, may record such data for auditing. Alternatively, as the responder mobilization device 30 fails to read any unique identifier tag within an allowed response time period, the control station 50 may mobilize alternate resuscitation team members.

The control station 50 and the responder mobilization device 30 may exchange such information and instructions until the communication link is terminated.

Another aspect of the present invention provides a responder mobilization device 30 for mobilizing a resuscitation team. FIG. 2 is a schematic block diagram of a preferred embodiment of the responder mobilization device 30. The responder mobilization device 30 is in the form of a stand-alone unit that is securely attached

on to a resuscitation trolley. The responder mobilization device 30 comprises a mobilization activation means 34 and a communications unit 32. The communications unit 32 is coupled to the mobilization activation means 34. During a resuscitation emergency, the user actuates the mobilization activation means 34 to activate the mobilization of the resuscitation team. In response to the actuation of the mobilization activation means 34, the communications unit 32 contacts the control station 50 to mobilize the resuscitation team. The mobilization activation means 34 comprises one of a button switch and a pull-cord switch.

In one embodiment, the mobilization activation means 34 is a pull-cord switch. During a resuscitation event, the user, either before or while pushing the resuscitation trolley, can pull the pull-cord switch to initiate the mobilization of the resuscitation team.

Referring to FIG. 4, the communications unit 32 of the responder mobilization device 30 comprises a control unit 36, a transceiver 38 coupled to the control unit 36, a speaker means 40 coupled to control unit 36, a microphone means 42 coupled to the control unit 36, an input means 44 coupled to the control unit 36, and a display means 46 coupled to the control unit 36. The control unit 36 comprises a processor, and a memory coupled to the processor. The memory functions for storing data, selected messages and programs. A suitable example for the display means 46 is a liquid crystal display (LCD) capable of producing text and graphics displays. In one embodiment of the present invention, the control station can send visual (e.g., video, graphical, textual, etc.) or aural instructions back to the responder mobilization device to assist the resuscitation team. Accordingly, the control station can remotely and in real-time assist the members of the resuscitation team in the emergency treatment of the patient.

As illustrated in FIG.5, in another embodiment of the responder mobilization device 30, the responder mobilization device 30 further comprises a video camera 48

coupled to the communication unit 32. The responder mobilization device 30 can transmit video images captured by the video camera 52 to the control station 50. One advantage of this embodiment is that the control station 50 can record resuscitation team activities for auditing purposes and/or for quality control purposes.

As illustrated in FIG. 6, in yet another embodiment, the responder mobilization device 30 further comprises an attendance checking means coupled to the communications unit 32. The attendance checking means functions for reading the unique identifier tag carried by each resuscitation team member. The attendance checking means after reading each unique identifier tag, sends the tag's unique identifier to the communications unit 32 for transmission to the control station 50, whereupon the control station 50 processes the data to determine the attendance status of each resuscitation team member. The attendance checking means is preferably tag reader. Suitable examples for the tag reader comprise one of a bar code reader and a radio-frequency identification device reader.

As shown in FIG. 3, the responder mobilization device 30 contacts the control station 50 by establishing a two-way communication link capable of communicating audio, video and data signals. In use, the bi-directional communications link may be configured to provide audio communication between the user of the responder mobilization device 30 and a human operator located at the control station 50. One advantage of this aspect of the invention is that the user, while pushing the mobile resuscitation trolley towards the emergency location, can verbally coordinate with the human operator to mobilize the resuscitation team.

In another embodiment, the responder mobilization device 30 contacts the control station 50 by establishing a wireless bi-directional communication link with the control station 50, and by transmitting a selected message to the control station 50.

The selected message is processed and interpreted by the control station 50 to determine the parking location of the resuscitation trolley. One advantage of this embodiment is that the user does not have to verbally communicate the parking location of the resuscitation trolley to the control station operator.

Furthermore, in difficult resuscitation emergencies, the resuscitation team may need to consult with medical colleagues. Under the existing prior art system, the resuscitation team member often has to resort to leaving the patient's bedside to use a land line public telephone network or to using a cellular link. Another advantage of the present invention is that the bi-directional audio/video/data communications link and the components of the responder mobilization device 30 (e.g., the display, microphone, speaker, video camera described above), enables a medical consultant at the control station 50 to assist the resuscitation team to treat the patient in real-time. More specifically, instructions for delivering therapy, treating the patient, etc., may be sent from the control station 50 to the responder mobilization device 30 in the form of voice instructions, text messages, video images, graphical illustrations, etc. In addition, instructions generated by pre-programmed, protocol driven instruction sets may be sent or prompted for display by the responder mobilization device 30. Thus, the invention allows resuscitation team members to consult with a medical colleague located at the control station.

Now that various device embodiments have been described, the methods used by the responder mobilization device 30 to mobilize the resuscitation team will be discussed. The method of the invention commences when a mobilization activation event occurs. For purposes of the present example, it will be assumed that a patient requires emergency resuscitation, and accordingly, the mobilization activation event is the actuation of the mobilization activation means 34 of the responder mobilization device 30.

The method of the invention comprises the steps of detecting a mobilization activation event within the responder mobilization device 30, and contacting a control station 50 in response to the mobilization activation event. The control station 50 has a computer system operable by the human operator. The step of detecting the mobilization activation event includes detecting the actuation of the mobilization activation means 34 of the responder mobilization device 30. The mobilization activation event occurs as a result of a user-initiated action, such as depressing a button switch with which the responder mobilization device 30 is equipped. In response to the detection of a mobilization activation event, e.g., actuation of the mobilization activation means 34 of the responder mobilization device 30, the responder mobilization device 30 contacts the control station 50.

The step of contacting the control station 50 comprises the step of establishing a bi-directional communications link between the responder mobilization device 30 and the control station 50. As described above, the responder mobilization device 30 may be configured to establish a bi-directional communications link with the control station 50 sufficient for supporting transfer of any type of data, e.g., audio, video, etc. This allows the responder mobilization device 30 and control station 50 to communicate any patient, medical, location or device data to each other. In addition, this allows the control station 50 to communicate with the resuscitation team.

In yet another aspect of the method, the step of contacting the control station 50 comprises the step of establishing a two-way communication link between the responder mobilization device 30 and the control station 50, and the step of transmitting a selected message from the responder mobilization device 30 to the control station 50.

The method of the invention further comprises the steps of receiving and processing the selected message at the control station 50, displaying the selected message in a convenient format for use by the human operator at the control station 50, and initiating a contact sequence by which the members of a resuscitation team are mobilized.

The method of the invention further comprises the steps of reading the unique identifier tag carried by each resuscitation team member, and transmitting each tag's unique identifier to the control station 50.

The method of the invention further comprises the steps of processing each tag's unique identifier information at said control station 50, identifying resuscitation team members who have not responded within an allowed response time period, and generating and transmitting mobilization notification messages from the control station 50 to a alternate resuscitation team member's responder communication device 70.

While the preferred embodiments of the invention have been illustrated and described, it will be appreciated that various changes can be made therein without departing from the scope of the invention.

What we claim is:

1. A system for mobilizing a resuscitation team, said system comprising:

a control station; and

a plurality of responder mobilization devices capable of establishing bi-directional communications links with said control station, each responder mobilization device is securely attached on to a mobile resuscitation trolley, each responder mobilization device comprising a communications unit; and a mobilization activation means coupled to said communications unit;

wherein said mobilization activation means is actuable by a user to activate the mobilization of said resuscitation team, and

wherein said communications unit, in response to the actuation of said mobilization activation means, contacts a control station to mobilize said resuscitation team.

2. The system as claimed in claim 1, further comprising a plurality of responder communication devices capable of establishing bi-directional communications links with said control station,

wherein each responder communication device is carried by a resuscitation team member, and

wherein said control station mobilizes said resuscitation team by communicating mobilization notification messages to said plurality of responder communication devices.

3. The system as claimed in claim 2, wherein said control station comprises:

a computer system, said computer system is operable by a human operator, said computer system comprising:

a control unit, said control unit comprising a processor, and a memory coupled to said processor, said memory for storing data and programs;

a input device coupled to said control unit;

a user interface coupled to said control unit; and

a communications interface coupled to said control unit,

wherein said communications interface is capable of establishing communication links with said plurality of responder mobilization devices and said plurality of responder communication devices, and

wherein said computer system is capable of receiving, interpreting, validating, and storing all the messages received from, and for generating messages for transmission to, said plurality of responder communication devices and plurality of responder mobilization devices.

4. The system as claimed in any of the preceding claims, wherein said communications unit of said responder mobilization device comprises:

a control unit, said control unit comprising a processor, and a memory coupled to said processor, said memory for storing data, selected messages and programs;

a transceiver coupled to said control unit,

a speaker means coupled to control unit;

a microphone means coupled to said control unit;

a display means coupled to said control unit; and

an input means coupled to said control unit.

5. The system as claimed in claim 4, wherein said responder mobilization device further comprises:

a video camera coupled to said communications unit.

6. The system as claimed in claim 5, wherein said responder mobilization device contacts said control station by establishing a bi-directional communications link with said control station, said bi-directional communications link is capable of communicating audio, video and data signals.

7. The system as claimed in claim 5, wherein said responder mobilization device contacts said control station by establishing a bi-directional communications link with said control station, and by transmitting a selected message to said control station, and

wherein said selected message is processed and interpreted by said control station to provide information regarding the parking location of the resuscitation trolley.

8. The system as claimed in claim 5, wherein said mobilization activation means comprises one of a button switch and a pull-cord switch.

9. The system as claimed in claim 5, wherein said responder mobilization device further comprises:

an attendance checking means coupled to said communications unit, said attendance checking means for reading the unique identifier tag carried by each member of said resuscitation team,

wherein said attendance checking means after reading said unique identifier tag, sends said tag's unique identifier information to said communications unit for transmission to said control station.

10. The system as claimed in claim 9, wherein said attendance checking means is a tag reader, said tag reader comprising one of a bar code reader and a radio-frequency identification device reader.

11. The system as claimed in claim 2, wherein said responder communication device is wearable by a member of said resuscitation team.

12. The system as claimed in claim 11, wherein said responder communication devices are portable information devices comprising cellular phones, a two-way pagers and wireless personal digital assistants.

13. A responder mobilization device for mobilizing a resuscitation team, said device comprising:

a communications unit; and

a mobilization activation means coupled to said communications unit,

wherein said mobilization activation means is actuable by a user to initiate the mobilization of said resuscitation team, and

wherein said communications unit, in response to the actuation of said mobilization activation means, contacts a control station to mobilize said resuscitation team.

14. The device of claim 13, wherein said communications unit comprises:

a control unit, said control unit comprising a processor, and a memory coupled to said processor, said memory for storing data, selected messages and programs;

a transceiver coupled to said control unit,

a speaker means coupled to control unit;

a microphone means coupled to said control unit;

a display means coupled to said control unit; and

an input means coupled to said control unit.

15. The device of claim 14, wherein said responder mobilization device further comprises:

a video camera coupled to said communication unit.

16. The device of claim 15, wherein said device contacts said control station by establishing a bi-directional communications link with said control station, said bi-

directional communications link is capable of communicating audio, video and data signals.

17. The device of claim 15, wherein said device contacts said control station by establishing a bi-directional communications link with said control station, and by transmitting a selected message to said control station, and

wherein said selected message is processed and interpreted by said control station to provide information regarding the parking location of the resuscitation trolley.

18. The device of claim 15, wherein said mobilization activation means comprises one of a button switch and a pull-cord switch.

19. The device of claim 15, wherein said responder mobilization device further comprises:

an attendance checking means coupled to said communications unit, said attendance checking means functions for reading the unique identifier tag carried by each resuscitation team member,

wherein said attendance checking means after reading said unique identifier tag, sends the unique identifier information to said communications unit for transmission to said control station.

20. The device as claimed in claim 19, wherein said attendance checking means is a tag reader, said tag reader comprising one of a bar code reader and a radio-frequency identification device reader.

21. A method for mobilizing a resuscitation team using a mobile resuscitation trolley mounted responder mobilization device, said method comprising the steps of:

detecting an mobilization activation event within said responder mobilization device; and

contacting a control station in response to said mobilization activation event, said control station having a computer system operable by said human operator.

22. The method of claim 21, wherein the step of detecting a mobilization activation event includes detecting the actuation of the mobilization activation means of said responder mobilization device.

23. The method of claim 22, wherein said step of contacting said control station comprises the step of:

establishing a bi-directional communications link between said responder mobilization device and said control station, said bi-directional communications link is capable of communicating audio, video and data signals.

24. The method of claim 23, wherein said step of contacting said control station further comprises the step of:

transmitting a selected message from said responder mobilization device to said control station.

25. The method of claim 24, further comprising the steps of:

receiving and processing said selected message at said control station;

displaying said selected message in a convenient format for use by said human operator at said control station; and

initiating a contact sequence by which the resuscitation team members are mobilized.

26. The method of claim 25, further comprising the steps of:

reading the unique identifier tag carried by each resuscitation team member; and

transmitting unique identifier information to said control station.

27. The method of claim 26, further comprising the steps of:

processing the unique identifier information at said control station;

identifying the resuscitation team members who have responded within an allowed time period;

determining the resuscitation team members who have not responded within an allowed response time period; and

generating and transmitting mobilization notification messages from said control station to an alternate resuscitation team member's responder communication device.