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DEVELOPMENT OF DIGITAL HUMAN BODY TRACKER ALARM SYSTEM USING GPS AND TRANSCEIVER FOR CATASTROPHIC EVENTS' RESCUE OPERATION

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ABSTRACT

Catastrophic events especially natural disasters are one of the most devastating events countries around the world normally experience nowadays. One major problem is that disasters leave some countries with a massive destruction and most of the time it kills and destroys the life of the people. After such said event, the lives of the people would become unpredictable because some of them have might survive would die instantly. This is where the researchers thought of conducting a study that would be useful every time these catastrophic events will occur.

The study focused on the development of digital human body tracker alarm system (DHBT AS). The DHBT AS is a device to be monitored by the rescuers who will help the survivors during tragedy. The device is incorporated with GPS and transceiver to locate the survivors. The location in the form of latitude and longitude coordinates will be displayed on the LCD monitor of the DHBT AS. Using the coordinates at wiki map, it would be easier for the rescuers to locate the survivors with respect to the location of the DHBT AS. The device is also incorporated with a buzzer to alarm the rescuers the respective distance between the device and the survivor. The more abrupt the sound of the buzz is, the nearer is the rescuer to the survivor.

The DHBT AS has its partner which is the rescue and operation device (ROP) which is to be worn by the victim; According to the tracked number of ROPs, the rescuers will be able to track the location and know the number of persons who still have a chance to live or survive within the 100m radius of the DHBT AS location. Moreover, the ROP device has its button that is to be pushed by the victim to inform the rescuers that they badly needed assistance or help as soon as possible. Pushing the button will allow the rescuers prioritize the need of the respective ROP wearer. The overall system trials gave an average delay of 2.4 seconds waiting time before the GPS satellite locator can give exact location.

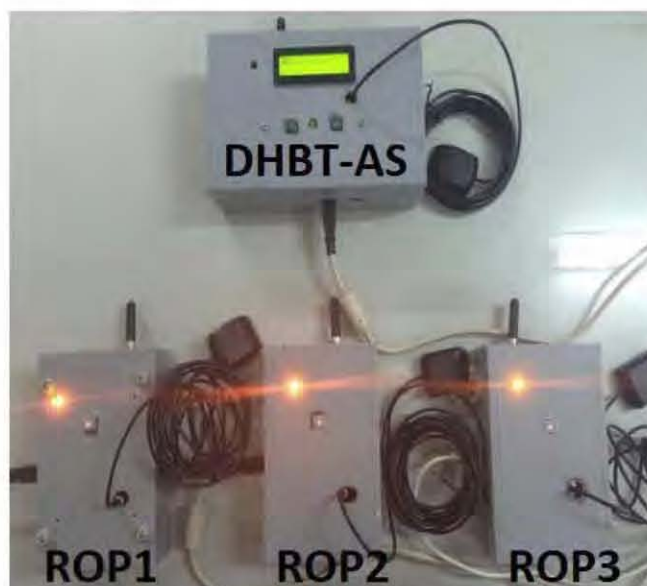


Figure 1. DHBT AS tracks the location of the three ROPs using GPS and transceiver

