

ABSTRACT

In the past years, there are several earthquake incidents happened and it can occur at any time of the year. Many people die, being injured and stocked under broken and cracked concretes when earthquake occurs especially if it happens in an overly populated areas and areas where there is weak-structured building. Moreover, earthquake can cause extensive property damage like collapsing buildings, broken towers and falling huge objects. Hence, communication can be affected when catastrophic event like earthquake happens. In order to seek help and contact other people, communication is a must have. But, what if the communication system breaks down? As well as the electricity goes off because of the catastrophic events such as earthquake?

Therefore the researchers come up with the study; WiFi-based Emergency Network Infrastructure System. This system can provide WiFi signal in more than 200 meters away with -86dBm signal strength. The said system also has an android application named iHelp that will serve as the group chat for the people who are in need of help. The android application has two features; it can send an instant messages and custom messages. Instant messages are for the users that can not be able to type their message for a long period of time. The whole system is powered with as solar power so that even when there is no electricity, the system can still be used.

The system can be used in rescuing the victim caused by an earthquake. By sending messages, they can be traced and find by the rescuers easily and the number of injuries will also be lessened. Because of the system, they can be rescued

easily and immediately. Unlike before, it takes days or several hours to rescue people. Before the rescuers have found the victim, the victim already died because of hunger and suffocation beneath the many layers of broken and cracked concretes or woods.

