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Amateur Radio to Support Emergency Communications to Hospitals in Natural Calamities

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The recent Wynad Landslide was a major natural calamity in our region which resulted in almost complete washout of a small town on a hilltop. The communication network was also down along with it. Emergency relief workers found it difficult to communicate with the District Headquarters in the early hours of the disaster from Ground Zero. Dr. Abraham Jacob, Pulmonologist working Kerala Health Service in Wynad, who is also a well-known amateur radio operator, was called upon by the District Administrator to provide emergency communications between the Ground Zero and the District Headquarters. He immediately arranged an ad hoc amateur radio station at the District Headquarters and a team of radio amateurs from Wynad proceeded to Ground Zero to provide wireless connectivity as the mobile network was down.



Figure 1: Dr. Abraham Jacob operating ad hoc amateur radio station at Wynad District Headquarters during the Wynad Landslide Disaster, providing vital communication link.

They could utilize the existing amateur radio Very High Frequency Repeater located on another hill known as Wynad Phantom Rock Repeater, to relay messages from the Ground Zero to the District Headquarters, in the early hours following the disaster. As the repeater was at line-of-sight from Ground Zero, connectivity could be obtained even using hand-held amateur radios. Official communications infrastructure was established soon after and then amateur radio remained on standby in case of further events which could disrupt the mobile network once again. Fortunately, that did not occur in a very great extent.

Now what is amateur radio? It is a hobby permitted by the Telecom Ministry for those who pass an examination and obtain an Amateur Radio Station Operator's License. From time to time, during natural calamities worldwide, when conventional communication services failed, amateur radio operators have provided crucial alternatives for emergency communications. Even during the 2018 Kerala Floods, several amateur radio operators have rendered emergency services. Amateur radio is often considered as a medium of communication which works when everything else fails [1].

Now what role does hospitals have in common with amateur radio? Hospitals provide emergency services in case of natural calamities. In some regions of the world, hospitals use radio communication facilities for ambulance dispatch and have dedicated radio rooms near the emergency room. Ambulances in those regions are equipped with radios for rapid communication, without going through the highly congested mobile networks during a natural calamity when everyone is trying to call and find out whereabouts of friends and family in the calamity affected region. Hospital Radio Network is a group of radio amateurs in Oklahoma, United States who liaison with hospitals in such scenario by providing alternate communications in case of failure of conventional communications.

There are similar setups in Spokane, Washington as well, where many hospitals have radio rooms near the emergency rooms. As the antenna being used by hospital ambulance dispatchers is in the Very High Frequency band used by radio amateurs, it is easy for radio amateurs to plug in their radios in the radio room and help in supporting emergency communications. In addition to a voice network, they could also use the Winlink email system prevalent in the US among radio amateurs. In the United States, Winlink is a network of amateur radio and authorized government stations that provide worldwide radio email using radio pathways where the internet is not present. The system has been activated even as recently as during Hurricane Lee affecting parts of Northeastern United States and Canada.

Hospitals in our region could consider linking with amateur radio operators in case of massive natural disasters, though all of us hope that it should never occur. Amateur radio could be part of the routine hospital emergency preparedness drills as well. As you are very aware, amateur radio can be used for public purpose only in a dire emergency, that too with permission from local authorities as in the case of Wynad Landslide disaster and NOT for routine third party traffic.

Reference

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