ABSTRACT

Indonesia cannot predict the natural disasters that happens almost each year which are known to give rise to a very large impact, especially in the telecommunications infrastructure damage. This years, Walkie talkie, satellite phone and ad-hoc networks are communication devices that often used in a natural disaster condition, they are very helpful but also has limitations. Mobile Ad-hoc Network (MANET) was applied on Android device and use the protocol Better Approach to Mobile Ad-hoc Networking (B.A.T.M.A.N.) can help in a condition which isolated from the fixed network as well as post-disaster situation. The system was connected in a mesh which means that this system has the risk of breaking the links between nodes in the network. This Final Project will discuss the performance of a Mobile Ad-hoc Network (MANET) which can be used in the aftermath of natural disasters by analyzing the strength of the transmission power, the quality of speech, the quality of the text message, throughput, jitter and packet loss in the three scenarios, those are tethering, ad-hoc singlehop and multihop. From the performance, it can be inferred that the maximum range to make communication between two nodes on adhoc singlehop scenario are 132 meter for the telephone call and 136 meter for sending text message, whilst on multihop scenario maximum range for both data transmission is 220 meter between transmitter and receiver node.

Keywords: Mobile Ad-hoc Network, MANET, B.A.T.M.A.N, Mesh Networks
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