

ABSTRACT

Mobile Ad hoc Networks (Manet) is a wireless network consisting of nodes that are mobile and come together spontaneously and communicate without the need for fixed infrastructure with a dynamic topology. Because of the nature of the mobile node, many challenges faced by mobile ad hoc networks, as a result the number of nodes, due to node movement, and the size of the package sent. To facilitate communication within the network, a routing protocol used to discover routes between nodes. In building a Manet routing protocols, network efficiency sought by the minimum delay and maximum throughput, so the performance Manet maintained.

Manet has many applications in saving the victims of natural disasters, war and emergency operations. Multimedia applications such as video streaming is required in these circumstances. But to apply, video streaming requires a wide bandwidth and minimum delay. While Manet has limited bandwidth, transmission range and battery power of each user. Therefore, the required routing protocol that can overcome these limitations.

So, in this final task be performed simulations to analyze the performance Manet routing protocol AODV (Ad-hoc On-demand Distance Vector) and OLSR (Optimized Link State Routing) as the video traffic is passed. From both the routing protocol, analyzed based performansinya parameters such as delay and to end, delay jitter, throughput, packet loss and PSNR, with the addition of impact scenarios nodes and the influence of changes in displacement velocity nodes for the two videos that will be simulated each one. As for the application traffic generator using traffic VBR (Variable Bit Rate) in the form of video applications with H.264/AVC coding. In data analyze perform by the parameter have been used delay jitter, packet loss and throughput. Hence, in delay analyze which has been used delay end to end analyze performance are obtained for AODV about 49 ms and 70 ms for OLSR, from the minimum standard of delay end to end ITU-T G.114 150 ms. Then throughput are obtained 81 kbps for AODV and 47 kbps for OLSR from the minimum standard. And then in jitter measurement in AODV is obtained 30 ms and 40 ms for OLSR from minimum standard of jitter ITU-T 30 ms, jitter for VoIP service. Packet loss

measurement in AODV 1.09%, meanwhile OLSR 44.86%. From the field measurement is could PSNR AODV about 23 dB until 41 dB from minimum standard < 20 dB. Meanwhile, in OLSR get PSNR 13-28 dB, from the minimum standard < 20 dB. Meanwhile MOS be got for objective method are obtained scale 4(Good) for AODV while scale 2 (Poor) for OLSR. In this simulation, AODV is better than OLSR.

Key words : Routing Protocol, Wirelles, Ad-hoc Network, AODV, OLSR.