Abstract

Wireless adhoc network is a decentralized type of wireless network, it does not rely on a preexisting infrastructure. These types of networks are used in situations where temporary network connectivity is needed. This research paper explores the effect of using directional antennas in ad hoc network. Antenna patterns of omni directional and directional antenna have been developed using the OPNET Modeler 14. 0. Simulation scenarios have been created for both antennas with three routing protocols AODV, GRP, OLSR. From the results of the simulation, we observe that data dropped rate (Retry threshold), Load and Delay graphs in case of directional antenna network shows better performance than omni directional antenna network. Among three routing protocols which we have used in our network model, OLSR routing protocol shows better performance and high throughput for directional antennas as compare to AODV and GRP routing protocols.

References

Dham, V. 2003. Link Establishment in Ad Hoc Networks using Smart Antennas. Virginia Polytechnic Institute and State University.


**Index Terms**

Computer Science Wireless
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Adhoc Network  Routing protocols  Antennas  OPNet.