ABSTRAK

Mobile Ad Hoc Network (MANET) merupakan jaringan *wireless* yang berasal dari kumpulan mobile node yang topologinya dapat berubah dengan cepat dan kapan saja. Disini setiap node dapat bertindak sebagai pengirim, penerus jalur dan penerima pesan. Dalam tugas akhir kali ini akan diuji perbandingan antara protokol proaktif DSDV dan protokol reaktif DSR menggunakan simulator OMNeT++.

Routing Protokol DSDV lebih unggul dari segi delay dan throughput karena protokol ini bersifat proaktif yang mengupdate tabel secara periodik, maka setiap node memiliki tabel routing dari semua node sehingga protokol ini tidak membutuhkan waktu yang lama saat mecari jalur pengiriman, dan secara otomatis throughput pun akan lebih baik daripada protokol DSR. Kekurangan Routing protokol ini adalah memiliki overhead yang lebih besar karena protokol ini memaintenance semua jalur pengiriman sehingga overhead pun akan besar.

Routing Protokol DSR memiliki kelebihan dari segi overhead dikarenakan DSR merupakan routing protokol reaktif yang hanya memaintenance satu jalur dalam pengiriman data. Kekurangan protokol ini tidak cocok digunakan dalam banyak node karena delay yang semakin besar dan throughput yang semakin menurun dikarenakan apabila node ditambah akan menambah hop jalur pengiriman pesan sehingga waktu pun akan bertambah dan otomatis akan mengurangi throughput.

ABSTRACT

Mobile Ad Hoc Network (MANET) is a wireless network that comes from a group of mobile node which topology might change quickly at any time. In this network, each node might serve as the transmitter, the path extension and the message receiver. Therefore, the researcher through the study would like to test the comparison between the proactive protocol of DSDV and the reactive protocol of DSR by means of OMNeT++ simulator.

The routing of DSDV Protocol had been more prominent in terms of delay and throughput aspect because the protocol was proactive and updated the table periodically; as a result, each node had the routing table from all nodes so that the protocol would not take a long time to find the transmission path and automatically the throughput would be better than the DSR Protocol. The lack of the protocol routing was that the protocol had enormous overhead because the protocol performed the maintenance toward all transmission paths and, therefore, the overhead would be enormous.

The routing of DSR protocol had been superior in comparison to the that of DSR Routing in terms of overhead aspect because DSR had been reactive protocol that only performed the maintenance for a single path in the data transmission. The lack of this protocol was that the protocol had not been compatible for the implementation in multiple nodes due to the increasing delay and the decreasing throughput; this situation occurred because the increasing nodes would expand the hop of message transmission path. As a result, the time would be increasing and automatically the throughput would be decreased.