PERFORMANCE COMPARISON OF TWO MOBILITY MODELS USING AODV

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ABSTRACT

AODV is the most important routing protocol for Ad Hoc network. In this, we make a comparison of two mobility models viz. Random Direction and Probabilistic Random Walk based over AODV protocol in context of the services offered by them to the transport layer. Detailed simulations are then performed to compare the performance in terms of packet delivery ratio, routing overhead, average end-2-end delay and normalized routing load of both models with respect to varying number of nodes. This paper presents simulation results in order to choose the best mobility model to give the highest performance when implemented on the AODV and TCP as traffic generator. We observe the high variability of the result, exact behavior of the system and the impossibility to define a unique proposal, which is general to every environment. On the bases of these observations, we found that Random Direction model having good packet delivery ratio on some aspects and less normalized routing load when the number of nodes are increasing. On the other hand end-2-end delay is less in the Probabilistic Random Walk.

KEYWORDS: MANET, TCP, AODV, Random Direction, Probabilistic Random Walk.