

A Review of Routing Protocols for Mobile Ad-Hoc NETWORKS (MANET)

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Abstract : The increase in availability and popularity of mobile wireless devices has led researchers to develop a wide variety of Mobile Ad-hoc Networking (MANET) protocols to exploit the unique communication opportunities presented by these devices. Devices are able to communicate directly using the wireless spectrum in a peer-to-peer fashion, and route messages through intermediate nodes, however, the nature of wireless shared communication and mobile devices result in many routing and security challenges which must be addressed before deploying a MANET. In this paper, we investigate the range of MANET routing protocols available and discuss the functionalities of several ranging from early protocols such as DSDV to more advanced such as MAODV, our protocol study focuses upon works by Perkins in developing and improving MANET routing. A range of literature relating to the field of MANET routing was identified and reviewed, we also reviewed literature on the topic of securing AODV based MANETs as this may be the most popular MANET protocol. The literature review identified a number of trends within research papers such as exclusive use of the random waypoint mobility model, excluding key metrics from simulation results and not comparing protocol performance against available alternatives.

Keywords : protocol, MANET, ad-Hoc, communication

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