IMPROVED DSR PROTOCOL USING REPUTATION BASED SCHEME

[1] KULBIR NAIN, [2] POONAM KUMARI & [3]ROSHAN LAL HIRANWAL

[1]CRM Jat College Hisar

[2]GJU S&C Hisa

[3]Associate Professor Govt. College Karnal

ABSTRACT

MOBILE ad hoc networks (MANETs) are collections of mobile nodes, dynamically forming a temporary network without pre-existing network infrastructure or centralized administration[1]. The dynamic nature of mobile ad-hoc networks make traditional routing protocols unsuitable for MANETs. Various routing protocols designed for ad-hoc networks fulfilling a unique set of requirements are viz ADODV, DSDV, TORA, TBRPF and DSR. The Dynamic Source Routing is a simple and robust protocol designed for use in multi-hop wireless ad-hoc network of mobile nodes[8]. Under DSR protocol, adhoc network nodes have to co-operate in packet forwarding and route discovery procedures for the network to operate. Some nodes though, in order to save resources, may exhibit a selfish behavior and not co-operate, thus damaging the efficiency of entire network[10]. This paper proposes a set of minor extensions to the DSR protocol proposed by the IETF MANET working group, by implementing the reputation based scheme on it, that enable to increase the performance of the network. The proposed mechanism allows a node to autonomously evaluate the "reputation" of its neighbors based on the completion of the requested services. Simulations will show the increase in throughput and packet delivery ratio, decrease in data drop and routing overhead on the basis of some network metrics used.

KEYWORDS: MANET, TORA, DSR, ADODV, DSDV, TBRPF.