A Review of DVR-based Routing Protocols for Mobile Ad Hoc Networks

Authors:
Mrinal Kanti Debbarma
Santanu Kumar Sen
Sudipta Roy

Abstract

Designing an efficient and robust routing algorithm for Mobile Ad Hoc Network (MANET) is a challenging job compared to that of a wired and immobile network as because of some intrinsic characteristics of the MANET like highly dynamic nature of network topology due to mobility of nodes, asymmetric links, limited bandwidth, limited battery power, and alike. The statistics shows that the most of the routing algorithms, developed so far, for MANET, are conceptually based on the traditional distance vector routing algorithm which, in turn, is based on Distributed Asynchronous Bellman Ford’s shortest path algorithm, however, with some minor to significant modifications as needed for the ad hoc and mobile nature of the MANET. A major thrust of the protocol designers towards the development and deployment of DVR-based routing protocols, irrespectively in wired, wireless or even in ad hoc networks, is primarily because of the conceptual and implementation simplicity and elegance coupled with the minimum information requirement by each node of the DVR. A good amount of research has been done in the past towards the improvement of routing algorithms in MANET, but the area has not become stable till date. This paper is presented towards the review of DVR-based routing protocols for finding path between source and destination in a mobile ad hoc network with
significant comparisons on the characteristics, performance and complexity issues.

References

- C. C. Chiang, T. C. Tsai, W. Liu, and M. Gerla, "Routing in clustered multihop, mobile wireless networks with fading channel," The Next Millennium, Proceedings of IEEE
Index Terms

Computer Science  Wireless

Keywords

DVR based routing protocols  Table-driven protocols  On-demand routing protocols

Special neighbours