Abstract

MaNet has emerged as one of the most focused and thrust research areas in the field of wireless networks and mobile computing. In ad hoc mobile networks, routes are mainly multi hop because of the limited radio propagation range and topology changes frequently and unpredictably since each network host moves randomly. Therefore, routing is an integral part of ad hoc communications. Many routing protocols are proposed for MaNet. The protocols are mainly classified in to three categories: Proactive, Reactive and Hybrid. Proactive routing protocols attempt to maintain consistent, up-to-date routing information from each node to every other node in the network. Reactive routing protocols creates routes only when desired by the source node. Once a route has been established, it is maintained by a route maintenance procedure.
In this paper, we propose Hybrid Routing Protocol which combines the merits of proactive and reactive approach and overcome their demerits. We propose variation of this proposed Hybrid Routing Protocol (HRP), HRP-Broadcast Reply. The propose protocol creates route only when desired by the source node as in case of reactive routing protocols. The propose protocols maintain routing table at each node as in case of proactive routing protocols. Hence called hybrid routing protocol. The propose protocol takes advantage of broadcast nature of MaNet to discover route and store maximum information in the routing tables at each node. HRP-BR is compared with existing routing protocol AODV. The results shows significant reduction in routing overhead, end-to-end delay and increases packet delivery ratio over AODV.

Reference


Index Terms

Computer Science Networks

Key words

Mobile ad hoc network

Hybrid Routing Protocol

AODV

Broadcast Reply (BR)

Content Customization