Abstract

MANET (Mobile Ad hoc Network) is a wireless self-organized distributed network. This paper gives a general survey of research on local repair of link, if it is broken during communication for MANET and proposes a new local repair scheme in order to make up the deficiency of the existing local repair schemes. The improved local repair scheme concerns about the over head
requirement and end to end delay in transmission. Nodes are required to keep the next two-hop node address for each route entry in routing table. During local repair, the repairing node use Ant algorithm for finding new route for next to next node in the link considering that other part of the link is already in existence. Reduced size of F-ANT and B-ANT will give significant reduction in overhead. In this case repairing node not only tries to discover the route to the destination node of data packet, but also attempts to establish the route to its downstream node (i.e. the next hop node). The proposed algorithm will be highly adaptive, scalable and efficient and mainly reduces end-to-end delay in high mobility cases.

References

- Er J.-N. LIU and Imrich Chlamtac “Mobile ad hoc networking with a view of 4G wireless: Imperatives and Challenges”
- Fei Jiang, JianJun Hao, “Simulation of An Improved AODV Algorithm for Ad Hoc Network” vol1 IEEE conference ICACT 2010,
- Ruud Schoonderwoerd, Owen Holland, Janet Bruten, and L.Rothkrantz, "Ant-Based
On Demand Local Link Repair Algorithm for AODV Protocol


Index Terms

Computer Science

Wireless

Keywords

Routing protocol    AODV    link break
Ant colony
local repair
Ad hoc mobile networking