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 uses the Ant algorithm for finding a new route for the next-hop node in the link, considering that other parts of the link are already in existence. Reduced size of F-ANT and B-ANT will give significant reduction in overhead. In this case, the repairing node not only tries to discover the route to the destination node of the 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.

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Index Terms

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Keywords

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