Abstract

MANETs are multi-hop ad-hoc wireless networks where nodes can move arbitrary in the topology with variation of speed and trajectory. As MANET network has no infrastructure or dependency, it can be implemented easily in any environment. But the main problem in such networks is to calculate the behavior of different routing protocols in different environments due to limited computing power, low bandwidth, high mobility and absence of central coordinating entity. The need for quality of service in mobile Adhoc infrastructure is increasing day by day due to more attacks, faults and congestion. Two major parts which provide such kind of service in mobile Adhoc devices are fault tolerance and energy saving. This proposed work is suitable for fault tolerance of the node in MANET by applying a novel cluster approach and time constraints. This work also aimed at implementing battery checking scheme to avoid faulty conditions in network and to provide an auxiliary path finding scheme in case of node failure. The simulated results illustrate that the proposed algorithm performs well as compared to existing techniques for various parameters.
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Index Terms

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Keywords

MANET AODV protocol Clustering Approach Fault Tolerance TAODV