Analysis of Flat and Hierarchical Routing Structure Supported Protocol in Mobile Ad-hoc Networks

Publisher: IEEE

M.S Nidhya ; R. Arumugam ; A. Kannagi ; T. Revathi ; M.P. Karthikeyan **All Authors**

Abstract: Mobile ad hoc networks are made up of nodes that are wirelessly linked to one another and may interact with one another without access to a central hub. Collected informa... **View more**

Metadata

Abstract:
Mobile ad hoc networks are made up of nodes that are wirelessly linked to one another and may interact with one another without access to a central hub. Collected information are aggregated and send to base station. Nodes in the network can follow two types of routing structure flat and hierarchical routing structure. Each routing structure has proactive and reactive protocols. In this paper we analyzed flat and hierarchical routing structure protocols based on the parameter such as scalability, bandwidth consumption, memory overhead, and control overhead. Based on the parameter, we compared proactive and reactive protocols, performance and characteristics are explained in graph model and suggested which routing structure protocol is efficient in large network

Published in: 2023 International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics (IITCEE)

Date of Conference: 27-28 January 2023

Date Added to IEEE *Xplore*: 10 April 2023

ISBN Information:

INSPEC Accession Number: 22931737

DOI: 10.1109/IITCEE57236.2023.10091055

Publisher: IEEE

Conference Location: Bengaluru, India

Contents

A wireless adhoc network is decentralized network; it does not have any topology or any central point, so it is complex for packet transmission than centralized networks. Each node in this network has finite resources, including computing power, memory, and battery. It also enables dynamic topology. But it is more applicable in human in accessible places like disaster etc. Nodes in a network can communicate with each other, if the receiving node is not in the range then the sender node will use intermediate node to forward the message, it is also called as multi hop network. Routing is difficult process in this network that is the reason more researches are in the routing protocols of mobile ad-hoc networks.