

# Maximizing P2P File Access Availability in MANET for Efficient File Sharing Using Replication

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**Abstract:** Applications of file sharing in MANET have attracted more and more attention in last few years. The efficiency of file querying affected by the distinctive properties of such networks including limited communication range, node mobility and resource. An efficient method to alleviate this problem is to create file replicas using the network. While considering the efforts on file replication, the research has not focused on the global optimal replica creation with minimum average querying delay. Preferably, current file replication protocols in mobile ad hoc networks have two shortcomings. In this paper, we introduce a new concept of file replication, which considers node storage and meeting frequency respectively. We theoretically study the flow of resource allocation on the average querying delay and we derive a resource allocation rule for minimizing the average querying delay. After that we propose a distributed file replication protocol for realization of the proposed rule. Extensive trace-driven experiments with real traces and synthesized traces to show that our protocol can achieve shorter average querying delay at a lower cost than existing replication protocols.

**Keyword:** MANET, Replicas, Replication protocol, Node mobility.

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## I. INTRODUCTION

### 1. Existing System:

In current networks like blind search through flooding mechanism is usually explored for resource discovery. To find any file, a peer sends out a query to its neighboring node on the overlay, since the query has traveled a certain radius. Despite its flooding techniques, simplicity and robustness. In large networks, the probability of a successful search might decrease dramatically without significantly enlarging the flooding radius

### 2. Proposed System:

In order to improve search performance, guided search. The key problem is what information is actually eligible to guide the search. Protocols that only consider storage space as resource. and we also consider file holder's ability to meeting the nodes as available resource as it also affects the average querying delay. An innovative local trust rating method based on time attenuation function and the basic assumption is that if a peer has a particular file required by another peer p,

Theoretical performance results conclude that in a constant probability to be requested by p<sub>1</sub> in the future. According to the previous queries, shortcuts from peer p to several peers are established in order to expedite subsequent search processes. We also able to maintain the massive amount of unnecessary storage and computation

### 3. MANET:

- MANET stands for mobile ad hoc network.
- Each device in A MANET is free to move independently in any direction therefore can change its links to other devices frequently.
- Manets are a kind of wireless ad hoc network that usually has a routable networking environment on top of a link layer ad hoc network.
- Manets consist of a peer-to-peer, self-forming, self-healing network

#### 3.1 Priorities in MANET:

There are two kinds of priorities in MANET:

1. Data priority: If access to data is higher than priority of data is higher.
2. Node priority: Priority of node is decide by its battery life.

### 4. System Architecture:

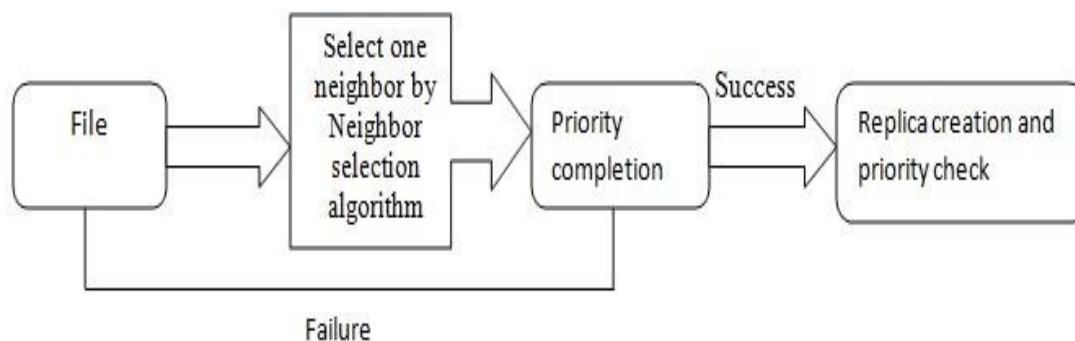


Fig. 1 System Architecture

### 5. Software & Hardware Requirement:

#### 5.1 Software Requirements:

Operating System	:	WINDOWS XP & ABOVE
Front End	:	JSP SERVLET ,HTML ,CSS
Database	:	My SQL
Simulator	:	NS3
Language	:	java
Scripts	:	JavaScript

#### 5.2 Hardware Requirements:

System	:	Pentium Iv 2.4 GHz
Hard Disk	:	40 GB
Monitor	:	15 VGA Color
RAM	:	512 Mb

## II. CONCLUSION

In this paper, we investigated the problem of how to allocate limited resources for file replication considering the purpose of global optimal file searching efficiency in MANETs. Our method selects the best peers based on the query content and the user's profile. It considers the energy efficiency, peer load factor and peer mobility into the query forwarding process, to guarantee that the pertinent peers can be reached. As the future work, we plan to implement the proposed method and evaluate its retrieval effectiveness and routing efficiency.

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