

# TCP - Message Ferry Delay Tolerant Networks

*Abstract*—The abstract goes here.

## I. INTRODUCTION

## II. RELATED WORK

- DTN background
- mechanical backhaul, message ferry
- TCP issues, previous approaches, compare with Wireless TCPs

## III. BACKGROUND AND PROBLEM DESCRIPTION

Limitations and advantages of message ferry DTNs.

### A. Application Scenarios

- Classification based on RTL, throughput and reliability
- What applications DTN can support and what not?

### B. Transport Protocol Requirements

Detailed discussion of following TCPs and why would they fail in DTNs

- Freeze TCP,
- Snoop Protocol,
- MTCP,
- M-TCP,
- I-TCP,
- TCP Spoofing

### C. Problem and approach

What is the problem using standard TCP with DTN? How TCP should be modified for DTNs?

## IV. MESSAGE FERRY TCP

### A. System Design

- What changes are made to standard TCP?
- Window size estimation for node and ferry

### B. TCP State Transitions

State transition diagram for ferry and node

### C. TCP Operations

Session initiation, termination and data transfer between client, ferry and server

## V. NUMERICAL RESULTS

- comparison with standard TCP and message ferry TCP
- discuss the cases of data segment loss in message ferry TCP

## VI. CONCLUSION AND FUTURE WORK

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## REFERENCES