

## **ABSTRACT**

The performance of delay tolerant networks (DTNs) can be influenced by movement model in different application environments. The existing routing algorithms of DTNs do not meet the current city environments due to the large differences in node densities, social characteristics, and limited energy. In the urban environment, there are some aspects that non-city environment (like inland village, etc) doesn't have. These aspects are like a place in the city where a lot of people are gathered together and high density of public transport that can offset the density of people in the city. The key indicators of DTNs such as success delivery ratio, average delivery latency, network lifetime, and network overhead ratio can influence the performances of civil DTNs applications.

Aiming to improve the energy efficiency of DTNs in city environments, this final project presents a new variant of Game Theory Based on Decision Making (GTDM) that can deliver packet to static node. Hence, its destination node(Receiver Node) needs to go to the static node to take their packet under Working Day Movement (WDM), because relay node will be passing by the static node with continuously move to its track to deliver packet. GTDM can be categorized to knowledge based routing protocol with single copy forwarding mechanism, thus there is just exist 1 copy of each packet in the network. In this final project author will analyze is this new variant of GTDM can be more usefull than original GTDM for application in city environment with using transportaion movement.

**Keyword:** Delay Tolerant Network, Dense Urban, DTN Routing Protokol, Game Theory, GTDM, Knowledge Based, Single Copy Forwarding, Sink Station.