Abstract

This paper introduces a proposed fuzzy-based routing protocol for DTN networks, called FBRP designed to maximize successful data delivery rate and minimize transmission delay. It uses only two parameters namely, probability of delivery and energy value as inputs to fuzzy system in order to compute the delivery predictability value which determine the routing path for packets. Simulation results are used to draw conclusions regarding to the proposed routing algorithm and compared it with well known routing protocols: Epidemic and PRoPHET routing protocols. Conducted experiments showed that our proposed algorithm exhibits superior performance with respect to the well known routing protocols in terms delivery rate and overhead ratio.

References

- Homepage of Opportunistic Network Environment (ONE), http://www.netlab.tkk.fi/tutkimus/dtn/theone/ version 1.3.0, January 2009
- Networking for communications challenged communities (N4C) project website, http://www.n4c.eu.

Index Terms

Computer Science
Fuzzy Systems
Keywords