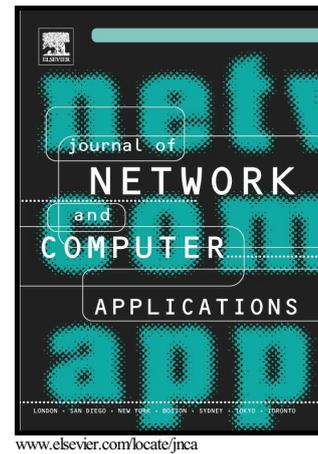


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# A Software Defined Network Routing in Wireless Multihop Network

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## Abstract

SDN has been touted as one of the most promising solutions for future Internet with the innovative design ideas that the control plane is logically centralized and decoupled from the data plane. Current research on SDN mainly focuses on wired network and data center, while software-defined wireless multi-hop network is put forth in a few researches, but only at stage of putting forth models and concepts. In this paper, we propose a novel routing protocol applied SDN in wireless multi-hop network. The implementation of the protocol is given in detail, and OPNET is used to build the model and carry on the simulation experiment. A large number of simulation experiments are performed to compare the key parameters of different networks. Simulation results show that our proposed routing protocol provide shortest path and disjoint multipath routing for nodes, and its network lifetime is longer than existing algorithms (OLSR, AODV) when traffic load reaches a certain value.

**Keywords:** Software Defined Network(SDN), Wireless Multihop Network, Routing,

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