

# 基于连通时序效用的延迟容忍网络路由算法

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**摘要:** 针对延迟容忍网络现有社区内路由算法在选择中继节点未考虑节点间有序连接而高估通信路径可达性问题, 提出一种基于连通时序效用的路由算法——RBCSU (Routing Based on Connected Sequence of Utility), 该算法采用社区内节点间连通时序估计节点间通信路径状态, 进而考虑节点可达率、时延度以及相似度计算节点效用值, 并通过比较其效用值来选择最优的中继节点转发消息. 仿真结果表明, 相比于 Epidemic、PROPHET 和 SimBet 算法, 该算法能够有效提高消息投递率、降低消息传输时延和网络开销.

**关键词:** 延迟容忍网络; 连通时序; 可达率; 时延度; 相似度

## A Routing Algorithm for DTN Based on

## Connected Sequence of Utility

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**Abstract:** To solve overestimate the communication path accessibility in select relay node ignore order of connection, an Routing Based on Connected Sequence of Utility (RBCSU) is proposed. This algorithm estimate the connection status by using the community between nodes connected sequence. Furthermore, using node of reachable rate, time-delay degree and similarity to calculate the utility value, and then the preferable relay peers could be chosen by compare to the utility value. The result of simulation, which is compared to other well-known algorithms, indicated that this algorithm is improves the message delivery rate and reduce the overhead ratio.

**Key words:** delay tolerant network; connected sequence; reachable rate; time-delay degree; similarity degree

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