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Abstract

The connectivity richness in mobile ad hoc networks, there are paths between a source and a destination. There are many applications those require uninterrupted connections between the nodes while transferring the packets, the long-living paths can be very useful to provide Quality of Service. In this paper, we propose path-selection algorithms and evaluate their performance in a mobile ad hoc network based on two criteria: 1) the selected path is the most likely to meet a target energy consumptions, and 2) the selected path has the longest residual path lifetime among all the available paths. We also develop performance metrics (PMs) to compare the proposed algorithms among themselves and with a baseline random-selection algorithm. It is

found that path selection algorithms demonstrate comparable performance than existing algorithm. As the number of node increases, the proposed algorithms yield even greater performance gain over the baseline algorithm.

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