A Novel Fuzzy based Relay Selection for Cooperative Communication

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Abstract

Wireless sensor networks are highly sensitive to battery lifetime. To prolong the lifetime, the nodes relaying packets should be carefully selected. Relay selection is a method which significantly improves the performance of cooperative diversity. We propose fuzzy based relay selection algorithm by jointly considering the parameters distance, bandwidth and SNR. The selected relay nodes provide a high reliable data transmission in the environment where nodes are deployed in a distributed fashion. The main contribution of this article is to provide a relay selection using proposed fuzzy logic decision making which can achieve an improved end to end throughput as compared to conventional relay selecting schemes.

Keywords: Cooperative Communication, Relay Selection, Fuzzy approach.

References


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