Abstract

A cognitive radio ad hoc network is the thrust research area in the field of wireless communications. This paper presents the network clustering scheme, the model and algorithm for the clustered cooperative channel sensing based on reinforcement learning. It is imperative to minimize energy cost for channel sensing so as to prolong lifetime of the network. Hence an algorithm for the cooperative channel sensing based on reinforcement learning is proposed. Performance metrics such as success rate, average broadcast delay are taken into account for comparison. Simulation results portrays that the proposed EESACSRP outperforms in terms of the chosen performance metrics.

References

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**Index Terms**

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**Keywords**

Cognitive Radio Ad Hoc Network, Cluster Head, Quality of-Services, cognitive radio, multi-hop architectures