Abstract

Spectrum sensing plays a very provocative role in cognitive radio network. In order to utilize spectrum more efficiently and to exploit the primary user, spectrum sensing is accomplished. We proposed a new hybrid algorithm for detection of primary user in cognitive radio network. The theoretical analysis and simulation is also presented in this paper. This research work includes an analogy with Energy Based Detection and Cyclostationary Feature Detection. Our proposed algorithm is a flexible algorithm, the Cyclostationary feature algorithm act as feature extractor when primary user is present and function as detector when primary user is absent. The results show that it is optimum spectrum sensing algorithm under different SNR values. It has removed the shortcomings faced by both sensing algorithms i.e. Energy Based Detection and Cyclostationary Feature Detection.
Hybrid Spectrum Sensing Algorithm for Cognitive Radio Network

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Index Terms

Computer Science Wireless Communications

Keywords

Power spectral density  cyclic correlation function  mean square spectrum  hybrid spectrum sensing