

CYCLOSTATIONARY FEATURE DETECTION BASED SPECTRUM SENSING IN COGNITIVE RADIO NETWORKS

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ABSTRACT

Cognitive Radio is a smart wireless communication system which is aware of its environment. It makes conforming variations in operating parameters in real time and realizes dynamic spectrum access according to such a protocol that it doesn't interfere with the licensed users in the band. Cognitive radio technologies could solve the problem of radio electromagnetic spectrum scarcity. In this paper Cyclostationary detection based technique is discussed. Analysis is being carried out by implementing two different modulation techniques and based on that probability of detection and false alarm is discussed. Results of simulation indicate that this technique can flexibly detect the feature of received signal and provide satisfactory probability of false alarm and detection.

KEYWORDS: Cognitive Radio, Cyclostationary Feature Detection, Hilbert Transformation