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(57) Abstract :

The present invention provides an efficient method and system for spectrum sensing in open wireless architecture cognitive radio networks. The method involves measuring the energy in a channel using an energy detection technique (30), extracting cyclostationary features from a received signal using a cyclostationary feature detection technique (40), and combining the detection results obtained from multiple sensing nodes (10) using a fusion unit (50) to determine the presence of primary user signals in the channel. The system includes multiple sensing nodes (10) deployed in an ad-hoc manner, a processor (20), and a fusion unit (50). The proposed method and system are computationally efficient, robust to noise and interference, and can achieve high detection accuracy, making them suitable for practical implementation in cognitive radio networks.

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