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THROUGHPUT ANALYSIS OF COOPERATIVE SPECTRUM SENSING FOR COGNITIVE RADIO NETWORK

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ABSTRACT

In Cognitive Radio (CR) network, spectrum sensing is a fundamental issue for proper utilization of bandwidth extraction. In earlier researches cooperation among cognitive nodes is used to improve the performance in terms of the detection probability. However it increases the overheads in terms of bandwidth and time required for reporting their decisions to fusion centre whereas these overheads reduces throughput in turn. In this paper, we have investigated the effect of cooperation on throughput when fusion rule is OR. Performance of Cooperative spectrum sensing is investigated in terms of probability of detection and false alarm. Variation in throughput is analyzed with number of users for different value of SNR and time required for reporting the decision to fusion centre called reporting delay.

KEYWORDS: Cognitive Radio, Spectrum Sensing, Primary User, Secondary User

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