A Comparative Study on Different Types of Spectrum Sensing Techniques in Centralized Cognitive Cellular Network

Abstract

The shortage of spectrum is increasing day by day. To minimize this problem, dynamic spectrum access (DSA) technique is adopted by Cognitive Radio Technology. Spectrum sensing is an important technique of secondary users or cognitive users to scan the spectrum holes or white spaces. In this paper, they have discussed the sensing method in a Centralized Cognitive Cellular Network. They have also performed a hypothesis test for different values of Probability of Successful Detection and Probability of false alarm while operating in the low Signal-to-Noise Ratio. This paper basically explains different types of spectrum sensing methods graphically. From the graphical analysis, it has been observed that matched filter is the best spectrum sensing method with minimum local sensing time and less spectrum sensing error.

References


Index Terms

Computer Science Wireless
Keywords

Dynamic Spectrum Access; Spectrum Sensing; Centralized Cognitive Cellular Network; Spectrum Sensing Technique; Matched Filter; Local Sensing Time; Spectrum Sensing Error.