International Journal of Engineering, Management, Humanities and Social Sciences Paradigms (IJEMHS)
(Volume 13, Issue 01)
Publishing Month: June 2015
An Indexed and Referred Journal
ISSN: 2347-601X
www.ijemhs.com

Abstract Details

Title: Review Paper on Performance Analysis of Sensing Error Probability in Cognitive Radio Networks

Authors: Sandeep Sharma and Jitendra Kumar

Abstract: The electromagnetic radio spectrum is a precious natural resource but with the fast development of wireless communication the increasing demand of limited spectrum ultimately cause spectrum scarcity therefore the use of this spectrum is licensed by the government. The government licensed the spectrum bands to some specific services, such as mobile communication, TV broadcast, and satellite communication, in order to protect the different networks from harmful interference. Most of the spectrum band is allocated to specific services but worldwide observations show that only a few per cent of the spectrum band are efficiently utilized. A possible solution to these problems has been provided if licensed spectrum is made available to unlicensed users provided there is no interference with licensed users. This can solve almost all spectrum scarcity problems, and this solution can be achieved via intelligent radio system called CR. Cognitive radios, with cognition and reconfigurable capabilities are seen as a promising technology. One of the most prominent tasks in the implementation of cognitive radios in communication networks is the spectrum sensing. However, its performance is adversely affected due to noise uncertainty particularly in low SNR conditions. Therefore Cognitive Radio technology, Spectrum Sensing procedure, Spectrum sensing classifications is explained. Finally, Cooperative Spectrum Sensing is discussed along with its advantages and disadvantages.

Keywords: Cognitive Radio, Spectrum Sensing, Cooperative Sensing.