Abstract

The available radio spectrum is limited and is a valuable asset however the increasing demand of wireless applications has put a considerable measure of constraints on the available radio spectrum usage. Surveys on spectrum utilization has depicted that in the spectrum some frequency bands are mostly unoccupied the majority of the time, some other frequency bands are moderately used and the remaining frequency bands are heavily used. To ensure efficient use of the spectrum, cognitive radio is used which has the property of dynamic spectrum access. Dynamic spectrum access will enable us to use the unoccupied parts of the spectrum. The primary users are the licensed users of the spectrum and the secondary users are the cognitive radios which can use the spectrum in such a way that it should not cause any interference with the activities of the primary users. In this paper, the simulation of a cognitive radio system is carried out by using the automatic generation of primary users. This work mainly focuses on the practical realization of a cognitive radio system. Simulations are carried out in matlab R2013 a.
References

5. S. Haykin, “Cognitive Radios-Spectrum Sensing Issues”, by Amit Kataria presented to the Faculty of the Graduate School at the University of Missouri-Columbia.

Index Terms

Computer Science  Signal Processing

Keywords

Cognitive radio, dynamic spectrum access, primary users, secondary users.