Abstract

In wireless Communication system, Radio Spectrum is the most valuable and limited resource. Due to traditional fixed spectrum allocation policy, there is a problem of spectrum
under-utilization in licensed band whereas an unlicensed band is getting overcrowded. A new device called Cognitive Radio (CR) is introduced which allows unlicensed users to access licensed spectrum, without interfering with the operation of licensed user. Cognitive Radio follows Dynamic Spectrum Access Policy which makes it more vulnerable to the various attacks compared to traditional policy. An attacker can disrupt the basic functions of a Cognitive Radio Network (CRN) and cause harmful interference to the licensed user. Therefore security of CR is also a major concern. This paper provides a brief overview on operation, principles, architecture and security of Cognitive Radio. Finally, persistently unsolved challenges are highlighted.

References


Cognitive Radio Network – A New Paradigm in Wireless Communication


Index Terms

Computer Science Wireless

Keywords

Cognitive Radio Network Functions Spectrum Sensing Attack Open Challenges