Abstract

The vacant or under-utilized TV bands are resourcefully operated by Cognitive Radio permitted IEEE 802.22 Wireless Regional Area Networks (WRAN). Conversely due to the nature of cognitive radio networks and absence of active security protocols, the IEEE 802.22 networks are exposed to several Denial of Service (DoS) threats. In this work the target band for DoS attack is a particular band called as Most User Band which has maximum number of operators.
between the existing sub bands in the CR network. A primary user authentication system created on the spreading of "helper" nodes, motionless within the geographic area of the CRN. Our system works on a mixture of physical-layer signatures (link signatures) and cryptographic mechanisms to regularly sense PU action and pass data to the CRN. We suggest a countermeasure strategy (Time concealment strategy), to counter the MUB attack. Simulation results are provided to establish the efficiency of the proposed MUB attack and TCS with attack time control for more survival improvement of secondary nodes.

References

An Effective Primary user Authentication Mechanism for Denial of Service Attack in Cognitive Radio Networks


Index Terms

Computer Science

Networks

Keywords

Cognitive Radio   Most User Band Attack Denial Of Service Attack   Interference Authentication