Abstract

Cognitive radio (CR) is a promising technology in ad-hoc networks to solve the problems that result from the limited available spectrum and the inefficiency in the spectrum usage by utilizing the existing wireless spectrum advantageously. When the licensed primary user is not using the spectrum, the available channels are allocated for the unlicensed secondary users. An increasing numbers of security threats are being identified when the idea of cognitive radio becomes reality. One such threat is the possible presence of selfish secondary users who try to occupy all available channels. In this paper, an efficient selfish attack detection technique called Distributed Reaction Mechanism is introduced and implemented which results in enhanced detection rate.

References

- Ian F. Akyildiz, Won- Yeol Lee, Kaushik R. ChowdhuryBroadband Wireless Networking Laboratory, School of Electrical and Computer Engineering, "Cognitive radio ad hoc networks".
- X. Tan and H. Zhang; "A CORDIC-Jacobi Based Spectrum Sensing Algorithm for
Enhancing Detection Rate by using Distributed Reaction Mechanisms in Cognitive Radio Ad-Hoc Networks

- Minho Jo, Longzhe Han, Dohoon Kim, and Hoh Peter In, Korea University, "Selfish attacks and Detection in Cognitive Radio Ad-hoc Networks."

Index Terms

Computer Science  Communications

Keywords

Cognitive radio  selfish attacks  detection rate