An Attack Aware Cross Layer Routing Protocol for Multi-hop Cognitive Radio Network

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Abstract

Cognitive Radio Networks (CRNs) with such spectrum aware devices is a confident key to the spectrum insufficiency issue in wireless communication area. In this, an effective routing solution with a cross layer design is proposed for the multi-hop CRNs. The existing work uses Ad-hoc On-demand Distance Vector (AODV) routing protocol for CRNs. In cognitive radio based networks there are cross layer attack which occur due to DDOS (Distributed Denial of Attack) because of this attack efficiency is reduce. DDOS attacks which occur on cross layer routing is the biggest issue in cognitive radio. In this scheme present work is on layer for attack removal in the cross layer networks which will allow the system to offer high efficiency in routing even under attacks This will help the network to perform effective routing even if DDOS attack occur. MATLAB simulation result shows the parameter: Energy, Throughput and Delay this parameter signified graphically which shows result with attack and after removing attack the system efficiency is enhanced.

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**Index Terms**

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**Keywords**

Cognitive Radio Network, Cross layer Routing, DDOS, Multi Hop Cognitive Radio Network, RPL