

## **Analysis of Decentralized on Demand Cross Layer in Cognitive Radio Ad Hoc Network**

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**Abstract :** Cognitive radio ad hoc networks different unlicensed users may acquire different available channel sets. This non-uniform spectrum availability imposes special design challenges for broadcasting in CR ad hoc networks. Cognitive radio automatically detects available channels in wireless spectrum. This is a form of dynamic spectrum management. Cross-layer optimization is proposed, using this can allow far away secondary users can also involve into channel work. So it can increase the throughput and it will overcome the collision and time delay.

**Keywords :** cognitive radio, cross layer optimization, CR mesh network, heterogeneous spectrum, mesh topology, random routing optimization technique

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