A DISTRIBUTED SCHEDULING ALGORITHM FOR MULTI-CHANNEL DYNAMIC SPECTRUM ACCESS NETWORKS

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Cognitive radio network is one of the most emerging technology which improves the utilization of the limited radio resources. Dynamic spectrum access (DSA) is a new spectrum sharing paradigm which utilizes the spectrum holes and it reduces the spectrum scarcity problem as well as increases spectrum utilization. DSA is basically meant for Secondary users (SUs), which can dynamically search for the idle spectrum bands and temporarily access them. To avoid interference to Primary users (PUs), SUs continuously monitor the spectrum bands and returns to the PUs whenever it needs a band. At that particular time if the SU is engaged in transmitting delay-sensitive data, it will lead to severe degradation due to channel quitting requirement. In order to increase the network performance of the SU, we propose spectrum allocation technique and a scheduling mechanism to improve the network performance. The simulation result provides a significant improvement of throughput.

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