

Wireless mesh networks (WMNs) have emerged recently to extend Internet access and other networking services. WMNs routers provide network access to the clients and other networking functions such as routing, and packet forwarding. Bandwidth scarcity is the main challenge that limits the performance of WMNs. Although considerable research has been conducted on spectrum allocation, spectrum management is still considered an important open problem. This problem can be solved using cognitive radio technology that allows radios to intelligently locate free frequencies and use them efficiently. In this work, we propose a new spectrum management scheme that supports local and global management for a wireless network. Our scheme is based on clusters where the coordinator for each cluster manages spectrum information by keeping the required information at cluster level and for the whole network. Our scheme provides robust operation against any cluster head failure, as well as clients mobility