Abstract

Wireless channel allocation plays as an important role in the design of wireless network, as it greatly influences the throughput and performance of the network. It is proposed a technique to improve the usage of wireless spectrum in the context of IEEE 802.11 wireless network using new channel assignment methods among interfering Access Points (APs). Reliable channel selection for each Access Point (AP) is essential in setting up and operating densely deployed 802.11 WLANs. The aim of the channel selection is to provide efficient reuse of the spectrum and therefore minimize interference and improve the performance. The focus is mainly on to design an algorithm to solve the problem of channel allocation using Simulated Annealing. The algorithm minimizes the interference among the Access Points (APs). All the access points in the network operate on this algorithm simultaneously and determine the best channel it should use to minimize the interference from the neighboring access points.


Dynamic Channel Allocation in IEEE 802.11 Networks


Index Terms

Computer Science  Wireless

Keywords

Wireless Network, Network Interference, Dynamic channel allocation, Co-channel interference factor, Access Point Optimization