Abstract

In this paper, we propose a Channel Management Algorithm at the Access Points (APs) of Wireless Local Area Network (WLAN) in order to maximize the efficiency of the network by managing users on different channels such that the overall throughput is maximized. We start with the channel assignment at the APs, which is based on minimizing the total interference between APs. Initially we assign the users at different APs on the basis of the users load. The solution developed in this paper uses a distributed algorithm by assigning non-overlapping channels and managing fixed and roaming users in network. One software agent manages all APs and is able to communicate with its neighbors in order to maximize channel utilization for global throughput. Proposed algorithm result shows efficient management of users on different APs thus increases the channel utilization in WLAN. It also improves the network performance and gives higher throughput.

Reference

A Novel Approach for Managing Channels in Wireless Network

2006.

[9] Anurag Kumar and Vinod Kumar, Optimal Association of Stations and (APs) in an IEEE 802.11 WLAN, Indian Institute of Science, Bangalore, National Communications Conference (NCC), January 2005.

Index Terms

Computer Networks

Wireless

Communication

Key words

WLAN

Channel Management
Access Point

Channel Interference