Abstract

Congestion control in wireless networks is an important issue to be addressed. Solutions exist for single radio, single channel assignments. However, congestion control in wireless radio, multichannel wireless mesh networks play a significant role in the network communications. This problem is more complex because multiple radio channel assignment and traffic monitoring per channel are both to be jointly solved. In this work, we present a solution to solve both the problems by dividing the problem into two sub problems. One part solves the congestion control and the other part solves the channel assignment sub problem. We solve the congestion control sub problem by distribution of traffic to a set of radio paths. This solution provides channel congestion information which is used to solve channel assignment sub problem. This is an iterative procedure which increases the overall network utilization. Compared to the previous works in multi radio wireless mesh networks, we show that our approach yields significant
improvement in the network utilization.

Reference


Index Terms

Computer Science Wireless Networks

Key words

congestion control traffic distribution radio paths