Abstract

Quality of Service (QoS) provisioning to the various kinds of network traffic is one of the major design criteria of IEEE 802.16 WiMAX standard. The MAC and physical layers of 802.16 standards are designed to support different types of real time application by providing QoS. Scheduling, Connection Admission Control (CAC) and traffic policing are the major issues to
ensure QoS. In standard, scheduling and admission control are kept as open issues. Admission control is the ability of a network to control admission of new traffic based on the availability of resources. As per the specification the CAC considers minimum reserved rate of a connection as an admission criterion, in which the system can admit more connections, but packets of admitted connection may encounter large delays. In this paper average data rate (avg-rate CAC) and maximum sustained rate (max-rate CAC) of the connections are considered as admission criteria in CAC, along with minimum reserved rate (min-rate CAC). The performance of the WiMAX network is evaluated and compared for min-rate, avg-rate and max-rate CAC by considering the performance metrics such as number of connections admitted, throughput and delay using QualNet simulation tool.

Reference

14-30.

Index Terms

Computer Science

Wireless Networks

Key words

WiMAX  Scheduling  Connection Admission  Quality of

Control  Service