

AN OPTIMISED APPROACH TO PROVIDE SUPERIOR QoS FOR MULTIMEDIA APPLICATIONS IN IEEE 802.16E SYSTEMS

Kaarthick B¹, Nagarajan N², Raguvaran E¹, Saimethun G¹

¹ Network System design Laboratory, Sri Krishna College of Engineering and Technology, Coimbatore-641008, India

²Coimbatore Institute of Engineering and Information Technology, Coimbatore-641109, India

kaarthick_cbe@yahoo.com, rite2methun@gmail.com

ABSTRACT

WiMAX has emerged as a promising technology to provide last-mile connectivity due to its large coverage area, low cost of deployment and high speed data rates. The IEEE 802.16e standard is defined to support mobile users and provides different Quality of Service scheduling services to support different traffic like VoIP, video, FTP, web, etc. IEEE 802.16e is a standard which specifies the general QoS architecture with various parts of the architecture left undefined. In this paper, we have compared the performance of multimedia applications by varying the MAC Service Class parameters for a mobile station moving at a speed of 60kmph. Based on simulation results obtained using OPNET, we propose an approach which is best suited for multimedia streaming over mobile WiMAX. These results are very important as they provide a platform for developing an optimized scheduling algorithm, which is not defined in the IEEE802.16e architecture and left open for vendors to implement as per their needs.

KEYWORDS: Quality of Service, Voice over IP, Scanning, IEEE 802.16e