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## Abstract

Worldwide Interoperability for Microwave Access (WiMAX) is currently one of the hottest technologies in wireless, it's a standard-based on the IEEE 802.16 wireless technology that provides high throughput broadband connections over long distance, which supports Point to Multi-point (PMP) broadband wireless access. In parallel, voice Over Internet Protocol is a promising new technology which provides access to voice communication over internet protocol based network, it becomes an alternative to public switched telephone networks due to its capability of transmission of voice as packets over IP networks. Therefore VoIP is largely intolerant of delay and hence it needs a high priority transmission. In this paper we investigate the performances of the most common VoIP codecs, which are G. 711, G. 723. 1 and G. 729 over a WiMAX network using various service classes and NOAH as a transport protocol. To analyze the QoS parameters, the popular network simulator ns-2 was used. Various parameters that determine QoS of real life usage scenarios and traffic flows of applications is analyzed. The objective is to compare different types of service classes with respect to the QoS parameters, such as, throughput, average jitter and average delay.

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### Index Terms

Computer Science

Wireless Networks

**Keywords**

WiMAX VoIP BE UGS rtPS NS2