ABSTRACT

Mobile WiMax is a broadband wireless access technology that can provide data transfer speeds up to 70 Mbps and coverage of about 50 km and capable to provide data rate and high throughput because it uses a fairly large frequency of around 2-11 GHz and bandwidth channel that is wide enough and can be adjusted as needed. Therefore, Mobile WiMax can support various forms of multimedia-based data service that is one of Video Conference or commonly called VCON. For this application the required QoS is better than regular data transmission applications. Use RSVP protocol is one of the steps can be taken to resolve the issue. RSVP is a signaling protocol that is used to perform resource reservation on the network in order to obtain better service quality.

In this research, performance analysis of RSVP protocol for data services, in this case is VCON, on mobile WiMax network by comparing the performance VCON using RSVP protocol and without the RSVP protocol. The research is done by looking at performance improvement provided by the RSVP protocol to the service application VCON. The parameters used as reference of performance quality standards such as delay, throughput, packet loss, and jitter.

Results that can be drawn from the implementation of RSVP are a QoS improvement than without using RSVP. The amount of repair delay, jitter, and packet loss in a row at 1:39%, 34.73% and 25.65%. Moreover, mobile WiMAX network can deliver multimedia-based data services, video conferencing, in this case (VCON), quite well. Seen from the QoS parameters are measured in accordance with ITU-T standard and thipon.

Keyword: Mobile WiMax, RSVP, Video Conference, Delay, Throughput,
Packet Loss, Jitter.