Abstract

Mobile WiMax is one of the Broadband Wireless Access Network that have a fairly broad range, where has a very high mobility. Mobility on any mobile WiMax network can occurred congestion because packet are sent quite a lot, so the possibility of packet loss and delay will often occur. Delay that occurs causes decreased quality of data packet, especially when delivering streaming multimedia traffic which is sensitive to delay.

For these reason, author recommend DCCP as one of the protocol to solve the congestion problem that is at the transport layer. With several performance parameters such as congestion window, throughput, delay, and packet loss, author will compare the performance of DCCP with the SCTP transport protocol that is more reliable in the delivery of video traffic and supported by the congestion the congestion control mechanism.

Both of these protocols will operate on the Mobile WiMax network through simulation process using network simulator and using MPEG-4 traffic which is generated by TES (Transform Expand Sample) method.

Based on the scenario showed that for the delivery of the MPEG-4 Traffic, the average value of end-to-end delay on DCCP protocol was lower than SCTP, but the video quality on the SCTP protocol is better, because it has a high throughput in every node and lower percentage of packet loss.

Keywords: *congestion*, DCCP, SCTP, *Mobile WiMax*, NS-2