

## **ABSTRACT**

Broadband wireless technology is a telecommunications technology that experienced rapid growth. The technology offers the MS to access a variety of services including streaming video services whenever and wherever needed , when MS idle or move from one BS to another BS. WiMAX Quality of Service features (QoS) as a guarantee of service performance data from BS to MS. WiMAX offers a variety of QoS in order to guarantee the quality of services provided to the MS, in this case is a streaming video service.

Effect of MS motion on the more than one BS , when MS at the time of idle, or when the MS move will certainly affect the throughput, delay, jitter and packet loss of streaming video services on Mobile WiMAX. PT Telkom is an operator that has the ability to market the Mobile WiMAX service. Performance analysis conducted to determine the feasibility of the implementation of Mobile WiMAX services in PT Telkom with a case study in Kodya Bandung by using OPNET software.

Overall BS needed to cover the Kodya Bandung are 10 BS, 8 BS for Urban and 2 BS for Suburban and based on simulations with variations in the number of users on the idle positions the percentage of packet loss 0.29% to 40.79%. Additionally at the speed of the user reaches 100km/jam, streaming video service packet loss 21.91%, which means the value is between moderate (15%) and bad (25%) according to tiphon standard.

Keywords: mobile wimax, QoS, mobility, handover, video streaming, OPNET