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## *ABSTRACT*

Worldwide Interoperability for Microwave Access (*WiMAX*) wireless network technology which is between the users and transmit antenna should not in line of sight, that provide broadband service within the scope of a fairly broad. *Wimax* technology, which was consistent with the standards issued by the Institute of Electrical and Electronics Engineering (IEEE) 802.16, using two models of operation, that is fixed (fixed) or nomadic, and mobile. With the working frequency of 2.5GHz and 3.5 GHz for licensed frequency bands and frequency 5.8 GHz for an unlicensed, *wimax* technology can handle data rates up to 75 Mbps and also with the coverage area of 50 kilometers.

This final report describes the performance of two kinds of handover process, namely the hard handoff and soft handoff. For hard handoff algorithm is called the break-before-make handover due to perform handover to the destination cell, the connection to the base station is serving disconnected first. While soft handoff algorithm is referred to as make-before-break handover because the mobile station connect to the destination base station first before break the connection to currently serving base station.

The result of simulation is the comparison chart handover between soft handover and hard handover with 3 type different velocities. In addition, the results obtained from this simulation is to compare the time required for movement from the starting point is revived to the handover point with three different types of velocity.

*Keywords : handover, hard handoff, soft handoff, handover rate, velocity*