## ABSTRACT

Wireless network technology offer user mobile a difference between bandwidth connection, coverage, and cost. With vertical handover user can used appropriate wireless network with time and place. When handover occurs between WLAN and UMTS, data transfer are carried out. Handover between those networks are known as vertical handover. Vertical handover make transfer user between high rate data network with small coverage area and small rate data network with wide coverage area are possible.

The differences from those two networks are coverage and rate data. Characteristic link changed from UMTS to WLAN or the other way can change bandwidth and propagation delay. It can cause retransmit packet and arrival delay acknowledgments (ACKs) so the performance of TCP network will disturb.

This final project is discussed about the effect of vertical handover toward TCP protocol performance between UMTS network and WLAN. Vertical handover between UMTS network and WLAN are simulated using ns-2 program. Higher vertical handover velocity cause the decreasing toward TCP network performance. In general, decreasing interval transmission packet cause decreasing toward TCP network performance.



Keywords: UMTS, WLAN, TCP, vertical handover