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## Abstract

WiMAX is wireless networking which based on IEEE 802.16 and the first version published on October 2004. This technology support any network architecture, but the first version can not support inter cell handover and only used for fixed or nomadic access. Handover procedure implemented on the new version of 802.16e standardization on September 2005. This version supported for mobility user. WiMAX uses OFDM technology that support help in achieving high data throughput of the order of 70 Mb/s and coverage distance around 50 km, depending on spectrum available. Mobile WiMAX designed to complement existing 2G/3G access technologies. WiMax can be positioned as a complementary solution in integrating networks by offering higher bandwidth when required, particularly in dense urban areas.

One of the problems in integrating networks between UMTS and WiMAX are how is mechanism handover between UMTS networks and WiMAX networks. Because handover is one of important aspect in the system radio cellular to ensure that communication still exist although user has changed to the different cell so dropping call do not happen. Hence good synchronization between UMTS networks and WiMAX networks are needed to ensuring handover success.

In this final project will simulate the process of intersystem handover between UMTS networks and WiMAX networks and will analyze performance of intersystem handover based on dropping probability. In this simulation use visual basic 6.