

## ABSTRACT

WiMAX 802.16e standard is developed for portable and mobile application so it has ability to handover. To start handover initialization, information of the signal quality that is Carrier to Interference plus Noise Ratio (CINR) is very useful for Mobile Station (MS). CINR that is measured can experience the distortion resulting from the movement MS through shadowed places, mentioned as affected CINR. It causes this CINR temporary drop till under relative delete threshold and inaccurate so as really influences the number of handover initializations in each MS.

To overcome this affected CINR, in this final project simulates handover delay timer. Through this simulation can be analysed the influence duration of delay (0 – 5 second) on the number of handover initializations with the percentage of affected CINR in WiMAX communication are 0,5%, 0,05%, and 0%.

Results from the simulation are; in variation I (affected CINR = 0,5%), the number of handover initializations can decrease of 72% for the duration of HDT 1s, to 90 % for the duration of HDT 5s. In variation II (affected CINR = 0,05%), the number of handover initializations that can decrease of 54 % for the HDT duration 1 s, to 84 % for the duration of HDT 5s. In variation III (affected CINR = 0%), the number of handover initializations can decrease of 50% for the HDT duration 1 s, to 83% for the duration of HDT 5s. It can be concluded that the function of HDT increases together with the increase the percentage affected CINR resulting from shadowing.

Keywords : mobile WiMAX, handover delay timer, shadowing.