

ABSTRACT

Requirement of human being to communication will claim the technology to develop the flexible communications system, moving free, and have high technology. Hence, according to the human being demand, a new technology is developed that is WCDMA (Wideband Code Division Multiple Access). Cause of high mobility and immeasurable traffic intensity probably there are some functional developing and implementation of inter-system handover WCDMA to GSM.

Inter-system handover is implemented to reduce the dropping because user mobility from one UMTS cell to others UMTS cells. Using an optimal parameter from an inter-system handover algorithm is expected to increase user service quality in communication which UMTS network performance is getting higher.

The research results, ISHO parameter with $T_{3AU} = -18$ dB and $T_{3AG} = -80$ dBm have a minimum dropping probability for user movement towards border of 3G cells. When user's speed is 5 km/h and 50 km/h the dropping would be 0, and when user's speed 100 km/h the dropping would be 0.2. For user movement towards center of 3G cell and to soft handover area, When user's speed is 5 km/h , 50 km/h, 100 km/h the dropping would be 0. Path loss exponential value's = 3 have a minimum dropping probability for user movement towards border of 3G cells and for path loss exponential value's = 3 or 4 have a minimum dropping probability for user movement towards center of 3G cell and to soft handover area.

Keywords : *Inter-System Handover, WCDMA-UMTS, GSM*