

ABSTRACT

The development of telecommunications technology these days more rapidly. The necessity for a diversity of data services at high speed has spawned a new technology called HSDPA (High Speed Downlink Packet Access). The high demand of communication and user mobility on terrestrial networks, especially for mobile communications requires the continuity of service. To maintain continuity of service required of a good handover algorithm.

The inability to complete handover procedure to form a new relationship with the target cell is called handover failure. Handover failure can be attributed to the service coverage limitations and the limited availability of channels, that will trigger a few things such as failure to handover signaling, the loss of the old channel before the handover signal is received, and also the lack of available frequency resource in the target cell to accomodate handover calls.

Simulation results of this final task showed that the best channel conditions is achieved when the CQI = 19, using 16-QAM modulation so that the maximum user throughput of 2.7 Mbps available with a number of HS-PDSCH code are 5 codes. The minimum value of dropping probability is achieved when using handover parameters: $ASTh_Add \& Drop = 7 \text{ dB}$, $AS_hyst = 3 \text{ dB}$, $AS_Rep = 2 \text{ dB}$, when the user speed 5 km/h, the dropping is 0019, when the user speed of 50 km/h, the dropping is 0.0031, and when the user speed 100 km/h, the dropping is 0005. If the value of dropping probability of reaching more than 2%, the handover failure occurs .