

ABSTRACT

HSDPA (High Speed Downlink Packet Access) is one of a new technology in cellular telecommunication system that was released by 3GPP Release 5 and it is a 3,5 generation technology (3,5G). The technology which is also the development of WCDMA, is designed to increase data transfer speeds 5x higher. HSDPA has a data packet-based services in WCDMA downlink with data rate reaches 14.4 Mbps and 5 MHz bandwidth. In the integrity of networks, HSDPA could be positioned as a solution to meet the needs of high bandwidth, thus enabling the streaming video service, fast internet access, and video conferencing.

One of the problems in integrating networks between HSDPA and GPRS are how is the mechanism of handover between HSDPA and GPRS network. Handover is one of the 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. Therefore, a good synchronization between HSDPA and GPRS network are needed to ensuring handover success.

The simulation result of intersystem handover in HSDPA with GPRS networks, the first scenario (user moved from 3G_1 cell to 2G_1 cell) is obtained the smallest value of dropping probability and BER when the parameter of HSDPA threshold = -85 dBm and GPRS threshold = -98 dBm. At the second scenario (user moved from 2G_1 cell to 3G_1 cell) is also obtained the smallest value of dropping probability and BER when the parameter of HSDPA threshold = -85 dBm and GPRS threshold = -98 dBm. At the highest speed of user, the success of ISHO is getting smaller, so the value of dropping probability increases. This is because the interference between cell is large.

Keyword : Intersystem handover, HSDPA, GPRS.