

ABSTRACT

High-Speed Downlink Packet Access (HSDPA) is development technology UMTS specification release 5 that service based on packet and sometimes called to as 3.5 G technology. HSDPA provides evolution path for network Universal Mobile Telecommunications System (UMTS), which allows for the use of data capacity is greater up to (14.4 Mbit / sec downlink direction). HSDPA defines a new channel W-CDMA, the High-Speed Downlink Shared Channel (HS-DSCH), which is operating with a different W-CDMA channel that is now. Until now HSDPA technology use only for downlink in the communication.

This final project discussing about performance analysis and optimization for HSDPA network. Network performance analysis will be done based on the data drive test measurement results, while the data to be analyzed include data RSCP, Ec/No and throughput. To help analyze the data used TEMS software. This software will help engineer to process data, so that it can be analyzed properly. The results of the analysis will provide optimization solutions that can be done for each node B. The solution that will be used for the optimization consider to increase the quality of RSCP, Ec/No and throughput from MS to node B side in study case area, South Bandung. So the expectation from the optimization result is to increase the quality of HSDPA network in South Bandung, and customer satisfaction will increase.

From the result of drivetest measurement after optimization the quality of HSDPA network in South Bandung better than before optimization, it can be seen from the average result of field parameter which are RSCP -76.09 dBm, Ec/No -7.18 dB, and throughput 441.16 kbps. From the average result of field parameter, it can be seen that the result is absolutely pass the KPI target from the operator .