ABSTRACT

Data communication is one of the telecommunication services that already no stranger for mobile users. As one of the data communication services which offers high speed data access, HSDPA is present for mobile users who want to access communications data with fast and reliable. It is therefore necessary to HSDPA networks palnning on places that potential so that it can be used by users optimally and efficiently. One of the potential places to do the HSDPA coverage planning is Apartement Gateway Pesanggrahan Jakarta. The condition of the apartment building with a large damping caused by bad quality of the signal received by the user within the building. This causes the users can not perform data communication optimally.

On the research in this Final Project is done with HSDPA network coverage planning case study Apartemen Gateway Pesanggrahan Jakarta. HSDPA network planning is carried out using the walk test to find out the condition of the field by using RSCP, Ec/No, and Throughput parameters. It also uses the RPS 5.4 software to simulate the coverage area that can encompass all existing users in apartment building. The study also included the calculation of Link Budget and Traffic Plan for the supporting data in coverage HSDPA planning.

Taking into account the number of people inside the building, which is about 3400 users, then this planning requires a large capacity. From the results of the calculation of the radius of the antenna, it takes 4 cell/antenna for the 1st floor and 3 cell/antenna for the 2nd till 20th floor. After conducting simulation using the RPS 5.4 then the values of RSCP average obtained -67.97 dBm with detalis as follows -55.03 dBm fo the 1st floor and -80.91 dBm for the 2nd floor. Therefore with those results can be said to be planning to do produce a pretty good coverage area.

Key words : HSDPA, walktest, RSCP, Ec/No, Throughput, Link Budget, traffic plan, coverage area.