

## Abstract

Along with advances in technology and user demand for data services will be qualified, competing operators race to improve the quality of their data services. One operator that has been done is a telecommunications company XL AXIATA. Bandung one object migration XL AXIATA to upgrade ATM network technology (Asynchronous Transfer Mode) to IP Based. Along with the rapid advancement in technology, the ATM network can no longer serve as the data with maximum user growth per year has increased dramatically. So XL AXIATA migrating from ATM to IP based network.

In this final project analysis performance transmission quality in IP node B on the 3G network when users access the streaming video service. Parameters measurement results obtained on scrambling code 97 lowest RSCP value is -92.5 dBm at a distance of 500 meters with a measurement duration of 5 minutes. For parameter  $E_c / N_0$  obtained the lowest result is -12.8 dBm at a distance of 500 meters with a duration of 5 min measurement. At scrambling code 105 lowest RSCP value is -90.7 dBm at a distance of 500 meters with a duration of 5 min measurement. For parameter  $E_c / N_0$  obtained the lowest result is -14.8 dBm at a distance of 500 meters with a duration of 5 min measurement. Scrambling code 113 on the lowest value is -86 dBm RSCP at a distance of 500 meters with a measurement duration of 10 minutes. For parameter  $E_c / N_0$  obtained the lowest result is -15 dBm at a distance of 500 meters with a measurement of 10 minutes duration.

The results of the simulation code scrambling 97 prior to optimization in antenna tilting can value -91.02 dBm RSCP and  $E_c / N_0$  -12.26 dBm. After tilting antenna simulation optimization -84.89 dBm RSCP value obtained and  $E_c / N_0$  -9.91 dBm. Results of the simulation scrambling code 105 before the optimization in antenna tilting can value -96.45 dBm RSCP and  $E_c / N_0$  -12.17 dBm. After tilting antenna simulation optimization -83.95 dBm RSCP value obtained and  $E_c / N_0$  -8.48 dBm. Results of the simulation scrambling code 113 before the optimization in antenna tilting can value -90.39 dBm RSCP and  $E_c / N_0$  -10.65 dBm. After tilting antenna simulation optimization -85.41 dBm RSCP value obtained and  $E_c / N_0$  -8.20 dBm.

**Keyword :** Node B, RSCP,  $E_c/N_0$ , Video Streaming, Tilting Antenna