ABSTRACT

Nowadays, Telecommunication grows rapidly as we know with many cellular operators in Indonesia. Esia was cellular operator from PT Bakrie Telecom used CDMA2000 1x that can accommodated voice and data service with data rate 153.6 Kbps–2.4 Mbps. Esia Network only has SMS (Short Message Service) service for the messaging services.

MMS (Multimedia Message Service) service is messaging service with multimedia format that used text, speech or voice, picture, and video services all at once in one packet. MMS service is unavailable not only in Esia Network but also in other CDMA operators. In MMS service planning, MMS users a few years later must be predicted through SMS users traffic nowadays and also need additional equipment in Bakrie Telecom existing network. Hopefully from this research, MMS service can become alternative in data communication service.

Based from MMS user prediction result for next one year, which in July 2008 the amount of MMS message can be predicted to 41,282,836 msg. So that the plan needs three RPP modules at the MMSC with 80 Mbps throughput for each one and total server capacity 206.41 GB. While for the buffer, it will be needed GAN Switch that has total throughput 2.5 Gbps. The prediction and network performance analyzed results will be simulated with Microsoft Visual Basic 6.0 to make easier the same network planning in the next research. The result from this research is to get MMS service planned in Bakrie Telecom network and that can be recommended for the equipment system necessity.