

## ABSTRACT

PT. PLN (Persero) UP3 Bandung uses cellular networks as communication media in the Automatic Meter Reading (AMR) system. At a customer location using the AMR system, a setbox is installed, which consists of an electronic kWh meter, modem, and antenna that has been integrated with an AMR based application called the Advance Metering Infrastructure ICON (AMICON) which is an electronic meter application that functions to withdraw data usage customer power, and online connection and disconnection of electricity on the GPRS network, but with the increasing number of customers, the GPRS network is deemed not fast enough to withdraw customer data so it is necessary to migrate to 3G networks.

In this study will examine the migration of GPRS to 3G networks on the AMR system at PT. PLN UP3 Bandung. The discussion of this research focuses on planning in terms of capacity and coverage. The migration planning process to 3G takes into account the number of AMR system customers that continues to grow every day that requires faster access to the process of data usage withdrawal. After planning, a simulation will be done using Atoll software and an analysis of the results of the planning will be conducted.

The results achieved in this study are the value of the RSCP parameter for the fail problem is -79.6 dB, for the connect problem is -80.5 dB and for the login time out problem is -78.12 dB, the  $E_c/N_0$  parameter for all three problems gets a value of 1, then for the parameter throughput for fail problems obtained throughput values of 44 kbps, for connect problems obtained throughput values of 46 kbps and for login time out problems obtained throughput values of 46 kbps

**Keywords:** Automatic meter reading system, Network Migration, RSCP,  $E_c / N_0$ , throughput.