ABSTRACT

GPRS is data communication service system based on packet switching which is carried by the GSM radio fisic channel in order to increase efficiency and provide flexibility of the service to external data packet network. GPRS service integration on GSM network changes of GSM network architecture which are allocation of access radio channel to GPRS and adding of new equipment and interface. Many services could be pass through this data packet network, one of the service based on data packet which is hopefully can increase data packet network utility is Push To Talk (PTT). PTT is a half-duplex-mode voice service which is developed so that it can be implemented in the cellular network. PTT is an instant service which enables one-to-one and one-to-many user communication and doesn't need a dial-up process, users only have to press the button on the UE (User Equipment) when they want to start to talk. However, if the communication links is dense then the conversation which use this service will have delays.

On this final assignment, the planning is done by PT Telkomsel region Bandung. The planning process is begun with existing GPRS network performance analysis which are traffic aspect and channel availability. Then continued by the planning of PTT system including PTT system infrastructure, the amount of PTT user forecast, equipment dimensioning, the coverage of PTT service area, and PTT system QoS according to the planning outcome.

The outcome of this final assignment is the total of PTT subscriber on 2010 which is 14566 user. The amount of PTT cequipment needed are 1 unit of GSN, 1 unit of control switch, 1 unit of Active Directory, and 2 units of web servers.