

ABSTRACT

Need in voice, data and multimedia service increasing rapidly. IP (Internet Protocol) technology expected to be able to accommodate various need in voice, data and multimedia traffic services into a multipurpose network. Operators and service providers competing in serving IP based services. Telephony service is also migrating to pass their service through IP network, which called VoIP (Voice over Internet Protocol).

The PBX conventional network has several limitations, such as in serving multimedia services and adaptation ability with packet data network. With IP-Enabled PABX, those PBX conventional limitations, which based on circuit switched, could be overcome. In implementation, IP-Enabled PABX that integrated with conventional PBX has to be well planned so it can produce an optimized network.

In this final task, will be designed IP Enabled PABX network at 20th Building in LIPI Bandung. Steps that will be taken in these planning are dimensioning tools, surveying location and need, and also testing existing tools compatibility. In order to complete this planning and to overcome problems that occurs, this final task use data from LIPI Jakarta and LIPI Bandung.

The results from this final task are better IP Enabled planning, PABX's tool and network management for the communication traffic of IP Enabled PABX.

Key word: IP-Enabled PABX design, VoIP Router, PBX integration, Delay Budget, Need Estimation.