

## **ABSTRACT**

Progress of telecommunication technology at the moment quickly push the need of competence of human resource. And one of the effective way to increase competence about telecommunication, especially student of IT Telkom (d/h STT Telkom), is by doing research continuously about the working of telecommunication system. One of problems to do the research, in this case research about telecommunication with network cable, like traffic parameters, network performance, esc, is because we must do the research in existing network of PT. Telkom, and this make student of IT Telkom not freely for doing the research.

At IT Telkom there is cable network that not optimally used. That is why we want to make the network can be use like the network of PT. Telkom with all characteristic of cable network, especially in this project for cable network with PABX system.

In this project we design PABX system by optimally using cable network and equipment that IT Telkom already have. This system will be use for backup IP PABX system. And the result of this project can be implementation and use for further research in IT Telkom.