

ABSTRACT

Nowadays, the telecommunication technology has grown rapidly, signed by the appearance of these technologies usage solution that prominent its benefits. The consumption of both packet and voice data slowly will replace technology based on circuit switch.. That is why the Internet Protocol technology appears and has ability not only to accomodate the voice data, but also packet data, faximily and multimedia to a multifunction single network. One of IP technology progression is. *IP PBX (Internet Protocol Private Branch Exchange)*. The benefits of IP PBX are easily converged to other networks such as Wi-Fi, Sofswitch, LAN,etc, a lot of application features but still able to accomodate conventional PBX. Evenmore, IP PBX is able to accomodate multimedia, more effective and efficient, especialyy for the bandwidth efficiency and minimizing the operational cost and maintenance.

In this final project, an IP PBX planning is already made, that focused on designing for 10 years later and its interconnection to Wi-Fi network. The output is expected to an optimal design, for its capacity, trunk line, and bandwidth that support the facilities in Braga City Walk Bandung area. The spesification is require one IP PBX central with 834 port analog, 80 port digital, and 58 channel that connected to PSTN, equal to 2 E1. The bandwidth is 14,2545 Mbps, and require 1 access point to food court building, mall 2nd floor, and book café.