

## ABSTRACT

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This Final project is intended how to design network Fiber To The Home using Passive Optical Network technology as the backbone network and make the initial path and the determination device, standard specification, layout and volume. The design construction at Terusan Buah Batu Bojongsoang Raya Street Bandung by offering the triple play service (Internet, audio, video) to each customer or Homepassed.

From these results obtained Link Budget calculation or total loss is 21,835 dB. As for the calculation of attenuation in other distribution average housing is 21,51 dB. The result means is still under the appropriate GPON ITU-T G.984 standard is 28 dB and also like a Telkom of 28 dB. All of total Homepassed is 357 homes or 357 ONT and this planning of network design needs 1 GPON OLT 1, 1 device ODC, 14 pieces Spiltter Passive configuration with 1: 4 at ODC and 54 pieces Spiltter Passive configuration with 1: 8 at ODP.

*Keywords: FTTH, Design, Passive Optical Network, Homepassed, Total Loss Attenuation(dB)*