

ABSTRACT

Developments in the field of communication technology has a very important role in supporting communication-based broadband service quality. To meet the needs of particular communities of users of telecommunications services among households dihadirkanlah FTTH network technology (Fiber to the home). At the end of the task is done FTTH network development planning in the area of New Solo, Grogol, Solo by survey method using the Google Earth application and CSV converter KML. FTTH network design is made so that it can be access from a central technology solutions to the customer. The initial stage is to conduct a survey passes and get the data such as home address, home criteria, and the status of the subscription service or not Telkom. Survey data is inserted into the Google Earth application for prospecting mapped CSV and KML to giving the customer name in accordance with the provisions. Then determine the required tools and materials such as ODC, ODP, Pole, Feeder Cable, Distribution Cable, Cable Drop to the distribution network of the central can reach out to customers in an efficient and ideal. Then calculate the Link Budget with 3 conditions 1:32 one stage, two stage 1: 2 => 1: 4 and 1: 2 => 1:16 on Boundary 5 and compared among the three conditions to determine the most appropriate configuration. And the distance calculated is the closest distance, middle, and furthest from the STO to the ONT. From the comparison of the network can be inferred by looking at the average generated at 1:32 scenarios generate an average attenuation of 24.97 dB, in scenario 1: 2/1: 16 resulted in an average attenuation of 21.96 dB, and in scenario 1: 4/1: 8 generates an average of 21:14 dB attenuation. So on the Solo baru Area more appropriate to use scenario 1: 4/1: 8 for smaller damping emerges is 21:14 dB compared to using scenarios 1:32 and 1: 2/1: 16. And of the three scenarios, none of these exceed the maximum tolerance limit is 28 dB attenuation. Table BOQ (Bill of Quantity) generated at Boundary 5 is 1,632 kilometers Feeder Cable, Cable Distribution 5.9391 kilometers, 62.5 kilometers Drop Cable, ODC 1 Piece , ODP 78 Pieces, connectors 6875 Pieces and 22 pole pieces .

Keyword : Fiber Optic, Fiber To The Home, Optical Network Termination, Optical Distribution Frame, Link Budget, Bill Of Quantity,