

## ***Abstract***

*Based on largely demand for better and more updated network, safe to say that urban area are location with highly need for fast and flexible network architecture. Study for applicate for FTTH network with Gigabit Optical Passive Network (GPON) on Perumahan Kramat Jaya Baru located at Jakarta Pusat will be doing as a sample for urban area.*

*Study based on feasibility parameter and system performance will be done for network applicate. Parameter contain Rise Time Budget, Link Power Budget and Bit Error Rate. Bit Error Rate will impact performance level with Link Power Budget and Rise Time Budget will give raw data to be compared with data gained from software Opti System.*

*The results of data processing can produce simulations that can be applied by service providers to provide better network access for users in the area of the residential area concerned.*