

## ABSTRAK

PT. Telkom Akses (PTTA) yang merupakan bagian dari komitmen Telkom terus berupaya dalam pengembangan jaringan broadband untuk menghadirkan akses informasi dan komunikasi tanpa batas bagi seluruh masyarakat Indonesia. Salah satu upaya tersebut dengan meningkatkan kinerja jaringan Fiber To The Home (FTTH), sehingga perlu dilakukan analisis tentang performansi jaringan Fiber Optik (FO). Penelitian ini dilakukan untuk menganalisa performansi jaringan FO dengan nilai redaman, loss sambungan, jarak kabel dari sentral office hingga ke pelanggan di Balikpapan serta membandingkan hasil yang didapat dengan standar di Telkom Akses. Pengambilan data dilakukan pada 2 Sentral Office (STO), yaitu STO KTB (KS. Tubun) yang berlokasi di Stalkuda dan STO BRU yang berlokasi di perumahan Balikpapan Baru dengan total pelanggan sebanyak 10 pelanggan yang menggunakan layanan FO. Berdasar hasil pengukuran jaringan, keseluruhan yang diperoleh nilai redamannya kurang dari 28dB, yang mengindikasikan bahwa jaringan FO yang ada di di kedua STO tersebut memiliki kinerja standar yang diinginkan PT. Telkom Akses Balikpapan. Adapun nilai standar redaman perbaikan yang dimiliki PT. Telkom Balikpapan, yaitu -23.00 dBm. Kualitas pelayanan FO sudah sangat baik, hal ini dibuktikan dengan speed tes yang dilakukan dengan nilai Download dan Upload sesuai dengan paket berlangganan pelanggan.

**Kata kunci** – Jaringan, Fiber Optik, Sentral Office, Redaman.

## **ABSTRAC**

*PT. Telkom Akses (PTTA) which is part of Telkom's commitment to continue to develop broadband networks to provide unlimited access to information and communication for all Indonesian people. One of these efforts is to improve the performance of the Fiber To The Home (FTTH) network, so it is necessary to analyze the performance of the Fiber Optic (FO) network. This Study was conducted to analyze the performance of the FO network with the value of attenuation, connection loss, cable distance from the central office to the customer in Balikpapan and compare the results obtained with the standards at Telkom Akses. Data was collection was carried out at 2 Central Offices (STO), namely STO KT (KS. Tubun) located in Stalkuda and STO BRU located in Balikpapan Baru housing with a total of 10 customers using FO services. Based on the results of network measurements, the overall attenuation value obtained is less than 28dB, which indicates that the FO network in the two STO's has the standard performance desired by PT Telkom Akses Balikpapan. The value of the repair attenuation standard owned by PT. Telkom Balikpapan, which is -23.00 dBm. The quality of FO service is very good, this is evidenced by the speed tests carried out with the Download and Upload values according to the customer's subscription package.*

**Keywords :** *Network, Fibre Optic, Central office, Attenuation*