

ABSTRAK

Perkembangan teknologi telekomunikasi semakin lama semakin berkembang pesat. PT. Telkom merupakan perusahaan yang bergerak di bidang telekomunikasi dengan layanan yang ditawarkan meliputi *voice*, *speedy*, *Internet Protokol Television* (IPTV), dan *wifi id*. PT. Telkom melakukan upaya untuk memenuhi kebutuhan *bandwidth* yang semakin besar dengan melakukan modernisasi jaringan menggunakan perangkat *Multi Service Access Node* (MSAN). *Annex M* adalah ADSL2+ yang mempunyai nilai *upstream* sampai 3 Mbps dan *downstream* sampai 24 Mbps. Metode analisis yang digunakan yaitu dengan membandingkan dua variabel sebelum dan sesudah menggunakan *Annex M* dalam persen rasio. Berdasarkan perhitungan sampel sebelum dan sesudah menggunakan *Annex M* maka didapatkan bahwa parameter *Signal to Noise Ratio* (SNR) mengalami perbaikan kualitas jaringan *upstream* sebesar 10,306% dan *downstream* sebesar 3,048%. Parameter *Attenuation* sebelum dan sesudah menggunakan *Annex M* mengalami perbaikan kualitas jaringan *upstream* sebesar 13,491% dan *downstream* sebesar 2,797%. Parameter *Attainable Rate upstream* sebelum dan sesudah menggunakan *Annex M* mengalami kenaikan sebesar 3,9106% dan *Attainable Rate downstream* sebelum dan sesudah menggunakan *Annex M* mengalami penurunan sebesar 3%.

Kata Kunci : *Multi Service Access Node* (MSAN), *Annex M*, *Signal to Noise Ratio* (SNR), *Attenuation*, *Attainable Rate*.

ABSTRACT

The development of telecommunication technology increasingly rapidly. PT Telkom is a telecommunication company that offered voice service, speedy, Internet Protocol Television (IPTV) and wifi id. Efforts made by PT. Telkom to complete the requirement of bandwidth is to modernize the network using Multi Service Access Node (MSAN). Annex M is ADSL2+, this technology having values up to 3 Mbps for upstream and up to 24 Mbps for downstream. The method of analysis is by comparing two variables, before and after using Annex M in percent ratio. Based on the result of calculating of the sample before and after using Annex M, Signal to Noise Ratio (SNR) got the improvement of network quality upstream is 10,306% and downstream is 3,048%. Attenuation, before and after using Annex M has improved quality upstream 13,491% and downstream 2,797%. Attainable rate upstream, before and after using Annex M increase 3,9106% and attainable rate downstream, before and after using Annex M decrease 3%.

Key Words : Multi Service Access Node (MSAN), Annex M, Signal to Noise Ratio (SNR), Attenuation, Attainable Rate.