ABSTRACT

The rapid of data traffic improvement and the trend makes a limited capacity of excisting transport system bandwidth, which dominated by the excisting and present tranportation system. To design and implement optimally in distributing voice traffic with switch circuit network. With this concept, it will happen when trouble in installation a new service provisioning based on data, because the existing network is only optimalled for circuit switch and unscalable for data traffic.Because of that, the technology development and riset work with the main purpose to fullfil the transport need based on packet in metro area, which include: data and voice service delivery, scalable and fullfil capacity, data service provisioning ability, reliable and secure.the technology is Metro Ethernet and RPR,

In this final project analysed Metro Ethernet network dan Resilient Paket Rings (RPR), which the Metro ethernet technology used standard IEEE 802.3, IEEE 802.1 ag and IEEE 802.ah, sedangkan RPR technology used IEEE 802.17 standard to deliver the packet. To implementing some data transmit scenarious, in order to find the best technology performances. The metric of network performances is Quality of Services, which including delay,packet loss dan troughput.

Analysis Result by using programming delphy, got delay for data application use proteksi, for ME is = 0.01414 µs and for RPR is 0.007665 µs.Untuk voice application Dengan proteksi, for ME is 0.011704 µs and RPR is 0.130734 µs. Package loss for good data application with proteksi and without proteksi is 0%, Whereas for voice application with proteksi got, for ME is 63.89% and RPR is 66.66%. Throughput for data application with proteksi, throughput for ME is 19.62175 Mbpses and RPR are 26.4715 Mbpses. For voice application with proteksi for ME is 0.305 Mbpses and RPR are 0.257.So RPR network have better Performansi are compared to Metro Etherent network