

ABSTRACT

The changes curriculum of 2016 at Telkom University led to a change of course syllabus. Prodi d3 Telecommunication Engineering built new laboratories because of the change of the syllabus, but this laboratory has not been integrated with each other, which is very difficult to exchange information between laboratories.

The design of metro ethernet access network and the availability of triple play service content that can be accessed wirelessly is one solution to solve the problem. An Ethernet network can connect a LAN with a WAN or backbone network and transmit fast, large amounts of data transfer as well as low cost of manufacture. To provide triple service content required internet data servers, ip-pabx and video servers. All three servers are connected to the switch as the main device of metro ethernet access network, then triple play service will be distributed by access point which connected with switch port wirelessly.

From the design and implementation of metro ethernet access network, we get the quality of triple play service content received by users in both categories. These results are derived from QoS (Quality Of Service) content of triple play service, MOS value of voice service content of 3.554 category is good enough, video service delay 4,757 ms which means have very small delay and throughput of internet data service 0,04231 Mbps.

Keywords: Ethernet metro network, triple play, wireles access