ABSTRACT

SDH (*Synchronous Digital Hierarchy*) is a digital transmission system that appears after developed of PDH (*Plesiochronous Digital Hierarchy*) system and also develop since PCM (*Pulse Code Modulation*) technology exist and to be widely known which is as a basic of signal transision from analog to digital signal and digital to analog signal.

There are some components of SDH, they are Multiplexing, Digital Cross connect, Regenerator and ADM (*Add Drop Multiplexer*).

In this Final Project is discuss about ADM (*Add Drop Multiplexer*) that is one of SDH`s component which use for signal traffic. Basically, ADM has two aggregate signal namely *Aggregate Right Direction* and *Aggregate Left Direction* or well known as *WEST* aggregate and *EAST* aggregate. If they are constructed between ADM, would be a Ring configuration that has a reliable protection capability for some interferences.

Based on ADM`s functions, no wonder work of this equipment is extremely important to support SDH`s network performance. Thus, this Final Project evaluate *Add Drop Multiplexer* SDH equipment`s performance for STM-16 brand xxx and type yyy by compare the result of measurement for each parameter or test the equipment with consistant specification according Telecommunication Specification (S-Tel), then decide whether this equipment eligible or not to support the utilization in supporting telecommunication services. The measurement was held at Transmission Laboratory, Research and Technology PT. TELKOM (Divisi RisTi PT. TELKOM)