

## ABSTRACT

SDH system is a digital transmission system, that appear after PDH system. SDH system can solve capacity and fleksibility problem from PDH system. The Element in SDH system are Terminal multiplexer, add drop multiplexer,digital cross connect and regenerator. The each element have important function to support the performance of SDH system. The performance effect of each element SDH to suport eligibled SDH system. There are more of to obstacle SDH Network performance. One of to obstacle SDH Network performance is jitter. Jitter can be tunned up by multiplexer or regenerator on SDH elements. This jitter wills decrease the quality of digital transmission system with damaged accepting ability for decide the true bit decision. For knowing SDH element ability with jitter influences, so we can make simulation by giving jitter as input with various jitter amplitudes but the jitter amplitude maximum are 20 Interval Unit. Bit rate, BER , pulse form and sensitivity as parameter simulated. The experiment result shows BER which is produced by SDH elements maximum speed 622 Mbps are  $10^{-4}$  and bit rate tolerance are 17 ppm with the method which is used is a justification process and slip buffer. More over “1” pulse decrease 0,306 volts and “0” pulse decrease 0,0145 volts.Measurement the device in Transmission Laboratory of PT TELKOM Research and Technology Division at August 2007.