

ABSTRACT

By increasing the requirement of telecommunications network with larger capacities bandwidth cause improvement of telecommunications technology. It begin from changing network of transport copper become network of transport fiber optic or radio and from analog system become digital system.

SDH (Synchronous Digital Hierarchy) technology is multiplex hierarchy based on transmission synchronize and weared many in fiber optic network and microwave. SDH which use fiber optic can improve network mainstay by totally ably owned reinforcement system so that can give better service.

Analysis of reliability peripheral Alcatel 1660SM shows the level availability value has attained the recommendation of PT Telkom for availability access network, that is 99,94 % and the avarage of down time system 77 minute/years. The average of MTTR value in 2005 is 1,33 hours. Flexibility network influenced by accelerateing the transmission bitt and the number of fiber optic performace. The performance of fiber optic communications system SDH is still undercontrol when energy receiver is smaller than energy threshold (- 27 dBm) and rise time budget is 0,3531 ns with capacities maximum 1984 Mbps and BER 10^{-10} .

Keyword: SDH (synchronous Digital Hierarchy)