

ABSTRACT

Currently, growth of multimedia services expand rapidly, so that a network base on optical very required to accommodate the generated traffic load. Backbone network of internet high-speedly will be needed to support a wide reach in peeping out application needing Quality of Service (Qos) and bandwidth which significant. Traffic from application needing Qos and bandwidth expected to become the bursty traffic.

Optical Burst switching is solution promising for the transmission of terabit IP burst in WDM network. One of the key component in design node at optical burst switched is development of technique of scheduling burst at channel which can efficiently handle the contention burst. Traditional scheduling techniques use the approach such as conversion of wavelength and buffering to solve the contention burst. In this final project, proposed by technique of scheduling non-preemptive using segmentation burst to solve problem the contention. Further, to decrease the loss packet can be conducted by combining segmentation of burst with fiber delay lines (FDLs) to solve problem the contention during taking place it scheduling.

Result of simulation indicate that the technique of scheduling non-preemptive using segmentation burst with *void filling* can reduce *packet loss probability* more effectively and give the better *average packet delay* performs compared to a scheduling technique without *void filling*.

STTTTELKOM