Abstract

Adaptive Data Burst Assembly in OBS Networks

To perform an Optical Burst Switching (OBS) network, a lot of challenges are faced that have to be solved. The edge node has to manage burst offset time and burst assembly technique. The core node has to reserve resources to send the data burst, schedule the control packet and data burst and contention resolution strategy. In this paper, we discuss the burst assembly mechanisms and their disadvantages which we will overcome using a new and simple algorithm for data burst generation which relies on changing some characteristics in queuing model in OBS network by taking into consideration the presences of Quality of Service (QoS) for multiple data priorities. The OBS network simulation using our algorithm shows that it adaptively changes the data burst size according to the offered load. So, it can offer high data burst utilization, limits the maximum end to end delay and reduces burst rate for high priority packets.