Abstract

Moustafa Hussein Aly

ping probability reduction in OBS networks: A simple approach

In this paper, we propose and derive a slotted-time model for analyzing the burst blocking probability in Optical Burst Switched (OBS) networks. We evaluated the immediate and delayed signaling reservation schemes. The proposed model compares the performance of both just-in-time (JIT) and just-enough-time (JET) signaling protocols associated with of void/non-void filling link scheduling schemes. It also considers none and limited range wavelength conversions scenarios. Our model is distinguished by being adaptable to different offset-time and burst length distributions. We observed that applying a limited range of wavelength conversion, burst blocking probability is reduced by several orders of magnitudes and yields a better burst delivery ratio compared with full wavelength conversion.