Abstract

Network simulator is a significant tool for researchers to simulate the actual network. The main advantage of the simulator is that it gives results much closer to the reality than the mathematical modeling. Furthermore, its cost is much lesser as compared to the real experimentation. The scale and size of the large networks (e.g. Internet) complicate both the
mathematical modeling and the real experimentation. Therefore, researchers depend mainly on simulators to study, evaluate and design the performance of network. Optical Burst Switching (OBS) network is one of the most popular research areas in the optical Internet. However, it is just recently that some of these networks simulators start to provide the ability to simulate OBS network. In this paper, the concepts behind the some main OBS simulators are presented. Furthermore, a feature comparison is made among them in terms of the module-based structure, simulating methodology, compilation, and Graphic User Interface (GUI). The comparison of these simulators has been made based on the needs of simulating real time traffic over OBS network and not to define which network simulator is the best as there are too many different parameters variations and different possible network scenarios to adequately determine this in a single section. The comparison results show that NCTUns can provide much better functions and performance in the simulation of real time traffic in OBS network, because of its several unique features which are suitable for real time traffic over OBS.

Reference


Index Terms
Key words
Network Simulators  OBS  Real time traffic.