This document gives an introduction to the optical burst switching (OBS) and describes the design and implementation of a network simulator to model an optical burst-switched network. In addition, some examples of how to use the simulator are explained. Finally, a study of basic burst assembly algorithms and their effect on assembled burst traffic characteristics are described.

The OBS network simulator is designed and built over the ns-2 simulator framework that is implemented in C++ and uses OTcl as the command and configuration interface. Simulation experiments permit to test the simulator and also to understand the impact of assembled Poisson traffic on a network.