Abstract

An optical network is a communication network in which information is transmitted as optical signals. In network data traverse through different routes, so deciding best route becomes an important issue in optical network. To select best route in the network various algorithms proposed by researchers. Blocking probability, routing etc are the various parameters related to these algorithms. For calculating the results for these parameters Erlang B formula was used. This paper presents a proposal of mathematical model to reduce the blocking probability in the network. The mathematical model is modification of Erlang’s B formula. MATLAB software is used for simulation. Results show that, with increase in the value of load, blocking probability increases but negligibly small. The results have proved that this model is better than the conventional techniques.

References

- Rolland Mwanou, Samuel Pierre . cole Polytechnique de Montr. al, QC, "Adaptive
Probabilistic Approach for Blocking Probability in Optical Networks

Routing Algorithms for All-Optical Networks; IEEE Canadian Review – Fall / Automne 2005

- M. Granot, M. Sotom, F. Masetti, "Routing Strategies for Optical Paths in WDM Networks"; 0-7803-3925-8/97 $1 0. 00 01 997 IEEE.
- Xiaowen Chu, Bo Li, Kazem Sohraby, Zhengsheng Zhang, "Routing and Wavelength Assignment Issues in the Presence of Wavelength Conversion for All-Optical Networks"; 0-7803- 7632-3/02/$17. 00 QZOO2 IEEE.
- (Fiber- cabling handbook).
- Tien Van Do, Ram Chakka, Zsolt Pandi, "NOVEL ANALYSIS METHOD FOR OPTICAL PACKET SWITCHING NODES";

Index Terms

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Keywords

Optical network  Blocking probability  Routing Strategies  Erlang’s B formula.