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Invited paper

Optical Performance Monitoring Techniques; Current Status and Future Challenges

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Abstract

The optical performance monitoring technique is of critical importance for the continual advancement of dynamic WDM networks. This paper reviews its current status and future challenges.

Extended Abstract

For the efficient operation and management of dynamic WDM networks, it is vital to monitor the key parameters directly in the optical layer. To date, numerous techniques have been proposed and demonstrated to monitor various parameters including the channel power, frequency, OSNR, Q-factor, and optical path, etc. However, the recent progresses in WDM networks including the utilization of advanced modulation formats and operation at even higher speed of 100 Gb/s necessitate further developments of these techniques. In addition, for the continual advancement of dynamic WDM networks, it would be necessary to develop a standardized method for the effective utilization of optical performance monitors. In this paper, we review the current status of the optical performance monitoring techniques and discuss their future challenges.

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