

COMMUNICATIONS METHOD, SYSTEM, AND APPARATUS FOR OPTICAL NETWORK SYSTEM

ABSTRACT

The present invention provides a method, a system, and an apparatus for data
5 communication in an optical network system. A new encoding scheme is implemented
in the following manner: performing 32-bit to 34-bit encoding on a data stream on
which 8-bit/10-bit decoding has been performed, performing forward error correction
encoding on the data stream on which the 32-bit to 34-bit encoding has been
performed, and sending the encoded data stream; or performing forward error
10 correction decoding on a received data stream, and performing 32-bit to 34-bit
decoding on the data stream on which the forward error correction decoding has been
performed. In this way, a bandwidth resource of a line is saved; line monitoring can
be implemented without interrupting a service, which is easy to implement and
greatly improves various types of performance of the system.

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Figure 9