ABSTRACT

Embodiments of this application disclose a data processing method that can be applied to a high-speed optical transport network. The method includes the following steps: obtaining second bit data based on first bit data having a bit quantity of d_{in}, where the second bit data includes d_{in} bits in the first bit data, d_{CRC} check bits, and/or d_{PAD} padding bits; scrambling the second bit data to obtain third bit data, where a bit quantity of the third bit data is $d_{scr} = d_{in} + d_{CP}$, and $d_{CP} = d_{CRC} + d_{PAD}$; then performing probabilistic constellation shaping PCS processing on a first bit subset in a first bit set having a bit quantity of m to obtain a second bit subset, where the first bit set is obtained from the third bit data; and performing FEC encoding and interleaving processing on the second bit subset and a third bit subset in the first bit set other than the first bit subset to obtain a second bit set. This application provides different values of d_{in}, m, and d_{CP}, is compatible with an existing 400G network, and has good performance and low costs.