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- (81) 指定国(除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW。
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(54) Title: OPTICAL SIGNAL TRANSPORT METHOD AND APPARATUS

(54) 发明名称: 一种光信号传送方法及装置

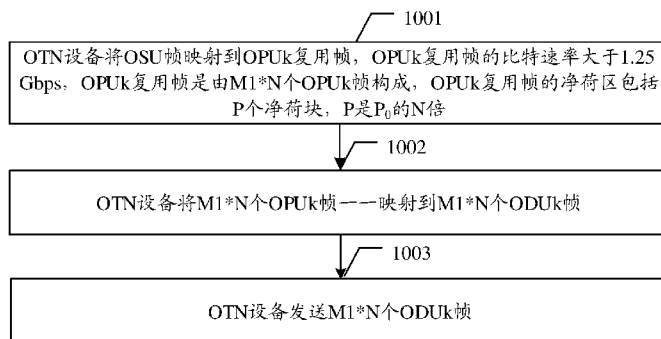


图 10

- 1001 An OTN device maps an OSU frame to an OPUk multiplexing frame, wherein the bit rate of the OPUk multiplexing frame is greater than 1.25 Gbps, the OPUk multiplexing frame is formed by $M1 \cdot N$ OPUk frames, and a payload region of the OPUk multiplexing frame comprises P payload blocks, wherein P is N times P_0
- 1002 The OTN device maps the $M1 \cdot N$ OPUk frames to $M1 \cdot N$ ODUk frames one by one
- 1003 The OTN device sends the $M1 \cdot N$ ODUk frames

(57) Abstract: Disclosed in the present application are an optical signal transport method and apparatus, which are used for reducing processing complexity while maximizing a bandwidth utilization rate. An OPUk multiplexing frame, the bit rate of which is greater than 1.25 Gbps, is constructed by means of the structure of an OPU0 multiplexing frame, such that the structure of the OPU0 multiplexing frame can be multiplexed as the structure of the OPUk multiplexing frame, thereby aligning the structure of the OPUk multiplexing frame with the structure of the OPU0 multiplexing frame. The OPUk multiplexing frame is composed of an integer multiple of the OPUk frames, and the OPUk multiplexing frame is kept aligned with a boundary of the OPUk frame, such that when an OTN device maps an OSU frame, the OSU frame can be mapped into the OPUk multiplexing frame on the basis of the structure of the multiplexed



(AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

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OPU0 multiplexing frame, and the position of a payload block can be rapidly acquired within each transport period, such that the processing complexity can be reduced.

(57) 摘要：本申请揭示了一种光信号传送方法及装置，用于在最大化带宽利用率的同时降低处理复杂度。通过OPU0复用帧的结构来构造比特速率大于1.25Gbps的OPUk复用帧，使得OPUk复用帧的结构能够复用OPU0复用帧的结构，从而与OPU0的复用帧的结构对齐。OPUk复用帧由整数倍的OPUk帧组成，保持OPUk复用帧和OPUk帧边界对齐，从而OTN设备在映射OSU帧时，可以基于重用的OPU0复用帧的结构映射OSU帧到OPUk复用帧中，在每个传送周期可以快速获取净荷块的位置，从而可以降低处理复杂度。