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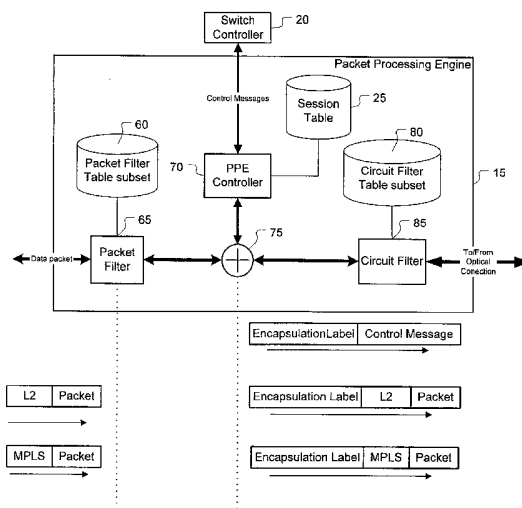
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(54) Title: A METHOD AND APPARATUS FOR TRANSPORTING PACKET DATA OVER AN OPTICAL NETWORK



(57) Abstract: A method, apparatus and network for transporting layer-2 frames, such as Ethernet MAC, ATM AAL5, and Frame Relay, over SONET, SDH, or OTN transport networks is disclosed. The method establishes "pseudo-wires" between, for example, SONET switches and directly on top of the SONET layer. The method may implement MPLS signaling protocols on traditional SONET switches for the purpose of aggregating layer-2 frames from the transport network edges, while the transport network itself is independent from IP and MPLS routing. This approach provides a number of advantages to the network carriers in terms of operation and equipment expense reduction. To enable the transport network to be independent from IP and MPLS, and avoid subsequent IP control message processing inside the networks, an edge-to-edge "tunneling" mechanism is designed to transmit control messages as a part of the SONET (or SDH or OTN) frame payload.

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B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — Y	(XIAO), draft-ietf-pwe3-requirements-03.txt, June 2002	1,5,6,8-12,13,16 and 17
Y	US 6721335 B1 (GREGG), 13 April 2004, fig. 10	2,3,4,14,15 2,3,4,14 and 15
A	US 2002/0097730 A1 (LANGILLE et al), 25 July 2002, see entire document	1-29
A	US 2004/0081203 A1 (SODDER et al), 29 April 2004, see entire document	1-29
A	US 2004/0066779 A1 (BARRACK et al), 08 April 2004, see entire document	1-29



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