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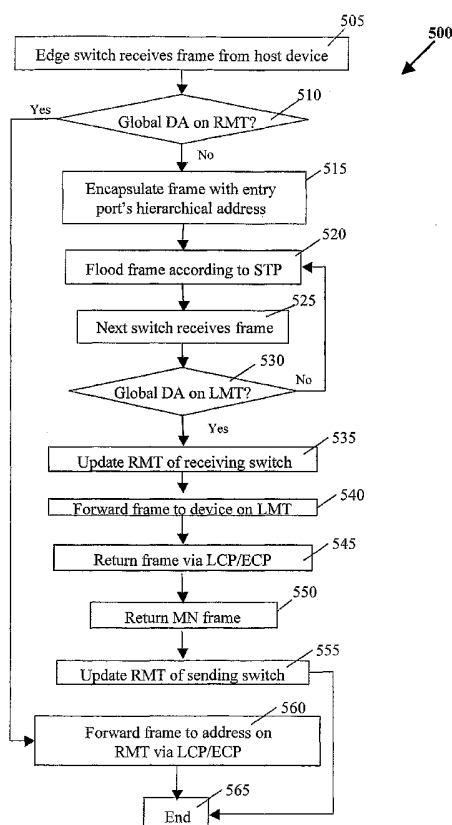
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(54) Title: FORWARDING TABLE REDUCTION AND MULTIPATH NETWORK FORWARDING



(57) Abstract: Increased usage of network links is provided and smaller forwarding tables are required. A combination of STP and Multipath methods may be implemented in a network. Frames may be forwarded between switches not only according to MAC addresses, but also according to switch IDs and local IDs. Switch IDs do not need to be globally unique, but should be unique within a particular network. Local IDs need only be unique within a particular switch. Some preferred implementations allow frames to be delivered in order to devices requiring in-order delivery. Preferably, core switches need only learn the switch IDs of each core switch and each edge switch, and the appropriate exit port(s) corresponding to each switch. Preferably, the forwarding tables of each edge switch indicate the addresses of each device attached to that edge switch, the address of each device that is in communication with an attached device and the address of every other switch in the network.



FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
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B. FIELDS SEARCHED

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6, 556, 541 B1 (BARE) 29 April 2003 (29.04.2003), column 6, lines 10-55 and column 10, 1-50	1-18
X,P	US Pub. No. 2005/0190752 A1 (Chiou et al) 01 September 2005 (01.09.2005), Figures 4, 5, and 6	1-18
X	US 5, 920, 566 (Hendel et al) 06 July 1999 (06.07.1999), column 4, lines 56-67 and column 5, lines 1-67	1 and 15
X	US 5, 974, 467 (Haddock et al) 26 October 1999 (26.10.1999), column 2, lines 5-40	1 and 15
X	US Pub. No. 2004/0032856 A1 (Sandstrom) 19 February 2004 (19.02.2004), paragraphs 24-26	1 and 15

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

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