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(54) Title: CAPACITY MANAGEMENT SYSTEM FOR PASSIVE OPTICAL NETWORKS

(57) Abstract: The invention is a tool that accurately predicts the performance of each different priority or service level on a PON with multiple different service types and multiple users. Delays and bit rates are computed accounting for all packet, protocol, propagation, and scheduling overhead. The performance and delays of all services are further verified by running a real¬ time simulation that identically mimics the operation of an actual PON, resulting in very close prediction of the performances of different services before the services are actually used or tested for use by the subscribers. The invention allows the service provider to sell the maximum number of services possible, while still ensuring that they can all function acceptably. The tool may be used to model and predict behavior of various PON.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/02811

A. CLASSIFICATION OF SUBJECT MATTER
IPC: **G06F 15/173**(2006.01);**H04B 10/20**(2006.01);**H04J 14/00**(2006.01)

USPC: 709/223,224,225,226
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 709/223, 224, 225, 226

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)
IEEE, ACM

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,522,629 B1 (ANDERSON, SR.) 18 February 2003 (18.02.2003), column 5, lines 25-56; column 6, lines 50-61; column 9, lines 6-47; column 11, lines 1-16; column 11, line 65-column 12, line 44.	1-20
Y	US 2004/0109689 A1 (SONG et al) 10 June 2004 (10.06.2004), abstract, paragraph [0005]-paragraph [0007]; paragraph [0024]-paragraph [0025].	1-20
A	US 2002/0172216 A1 (Asashiba et al) 21 November 2002 (21.11.2002), abstract.	1,11, 18
A	US 2004/0033075 A1 (KOCH et al) 19 February 2004 (19.02.2004), paragraph [0005].	1,11,18

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