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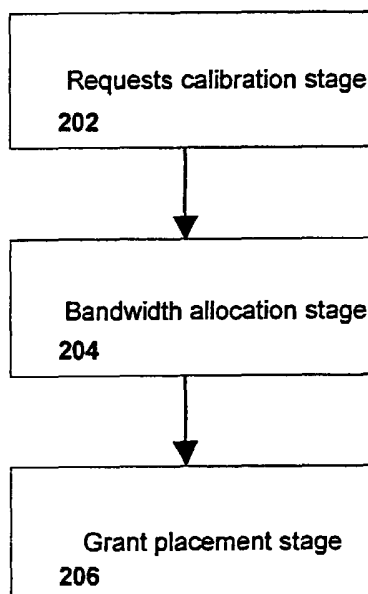
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ning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR DYNAMIC BANDWIDTH ALLOCATION IN AN ETHERNET PASSIVE OPTI-
CAL NETWORK



(57) Abstract: In a passive optical network that includes a plurality of optical net-
work units (ONUs) coupled to an optical line terminal (OLT), dynamic bandwidth
allocation (DBA) methods and algorithms designed to support a short delay as well
as best effort services, while maintaining fairness between subscribers. In a pre-
ferred embodiment, a DBA allocation method comprises the steps of calibrating
requests (202) issued by each of the ONUs to obtain respective calibrated requests,
allocating a bandwidth amount (204) to each ONU based on the calibrated requests
using an allocation scheme selected from the group consisting of an under-utiliza-
tion allocation scheme and an over-utilization allocation scheme, and based on the
bandwidth allocation, granting (206) the ONUs a second plurality of constant delay
grants per each cycle.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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US CL : 370/232

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. : 370/232,233-238,395.1-395.21

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 6,631,134 B1 (ZADIKIAN et al.) 07 October 2003 (07.10.2003), See entire document.	1-15
X,P	US 6,616,350 B1 (DE BOER et al.) 09 September 2003 (09.09.2003), See entire document.	1-15
X,P	US 6,721,504 B2 (KIM et al.) 13 April 2004 (13.04.2004), See entire document.	1-15
X,P	US 6,636,527 B1 (LEE et al.) 21 October 2003 (21.10.2003), See entire document.	1-15
X,P	US 6,647,210 B1 (TOYODA et al.) 11 November 2003 (11.11.2003), See entire document.	1-15
X	US 2002/0030875 A1 14 March 2002, see entire document.	1-15

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