

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 December 2000 (21.12.2000)

PCT

(10) International Publication Number
WO 00/78031 A3

(51) International Patent Classification⁷: H04N 7/173

(21) International Application Number: PCT/US00/15952

(22) International Filing Date: 9 June 2000 (09.06.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/138,756 11 June 1999 (11.06.1999) US
60/170,302 13 December 1999 (13.12.1999) US

(71) Applicant: SCIENTIFIC-ATLANTA, INC. HUBERT J. BARNHARDT III [US/US]; Scientific-Atlanta, Inc., Intellectual Property Dept. (ATL 4.3.517), 5030 Sugarloaf Parkway, Lawrenceville, GA 30044 (US).

(72) Inventors: RODRIGUEZ, Arturo, A.; 5315 Abigail Lane, Norcross, GA 30092 (US). JERDING, Dean, F.; 315 Seventeenth Fwy., Roswell, GA 30076 (US).

(74) Agents: BARNHARDT, Hubert, J., III et al.; Scientific-Atlanta, Inc., Intellectual Property Dept. (ATL 4.3.517), 5030 Sugarloaf Parkway, Lawrenceville, GA 30044 (US).

(81) Designated States (*national*): BR, CA, JP.

(84) Designated States (*regional*): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

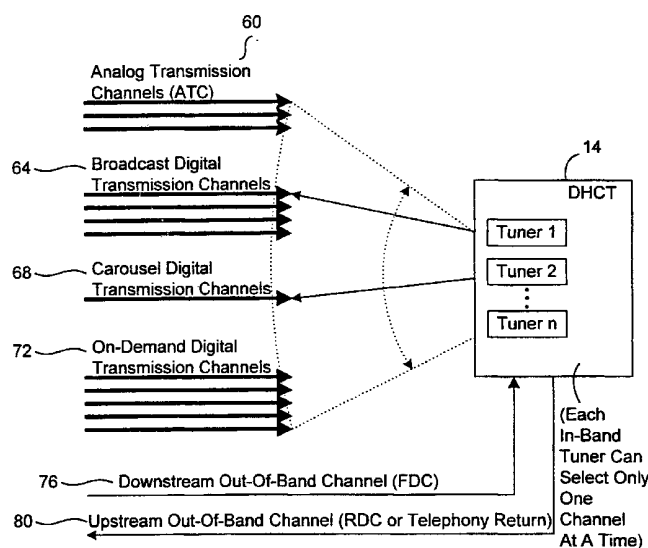
Published:

— With international search report.

(88) Date of publication of the international search report:
19 April 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEMS AND METHODS FOR ADAPTIVE SCHEDULING AND DYNAMIC BANDWIDTH RESOURCE ALLOCATION MANAGEMENT IN A DIGITAL BROADBAND DELIVERY SYSTEM



(57) Abstract: A technique for allocating bandwidth in a digital broadband delivery system (DBDS) using a bandwidth allocation manager to dynamically assign a content delivery mode to a plurality of digital transmission channels based on an allocation criteria received from a subscriber is disclosed herein. The bandwidth allocation manager determines a bandwidth allocation schedule for a predetermined bandwidth based on allocation criteria comprising a criteria received from a subscriber. The allocation criteria received from the subscriber may comprise a subscriber reservation request which is processed by the bandwidth allocation manager to determine the bandwidth allocation schedule.



WO 00/78031 A3

INTERNATIONAL SEARCH REPORT

Inter Application No
PCT/US 00/15952

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N7/173

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)
IPC 7 H04N

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 745 837 A (FUHRMANN AMIR MICHAEL) 28 April 1998 (1998-04-28) column 1, line 19 - line 39 column 3, line 14 -column 4, line 14 column 42, line 50 -column 46, line 30 figures 28,34-38 ---	1,6,7, 12,14, 15,19, 20,25,26
X	US 5 751 282 A (MATTHEWS III JOSEPH H ET AL) 12 May 1998 (1998-05-12) column 2, line 66 -column 7, line 65 figures 1-4 --- -/--	1-4, 6-10, 12-17, 19-23

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

10 January 2001

Date of mailing of the international search report

16/01/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Van der Zaai, R

INTERNATIONAL SEARCH REPORT

Inter Application No
PCT/US 00/15952

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96 41477 A (TV GUIDE ON SCREEN) 19 December 1996 (1996-12-19) page 44, line 31 -page 52, line 20 -----	2-4, 8-10,13, 15-17, 21-23

INTERNATIONAL SEARCH REPORT

Information on patent family members

Interr. Application No

PCT/US 00/15952

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5745837 A	28-04-1998	US 5793759 A	11-08-1998
		US 5768269 A	16-06-1998
		AU 2210597 A	01-10-1997
		WO 9734421 A	18-09-1997
		US 5991308 A	23-11-1999
		AU 711984 B	28-10-1999
		AU 6714896 A	19-03-1997
		BR 9610132 A	21-12-1999
		CA 2230294 A	06-03-1997
		EP 0858695 A	19-08-1998
		WO 9708861 A	06-03-1997
		US 6154456 A	28-11-2000
		US 5966376 A	12-10-1999
US 5751282 A	12-05-1998	NONE	
WO 9641477 A	19-12-1996	US 5585866 A	17-12-1996
		AU 705839 B	03-06-1999
		AU 6092996 A	30-12-1996
		BR 9608903 A	21-09-1999
		CA 2223018 A	19-12-1996
		EP 0830787 A	25-03-1998
		PL 323830 A	27-04-1998