

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
17 June 2004 (17.06.2004)

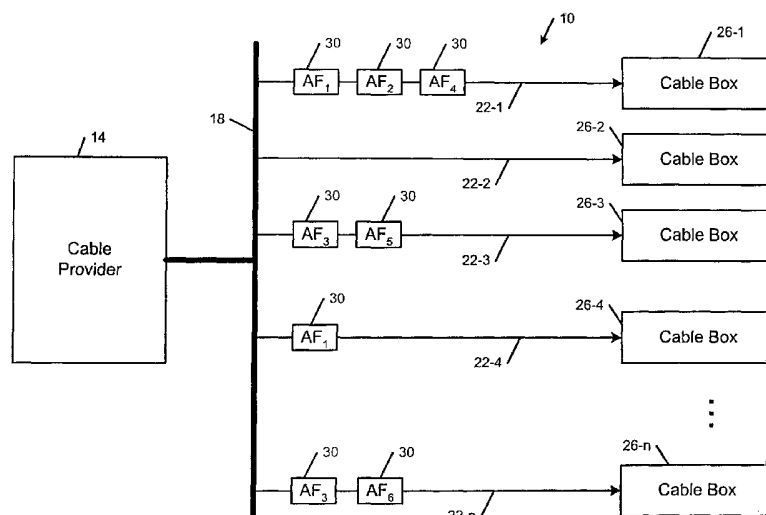
PCT

(10) International Publication Number  
**WO 2004/051401 A3**

- (51) International Patent Classification<sup>7</sup>: **H04N 7/14**, 7/173, 7/16, G06F 15/173
- (21) International Application Number: PCT/US2003/035705
- (22) International Filing Date: 10 November 2003 (10.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 10/308,930 3 December 2002 (03.12.2002) US
- (63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application: US 10/308,930 (CON) Filed on 3 December 2002 (03.12.2002)
- (71) Applicant (for all designated States except US): **MAT-SUSHITA ELECTRIC INDUSTRIAL CO., LTD.** [JP/JP]; 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501 (JP).
- (72) Inventors; and  
(75) Inventors/Applicants (for US only): **KHANDELWAL, Rajesh, B.** [IN/US]; 1031 Buxton Road, Bridgewater, NJ 08807 (US). **BRAUN, David, A.** [US/US]; 2 Mabro Drive, Denville, NJ 07834 (US). **LI, Luyang** [CN/US]; 432 Brennan Court, South Plainfield, NJ 07080 (US). **CHANG, Chieh-Chung** [—/US]; 1702 Pheasant Run, Monmouth Junction, NJ 08852 (US).
- (74) Agents: **STOBBS, Gregory, A.** et al.; Harness, Dickey & Pierce, P.L.C., P.O. Box 828, Bloomfield Hills, MI 48303 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: FLEXIBLE DIGITAL CABLE NETWORK ARCHITECTURE



(57) Abstract: A digital cable network architecture and services method includes a cable medium and a plurality of hosts that include a receiver. A policy file store contains policy files having at least one of a service provider section, a consumer section, and a manufacturer section that can be updated by at least one of the service provider, a consumer and a receiver manufacturer, respectively. A service provider that is associated with the policy file store provides digital cable services over the cable medium to the hosts and downloads monitor applications and policy files to the hosts over the cable medium. The MAs use the service provider section, the consumer section, and/or the manufacturer section of the policy file to alter resource contention, alter service provisioning at levels below a channel level, and/or alter fraudulent receiver identification calculations.



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT,

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

**(88) Date of publication of the international search report:**

19 August 2004

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.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/35705

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : H04N 007/14, 007/173, 007/16; G06F 015/173

US CL : 725/025, 116, 117, 146, 147; 709/224

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. : 725/9, 25, 28, 29, 132, 140

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	WO99/66714 (PETERKA) 23 December 1999, see entire document.	11-13 and 15-17, 18
---		-----
Y		1-4, 6, 7, 8, 9, 10 and 14
Y	US 6,286,139 B1 (DECINQUE) 04 September 2001, see entire document.	8
Y,E	US 6,665,869 B1 (ELLIS et al) 16 December 2003, col. 8, lines 14-54.	14
A,E	US2003/0217369 A1 (HEREDIA) 20 November 2003, see entire document.	1-18
A,P	US 2003/0018445 A1 (VINCE et al) 23 January 2003, see entire document.	1-18
A	US 6,256,393 B1 (SAFADI et al) 03 July 2001, see entire document.	1-18
A	US 6,047,377 A (GONG) 04 April 2000, see entire document.	1-18

☐

Further documents are listed in the continuation of Box C.

☐

See patent family 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 application or patent 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

"&amp;"

document member of the same patent family

Date of the actual completion of the international search

21 June 2004 (21.06.2004)

Date of mailing of the international search report

02 JUL 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

KENNETH A WEIDER

Telephone No. (703) 305-4710