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(71) Applicant (*for all designated States except US*): **THOMSON LICENSING S.A.** [FR/FR]; 46, quai Alphonse Le Gallo, F-92648 Boulogne Cedex (FR).

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(72) Inventors; and

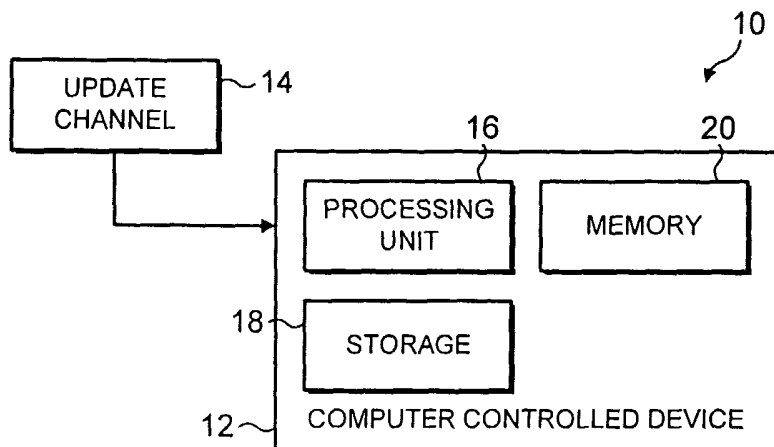
(75) Inventors/Applicants (*for US only*): **LIU, Xiaodong** [CN/US]; 12523 Pebble Knoll Way, Carmel, IN 46033 (US). **DINWIDDIE, Aaron, Hal** [US/US]; 1075 Bear Cub Drive, Circero, IN 46034 (US).

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(74) Agents: **TRIPOLI, Joseph, S.** et al.; Thomson Multimedia Licensing Inc., P.O. Box 5312, Princeton, NJ 08540 (US).

*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: METHOD AND APPARATUS FOR BACKING UP APPLICATION CODE UPON POWER FAILURE DURING A CODE UPDATE



(57) Abstract: A system, method and apparatus for updating computer code in a computer controlled device overcome glitches in updating of the computer code. The present invention allows upgrading of the computer code via any upgrade channel or mechanism. In one form, back-up code corresponding to application code is stored in memory. Upon a power failure or other glitch in which the application code becomes corrupt, back-up code is utilized by the boot code to provide a version of the application code for operation of the computer controlled device. In one form, the upgrade is accomplished via a smart card.

WO 01/052065 A3

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 01/00329

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F11/14 G06F9/445 H04N5/00

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 G06F

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, WPI Data, PAJ, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 666 293 A (HUDSON JR HENRY G ET AL) 9 September 1997 (1997-09-09)	1-5,8,9, 13
Y	the whole document	6,7,11, 12
X	--- "ADAPTER MICROCODE PROTECTION DURING DOWNLOAD" IBM TECHNICAL DISCLOSURE BULLETIN, IBM CORP. NEW YORK, US, vol. 37, no. 10, 1 October 1994 (1994-10-01), pages 181-185, XP000475624 ISSN: 0018-8689 the whole document	1
Y	--- FR 2 764 717 A (THOMSON MULTIMEDIA SA) 18 December 1998 (1998-12-18) the whole document --- -/--	6,7,11, 12

☒ 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

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\*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

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\*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

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\*Z\* document member of the same patent family

Date of the actual completion of the international search

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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

ABSALOM R.

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International Application No

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	"FIRMWARE IMAGE COMPRESSION" IBM TECHNICAL DISCLOSURE BULLETIN, IBM CORP. NEW YORK, US, vol. 38, no. 4, 1 April 1995 (1995-04-01), pages 89-90, XP000516080 ISSN: 0018-8689 the whole document ----	6,7,11, 12
A	EP 0 907 285 A (CANAL PLUS SA) 7 April 1999 (1999-04-07) column 13, line 54 -column 14, line 8 ----	1,8
A	US 5 537 292 A (BOWEN DONALD H) 16 July 1996 (1996-07-16) ----	
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A	US 5 579 522 A (CHRISTESON ORVILLE H ET AL) 26 November 1996 (1996-11-26) the whole document -----	

# INTERNATIONAL SEARCH REPORT

ational application No.  
PCT/US 01/00329

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-13

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-13

Restoring corrupt application code in a computer controlled device

2. Claims: 14-17

Authentication prior to reception of upgrade application code from a memory card

3. Claim : 18

Activation of a memory card interface in response to a card identification signal, as part of a method for upgrading application code in a computer controlled device

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/00329

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