

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
9 February 2006 (09.02.2006)

PCT

(10) International Publication Number  
**WO 2006/014561 A3**

(51) International Patent Classification:  
**G06F 11/08** (2006.01) **H04N 7/64** (2006.01)

(74) Agent: **BELL, Robert, P.**; P.O. Box 310, Aurora, NY 13026 (US).

(21) International Application Number:  
PCT/US2005/024143

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): 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, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 6 July 2005 (06.07.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/585,072 6 July 2004 (06.07.2004) US  
10/894,340 20 July 2004 (20.07.2004) US

(71) Applicant (*for all designated States except US*): **CIRRUS LOGIC, INC.** [US/US]; 2901 Via Fortuna, Austin, Texas 78746 (US).

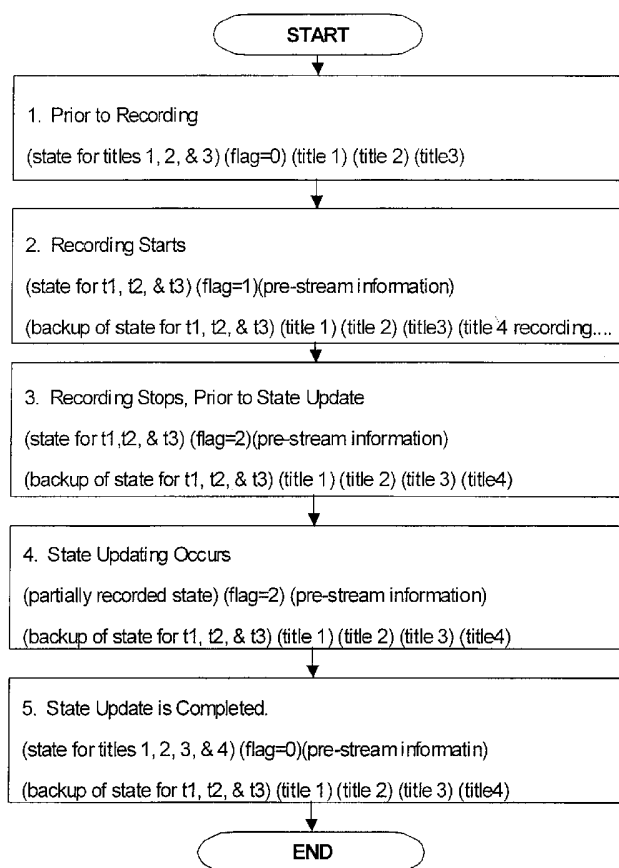
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant and

(72) Inventor (*for all designated States except US*): **WANG, Samuel, C.** [US/US]; 1224 Monte Place, Milpitas, CA 95035 (US).

[Continued on next page]

(54) Title: RECOVERY OF REAL-TIME VIDEO DATA AFTER POWER LOSS



(57) Abstract: A number of different subroutines or algorithms are provided for locating lost video data, reconstructing navigation data, and creating new navigation files or the like so that the DVD may be made readable by an ordinary DVD player. The present invention provides algorithms to recover video data for each of a number of different DVD formats, so that video data may be recovered regardless of which format DVD was being used at the time (e.g., DVD+RW, DVD+R, DVD-RW, DVD-R, or the like). In addition, the present invention provides a number of other algorithms that be used by one or more of the different recovery algorithms, to recover various aspects of data from a disc. The combination of these algorithms provides a complete package of data recovery techniques that allows for video data to be recovered in the event of a power loss or other interruption, and in most instances, creates recordable DVD players which may be subsequently read by other DVD players and the like.

WO 2006/014561 A3



**Published:**

— *with international search report*

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

27 July 2006

*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/US05/24143

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: G06F 11/08;H04N 7/64

USPC: 386/95,111;714/6,42

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. : 386/95,111;714/6,42

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          | US 2004/0136693 A1 (IWASAKI et al) 15 July 2004 (15.07.2004), pg. 3, para. 0068; pg.4, para. 0089, lines 13-18, pg.3, para. 0072 | 1, 2, 4, 13, 14, 16   |



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                                                                | "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                                              |
| "E" | earlier application or patent published on or after the international filing date                                                                                   | "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                                                                     |
| "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) | "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 |
| "O" | document referring to an oral disclosure, use, exhibition or other means                                                                                            | "&" | document member of the same patent family                                                                                                                                                                                                    |
| "P" | document published prior to the international filing date but later than the priority date claimed                                                                  |     |                                                                                                                                                                                                                                              |

Date of the actual completion of the international search

29 March 2006 (29.03.2006)

Date of mailing of the international search report

10 MAY 2006

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. (571) 273-3201

Authorized officer

Thai Tran

Telephone No. 571-272-2600