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(71) Applicant (for all designated States except US): **SONY ELECTRONICS INC.** [US/US]; 1 Sony Drive, Park Ridge, NJ 07656 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LARONNE, Shai, A.** [US/US]; 17 Montville Ave., Montville, NJ 07045 (US).  
**SHINHAU, Hiroyuki** [JP/JP]; 2-5-1-206, Mizonokuchi, Takatsu-ku, Kawasaki-Shi, Kanagawa 213-0001 (JP).

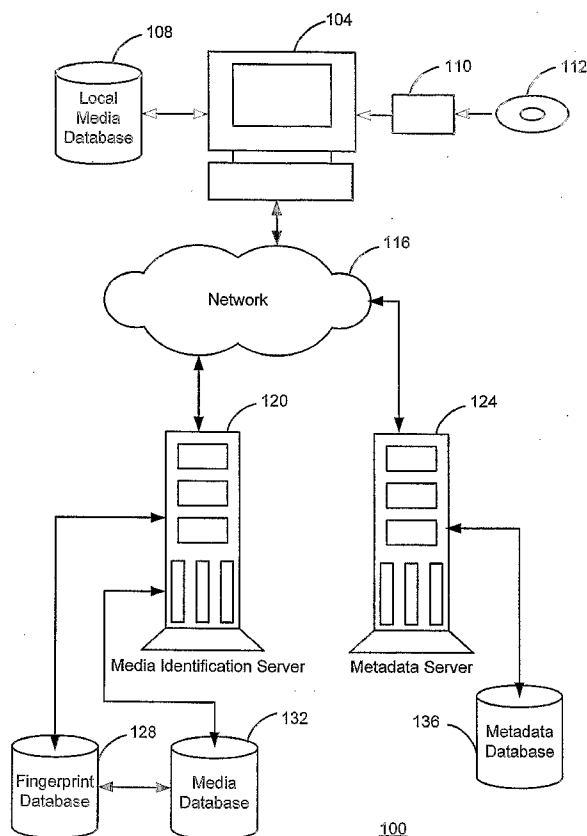
(74) Agents: **KANANEN, Ronald, P.** et al.; Rader, Fishman & Grauer, PLLC, 1233 20th Street, NW, Suite 501, Washington, DC 20036 (US).

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[Continued on next page]

(54) Title: MEDIUM CONTENT IDENTIFICATION



(57) Abstract: Methods and apparatus are presented for identifying medium content and updating database information. A medium identifier is created from both track fingerprint as well as physical media characteristics. The media identifier is then used to query either remote or local database of content information. A medium identification system (100) has a computer (104) with a local media database (108). Computer (104) has a media player (110) which accepts any computer readable medium (112). The computer is coupled to a network (116) such as the Internet or a local or wide area network. The computer is also coupled to a media identification server (120) and a metadata server (124). The media identification server is coupled to a fingerprint database (128) and a media database (132), while metadata server is coupled to a metadata database (136).



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
ML, MR, NE, SN, TD, TG).

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*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/US04/04863

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/30

US CL : 707/3,10

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. : 707/2,3,10,102,104.1; 360/39; 369/53.1

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)  
Please See Continuation Sheet

## 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 20040034650 A1 (SPRINGER et al) 19 February 2004 (19.02.2004), see entire reference.	1-9,11-19,37- 45,77,83,89,90-94
Y, P		----- 10, 20-32, and 46
Y	US 6,345,256 B1 (MILSTED) 05 FEBRUARY 2002 (05.02.2002), col. 14 - col. 16.	10, 20-32, and 46
Y	US 5,956,716 A (KENNER et al) 21 September 1999 (21.09.1999), col. 4 - col. 17.	95-100



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

13 May 2005 (13.05.2005)

Date of mailing of the international search report

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

Facsimile No. (703) 305-3230

Authorized officer

John E Breene

Telephone No. (571) 272-3609

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/04863

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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 No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:  
Please See Continuation 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.: 1-46 and 77-100

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

**BOX III. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING**

Group I, claims 1-46 and 77-100, drawn to creating medium context identifier for use to search the database, classified in class 707, subclass 104.1.

Group II, claims 47-70, drawn to testing condition of a medium, classified in class 369, subclass 53.1.

Group III, claims 71-76, drawn to bit stream data representation for the content on the medium, classified in class 360, subclass 39.

The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

1. Inventions I - III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, each of the respective inventions has a separate utility as in a system not having the others.
2. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for the other Groups, restriction for examination purposes as indicated is proper.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US04/04863

Continuation of B. FIELDS SEARCHED Item 3:

EAST

recordable, drive, book, specification\$1, non-commercial\$3, creat\$3, red, medium, media, cd-r, cd-rw, bit, stream, segment\$1, track\$1, fingerprint\$1, device, identif\$8, database\$1, data near base\$1, key\$1, off-set, off set, distance\$1, closed, finalized, search\$3, quer\$3