

EXHIBIT 9

(12) **United States Patent**
Yoshida et al.

(10) **Patent No.:** **US 9,818,449 B2**
(45) **Date of Patent:** **Nov. 14, 2017**

(54) **EDITING METHOD AND RECORDING AND REPRODUCING DEVICE**

(58) **Field of Classification Search**
CPC ... H04N 9/80; H04N 5/93; H04N 5/92; G11B 27/00

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(Continued)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **15/176,435**

(22) Filed: **Jun. 8, 2016**

(65) **Prior Publication Data**

US 2017/0025156 A1 Jan. 26, 2017

Related U.S. Application Data

(63) Continuation of application No. 14/141,417, filed on Dec. 26, 2013, now Pat. No. 9,384,783, which is a (Continued)

(30) **Foreign Application Priority Data**

Dec. 2, 2004 (JP) 2004-349264
Dec. 28, 2004 (JP) 2004-378767
Dec. 28, 2004 (JP) 2004-378768

(51) **Int. Cl.**

H04N 9/80 (2006.01)
G11B 27/00 (2006.01)

(Continued)

(52) **U.S. Cl.**

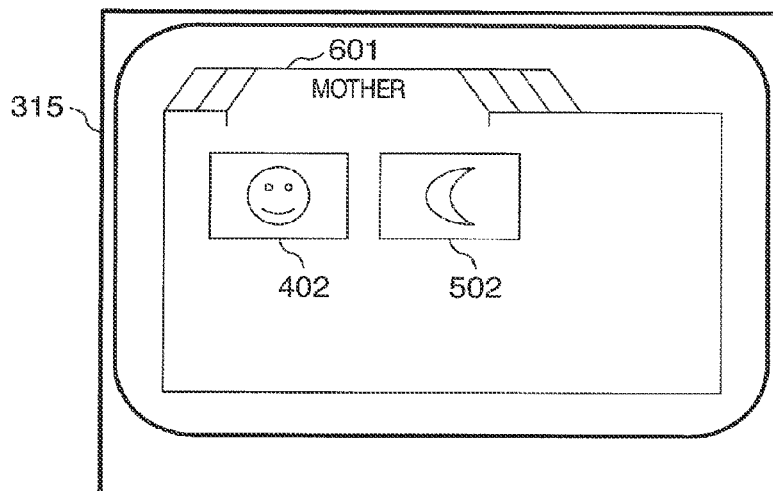
CPC **G11B 27/102** (2013.01); **G06F 3/0482** (2013.01); **G11B 27/031** (2013.01);

(Continued)

(57) **ABSTRACT**

In order to provide a recording and reproducing device that allows a user to select and manage arbitrary play lists, a unit of management for managing all registered play list information and an upper management hierarchical level are added. The unit of management is adapted to be handled on the same level with unified information that indicates a reproduction range of all AV data. User-defined unified information is adapted to be handled on the added management hierarchical level. The user-defined unified information is formed to allow arbitrary reproduction ranges contained on a lower hierarchical level to be registered.

16 Claims, 9 Drawing Sheets



Related U.S. Application Data

continuation of application No. 12/567,898, filed on Sep. 28, 2009, now Pat. No. 8,644,684, which is a continuation of application No. 11/203,457, filed on Aug. 11, 2005, now Pat. No. 7,613,383.

(51) **Int. Cl.**

H04N 5/92 (2006.01)
G11B 27/10 (2006.01)
G11B 27/034 (2006.01)
G11B 27/34 (2006.01)
H04N 5/76 (2006.01)
H04N 9/87 (2006.01)
G06F 3/0482 (2013.01)
G11B 27/031 (2006.01)
H04N 5/93 (2006.01)
H04N 9/82 (2006.01)

(52) **U.S. Cl.**

CPC **G11B 27/034** (2013.01); **G11B 27/34** (2013.01); **H04N 5/76** (2013.01); **H04N 9/87** (2013.01); **G11B 2220/2562** (2013.01); **H04N 9/8205** (2013.01)

(58) **Field of Classification Search**

USPC 386/239, 240, 278, 280, 281, 282, 326, 386/353

See application file for complete search history.

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FIG. 1

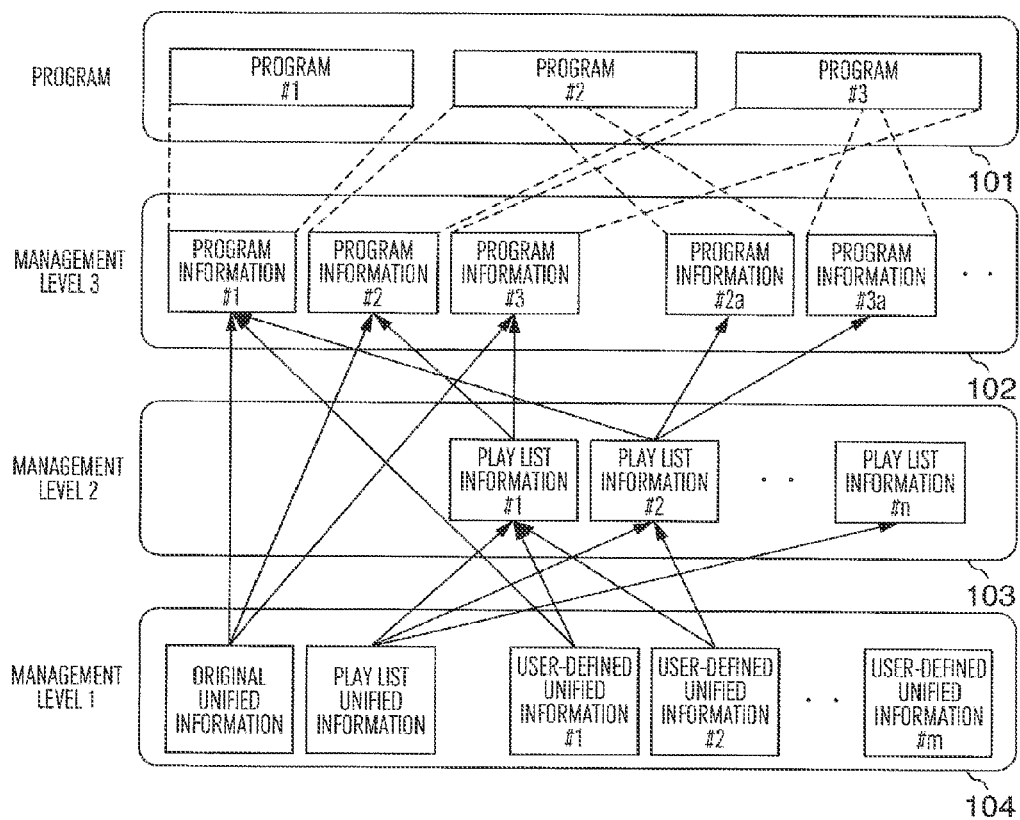
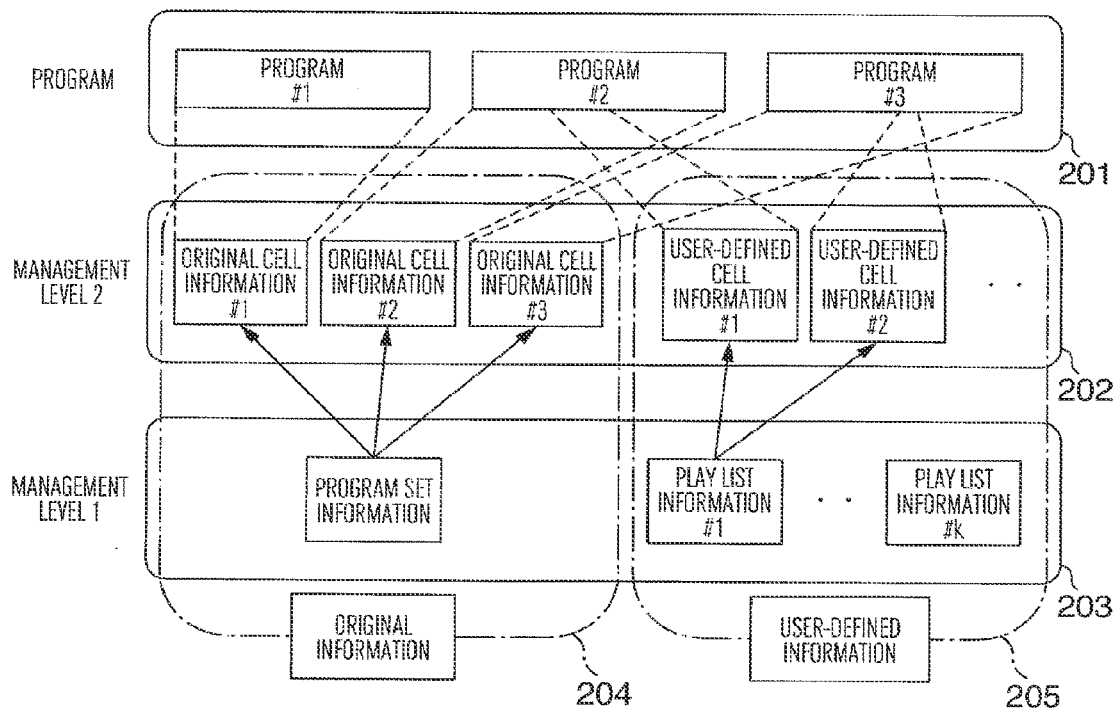


FIG. 2
PRIOR ART



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