

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas, Texarkana Division on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 5:23-CV-00152	DATE FILED 12/29/2023	U.S. DISTRICT COURT Eastern District of Texas, Texarkana Division
PLAINTIFF MAXELL, LTD.		DEFENDANT LG ELECTRONICS INC., and LG ELECTRONICS U.S.A., INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,736,729	5/27/2014	Maxell, Ltd.
2 7,421,188	9/2/2008	Maxell, Ltd.
3 9,818,449	11/14/2017	Maxell, Ltd.
4 10,199,072	2/5/2019	Maxell, Ltd.
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/176,435	11/14/2017	9818449	ASA-10782-04	6859

24956 7590 10/25/2017
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Susumu YOSHIDA, Kawasaki, JAPAN;
Hitachi Maxell, Ltd., Osaka, JAPAN;
Junji SHIOKAWA, Chigasaki, JAPAN;
Hiroo OKAMOTO, Yokohama, JAPAN;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

24956 7590 07/14/2017
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/176,435	06/08/2016	Susumu YOSHIDA	ASA-10782-04	6859

TITLE OF INVENTION: EDITING METHOD AND RECORDING AND REPRODUCING DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	10/16/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
ZHAO, DAQUAN	2484	386-248000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Mattingly & Malur, PC

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Hitachi Maxell, Ltd.

Osaka, JAPAN

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☒ Payment by credit card. Form PTO-2038 is attached.
- ☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 50-1417 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /John R. Mattingly/

Date October 12, 2017

Typed or printed name John R. Mattingly

Registration No. 30,293

Electronic Patent Application Fee Transmittal				
Application Number:		15176435		
Filing Date:		08-Jun-2016		
Title of Invention:		EDITING METHOD AND RECORDING AND REPRODUCING DEVICE		
First Named Inventor/Applicant Name:		Susumu YOSHIDA		
Filer:		John Roberts Mattingly/Krista Hargrove		
Attorney Docket Number:		ASA-10782-04		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	960	960

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				960

Electronic Acknowledgement Receipt	
EFS ID:	30632825
Application Number:	15176435
International Application Number:	
Confirmation Number:	6859
Title of Invention:	EDITING METHOD AND RECORDING AND REPRODUCING DEVICE
First Named Inventor/Applicant Name:	Susumu YOSHIDA
Customer Number:	24956
Filer:	John Roberts Mattingly
Filer Authorized By:	
Attorney Docket Number:	ASA-10782-04
Receipt Date:	12-OCT-2017
Filing Date:	08-JUN-2016
Time Stamp:	12:08:16
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$960
RAM confirmation Number	101217INTEFSW12093800
Deposit Account	501417
Authorized User	John Mattingly
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	10782-04-issuefeetransmittal.pdf	988454	no	1
			c97d3793bb469320099949f51643262d8e2abb9f		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30728	no	2
			d9d2195548773361c899f02908fa20aa3498d1c9		

Warnings:

Information:

Total Files Size (in bytes):	1019182
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

24956 7590 07/14/2017
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

EXAMINER

ZHAO, DAQUAN

ART UNIT

PAPER NUMBER

2484

DATE MAILED: 07/14/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/176,435	06/08/2016	Susumu YOSHIDA	ASA-10782-04	6859

TITLE OF INVENTION: EDITING METHOD AND RECORDING AND REPRODUCING DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	10/16/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

24956 7590 07/14/2017
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/176,435	06/08/2016	Susumu YOSHIDA	ASA-10782-04	6859

TITLE OF INVENTION: EDITING METHOD AND RECORDING AND REPRODUCING DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	10/16/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
ZHAO, DAQUAN	2484	386-248000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/176,435	06/08/2016	Susumu YOSHIDA	ASA-10782-04	6859
24956 7590 07/14/2017 MATTINGLY & MALUR, PC 1800 DIAGONAL ROAD SUITE 210 ALEXANDRIA, VA 22314			EXAMINER ZHAO, DAQUAN	
			ART UNIT 2484	PAPER NUMBER

DATE MAILED: 07/14/2017

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/176,435	Applicant(s) YOSHIDA ET AL.	
	Examiner DAQUAN ZHAO	Art Unit 2484	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 5/31/2017.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 2-17. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☒ All b) ☐ Some *c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. ☒ Notice of References Cited (PTO-892) | 5. ☒ Examiner's Amendment/Comment |
| 2. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>2/22/2017</u> | 6. ☒ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material | 7. ☐ Other _____. |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/DAQUAN ZHAO/
Primary Examiner, Art Unit 2484

1. The following is an examiner's statement of reasons for allowance:

For claims 2, 6, 10 and 14, Honkaniemi (US 20070022382) discloses user interface includes items, each item having a media file and arranged to be visible as a thumbnail to the user interface. The items are arranged to establish at least one playlist so that a series of thumbnails are arranged to establish the playlist. See figures 1-3 and the record of patent 8644684 (12/567898) for more detail. The prior arts did not disclose continue to include deleted information of the first group in the second group when the deleted information recorded on the recording medium was included in both the first group and the second.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Examiner's Comment: the claimed "recording unit", "output unit", "reproducing unit" are limitations that invokes 35 U.S.C. 112, sixth paragraph, and the corresponding structure are found in figure 3: "recording unit signal processing 303", "reproducing unit signal processing 306" and TV 315, also see figures 4-7.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daquan Zhao whose telephone number is (571) 270-1119. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Thai Q, can be reached on (571)272-7382. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daquan Zhao

Application/Control Number: 15/176,435
Art Unit: 2484

Page 4

/Daquan Zhao/

Primary Examiner, Art Unit 2484

Notice of References Cited	Application/Control No. 15/176,435	Applicant(s)/Patent Under Reexamination YOSHIDA ET AL.	
	Examiner DAQUAN ZHAO	Art Unit 2484	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2007/0022382 A1	01-2007	Honkaniemi; Petteri	G06F17/30873	715/733
	B	US-				
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

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	N					
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	P					
	Q					
	R					
	S					
	T					

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*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Receipt date: 02/22/2017

15176435 - GAU: 2484

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)

Approved for use through 07/31/2016. OMB 0651-0031

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	15176435
	Filing Date	2016-06-08
	First Named Inventor	YOSHIDA, S.
	Art Unit	2484
	Examiner Name	TBD
	Attorney Docket Number	ASA-10782-04

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6181870	B1	2001-01-30	OKADA et al.	
	2	7512622	B2	2009-03-31	VOLK et al.	
	3	6480669	B1	2002-11-12	TSUGUMAGARI et al.	
	4	7257774	B2	2007-04-14	DENOUE et al.	
	5	6470140	B1	2002-10-22	SUGIMOTO et al.	
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030063897	A1	2003-04-03	JUNG-KWON	

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2	20010023436	A1	2001-09-20	SRINIVASAN et al.
3	20070022382	A1	2007-01-25	HONKANIEMI

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	2004-192779	JP	A	2004-07-08	HITACHI, LTD.		
	2	2003-36652	JP	A	2003-02-07	TOSHIBA CORP.		
	3	11-32301	JP	A	1999-02-02	SONY CORP.		
	4	2000-152180	JP	A	2000-05-30	MATSUSHITA ELECTRIC IND CO LTD		
	5	2003-100055	JP	A	2003-04-04	MATSUSHITA ELECTRIC IND CO LTD.		
	6	2002-150503	JP	A	2002-05-24	PIONEER ELECTRONIC CORP.		
	7	1243596	CN	A	2000-02-02	MATSUSHITA ELECTRIC IND CO LTD.		

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8	2003-123389	JP	A	2003-04-25	SONY CORP.		
9	2002-197806	JP	A	2002-07-12	TOSHIBA CORP.		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Japan Patent Office (JPO) office action for JPO patent application JP2008-268104 (June 12, 2009).	
	2	Japan Patent Office (JPO) office action for JPO patent application JP2004-349264 (August 6, 2008).	
	3	Chinese Intellectual Property Office (SIPO) office action for SIPO patent application CN2005-100935522 (May 26, 2008).	
	4	Toshiba HDD & DVD Video Recorder Instruction Manual RD-X5 Operating Instructions, Toshiba Corporation, pp. 148-159 (2004).	
	5	Office action for Japan Patent Office patent application JP2008-31843 (December 21, 2010).	

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Examiner Signature	/DAQUAN ZHAO/	Date Considered	06/28/2017
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Attorney Docket Number	ASA-10782-04

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/John R. Mattingly/	Date (YYYY-MM-DD)	2017-02-22
Name/Print	John R. Mattingly	Registration Number	30,293

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The information provided by you in this form will be subject to the following routine uses:

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Receipt date: 02/22/2017

15176435 - GAU: 2484

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)

Approved for use through 07/31/2016. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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	Art Unit	2484
	Examiner Name	TBD
	Attorney Docket Number	ASA-10782-04

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	1	6181870	B1	2001-01-30	OKADA et al.	
	2	7512622	B2	2009-03-31	VOLK et al.	
	3	6480669	B1	2002-11-12	TSUGUMAGARI et al.	
	4	7257774	B2	2007-04-14	DENOUE et al.	
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	2	2003-36652	JP	A	2003-02-07	TOSHIBA CORP.		
	3	11-32301	JP	A	1999-02-02	SONY CORP.		
	4	2000-152180	JP	A	2000-05-30	MATSUSHITA ELECTRIC IND CO LTD		
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	1	Japan Patent Office (JPO) office action for JPO patent application JP2008-268104 (June 12, 2009).	
	2	Japan Patent Office (JPO) office action for JPO patent application JP2004-349264 (August 6, 2008).	
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Examiner Signature	/DAQUAN ZHAO/	Date Considered	06/10/2017
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OR

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/John R. Mattingly/	Date (YYYY-MM-DD)	2017-02-22
Name/Print	John R. Mattingly	Registration Number	30,293

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Search Notes 	Application/Control No. 15176435	Applicant(s)/Patent Under Reexamination YOSHIDA ET AL.
	Examiner DAQUAN ZHAO	Art Unit 2484

CPC- SEARCHED		
Symbol	Date	Examiner
h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92	7/10/2017	dz

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner
h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92	7/10/2017	dz

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
386	239,240,278,280,281,282,326,353	7/10/2017	dz

SEARCH NOTES		
Search Notes	Date	Examiner
USPAT; USPGPUB; USOCR; EPO; JPO; DERWENT; IBM_TDB	7/10/2017	DZ

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92	7/10/2017	dz
386	239,240,278,280,281,282,326,353	7/10/2017	dz

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EAST Search History

EAST Search History (Prior Art)

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S15	58	fujita.in. and video same time and edit\$3	USPAT	OR	OFF	2015/03/24 13:18
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S30	26	S29 and thumbnail	US-PGPUB; USPAT; USOCR	OR	OFF	2015/03/24 17:57
S31	9328	(386/239,240,278,280,281,282,326,353).OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/24 20:27
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			IBM_TDB			
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S34	5160	thumbnail same user same (select\$5 or click\$5) same (GUI or interface near3 user)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/24 20:30
S35	111	S31 and S34	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/24 20:30
S36	4611	(h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/24 20:47
S37	5160	S34 and S34	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/24 20:48
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S40	0	S39 and software	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/25 10:17
S41	0	S39 and CPU	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2015/03/25 10:17

			EPO; JPO; DERWENT; IBM_TDB			
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S45	1	("7613383").PN.	USPAT; USOCR	OR	OFF	2015/10/04 10:30
S46	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2015/10/04 10:35
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S49	476	S43 not S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/04 11:28
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S51	4731	(h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/10/04 13:24
S52	9856	(386/239,240,278,280,281,282,326,353).OCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/10/04 13:24
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S56	5001	(h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/05/15 12:04
S57	9995	(386/239,240,278,280,281,282,326,353).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/05/15 12:04
S58	68	S55 and (S56 or S57)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/05/15 12:04
S62	1	("9384783").PN.	USPAT; USOCR	OR	OFF	2017/03/17 19:18
S63	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2017/03/17 21:20
S64	1	("7613383").PN.	USPAT; USOCR	OR	OFF	2017/03/17 21:25
S65	816	edit\$5 near5 thumbnail same select\$5 same user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/03/17 22:10
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S67	10179	(386/239,240,278,280,281,282,326,353).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	2017/03/17 22:10

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S76	1	("7613383").PN.	USPAT; USOCR	OR	OFF	2017/06/28 13:42
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7/10/2017 11:30:13 AM

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EAST Search History

EAST Search History (Prior Art)

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S14	251	fujita.in. and video same time	USPAT	OR	OFF	2015/03/24 13:18
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S35	111	S31 and S34	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/24 20:30
S36	4611	(h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/24 20:47
S37	5160	S34 and S34	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/24 20:48
S38	16	S34 and S36	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/24 20:48
S39	2	"20140178042"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/25 10:16
S40	0	S39 and software	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/25 10:17
S41	0	S39 and CPU	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2015/03/25 10:17

			EPO; JPO; DERWENT; IBM_TDB			
S42	1	S39 and program	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/25 10:17
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S45	1	("7613383").PN.	USPAT; USOCR	OR	OFF	2015/10/04 10:30
S46	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2015/10/04 10:35
S47	7	("20030063897" "20070022382" "6181870" "6470140" "6480669" "7257774").PN. OR ("8644684").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/10/04 10:36
S48	231	edit\$5 near5 thumbnail same select\$5 same (user near4 interface or GUI)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/04 10:57
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S50	2	("5637871" "5856931").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/10/04 12:04
S51	4731	(h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/10/04 13:24
S52	9856	(386/239,240,278,280,281,282,326,353).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/10/04 13:24
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S54	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2016/05/15 12:03
S55	756	edit\$5 near5 thumbnail same select\$5 same user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/05/15 12:04
S56	5001	(h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/05/15 12:04
S57	9995	(386/239,240,278,280,281,282,326,353).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/05/15 12:04
S58	68	S55 and (S56 or S57)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/05/15 12:04
S62	1	("9384783").PN.	USPAT; USOCR	OR	OFF	2017/03/17 19:18
S63	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2017/03/17 21:20
S64	1	("7613383").PN.	USPAT; USOCR	OR	OFF	2017/03/17 21:25
S65	816	edit\$5 near5 thumbnail same select\$5 same user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/03/17 22:10
S66	6439	(h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/03/17 22:10
S67	10179	(386/239,240,278,280,281,282,326,353).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	2017/03/17 22:10

			IBM_TDB			
S68	69	S65 and (S66 or S67)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/03/17 22:10
S69	1	("6038295").PN.	USPAT; USOCR	OR	OFF	2017/03/20 12:57
S70	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2017/06/10 09:11
S71	23	("20010023436" "6480669" "20070022382" "6470140" "20030063897" "6181870" "7257774" "7512622" "7512622").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2017/06/10 09:31
S72	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2017/06/28 13:22
S73	452	daquan near3 zhao	USPAT	OR	OFF	2017/06/28 13:33
S74	1	("9384783").PN.	USPAT; USOCR	OR	OFF	2017/06/28 13:36
S75	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2017/06/28 13:39
S76	1	("7613383").PN.	USPAT; USOCR	OR	OFF	2017/06/28 13:42
S79	1	("20030063897").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/28 16:24

7/10/2017 11:21:39 AM

C:\Users\dzhao1\Documents\EAST\Workspaces\15176435.wsp

Issue Classification 	Application/Control No. 15176435	Applicant(s)/Patent Under Reexamination YOSHIDA ET AL.	
	Examiner DAQUAN ZHAO	Art Unit 2484	

CPC						
Symbol					Type	Version
G11B		27	/	102	F	2013-01-01
G11B		27	/	034	I	2013-01-01
G11B		27	/	34	I	2013-01-01
G11B		2220	/	2562	A	2013-01-01
H04N		5	/	76	I	2013-01-01
H04N		9	/	8205	A	2013-01-01
H04N		9	/	87	I	2013-01-01
G06F		3	/	0482	I	2013-01-01
G11B		27	/	031	I	2013-01-01
			/			
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			/			
			/			

CPC Combination Sets						
Symbol			Type	Set	Ranking	Version
		/				
		/				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	16	
/DAQUAN ZHAO/ Primary Examiner. Art Unit 2484	07/10/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	6

Issue Classification 	Application/Control No. 15176435	Applicant(s)/Patent Under Reexamination YOSHIDA ET AL.
	Examiner DAQUAN ZHAO	Art Unit 2484

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION											
CLASS			SUBCLASS			CLAIMED					NON-CLAIMED						
386			239			H	0	4	N	9 / 80 (2006.0)		H	0	4	N	5 / 93 (2006.01.01)	
CROSS REFERENCE(S)						G	1	1	B	27 / 00 (2006.0)							
						H	0	4	N	5 / 92 (2006.01.01)							
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)																
386	240	278	280	281	282												
386	326	353															

NONE		Total Claims Allowed:	
		16	
(Assistant Examiner)	(Date)		
/DAQUAN ZHAO/ Primary Examiner.Art Unit 2484	07/10/2017	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	6

Issue Classification 	Application/Control No. 15176435	Applicant(s)/Patent Under Reexamination YOSHIDA ET AL.
	Examiner DAQUAN ZHAO	Art Unit 2484

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	16	17												
1	2														
2	3														
3	4														
4	5														
5	6														
6	7														
7	8														
8	9														
9	10														
10	11														
11	12														
12	13														
13	14														
14	15														
15	16														

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 16	
/DAQUAN ZHAO/ Primary Examiner. Art Unit 2484 (Primary Examiner) _____ (Date) _____		O.G. Print Claim(s) 1	O.G. Print Figure 6

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 15/176,435		Filing Date 06/08/2016		☐ To be Mailed					
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO														
APPLICATION AS FILED – PART I														
(Column 1)			(Column 2)											
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)						
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A								
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A								
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A								
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =								
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =								
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).												
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))														
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL								
APPLICATION AS AMENDED – PART II														
(Column 1)			(Column 2)			(Column 3)								
AMENDMENT	05/31/2017		CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))		* 16		Minus	** 20		= 0		X \$80 =		0		
	Independent (37 CFR 1.16(h))		* 4		Minus	*** 3		= 1		X \$420 =		420		
	☐ Application Size Fee (37 CFR 1.16(s))													
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))													
											TOTAL ADD'L FEE		420	
(Column 1)			(Column 2)			(Column 3)								
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)		
	Total (37 CFR 1.16(i))		*		Minus	**		=		X \$ =				
	Independent (37 CFR 1.16(h))		*		Minus	***		=		X \$ =				
	☐ Application Size Fee (37 CFR 1.16(s))													
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))													
											TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.														

SLIE
DESHONNE T. MARTINO

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : HITACHI MAXELL, LTD.

Confirmation No.: 6859

Serial No. : 15/176,435

Filed : June 8, 2016

For : EDITING METHOD AND RECORDING AND REPRODUCING
DEVICE

Group : 2484

Examiner : Daquan ZHAO

Docket No. : ASA-10782-04

Customer No.: 24956

AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

May 31, 2017

Sir:

In response to the Office Action mailed March 23, 2017, please amend the
above-identified patent application as follows.

Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 12 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled).

2. (New) An information processing apparatus comprising:

a recording unit configured to record a plurality of video information on a recording medium;

an output unit configured to output a menu display for a user to select one group of video information among a plurality of groups of video information by specifying a position of a character corresponding to the one group of video information;

a reproducing unit configured to reproduce selected video information read out from the recording medium; and

a controller,

wherein, when a first group of video information is selected in the menu display by specifying a position of a character corresponding to the first group of video information, the controller controls the output unit to display a first group of thumbnails corresponding to the first group of video information,

wherein, when a second group of video information is selected in the menu display by specifying a position of a character corresponding to the second group of video information, the controller controls the output unit to display a second group of thumbnails corresponding to the second group of video information, and

wherein, when one video information recorded on the recording medium that is included in both the first group of video information and the second group of video information is deleted from the first group of video information, the controller continues to include the one video information in the second group of video information, and a thumbnail corresponding to the one video information is displayed as one of the thumbnails of the second group of thumbnails when the controller controls the output unit to display the second group of thumbnails.

3. (New) The information processing apparatus according to claim 2,

wherein the controller controls the output unit to display a first character corresponding to the first group of video information in a first area when the first group of thumbnails is displayed,

wherein the controller controls the output unit to display a second character corresponding to the second group of video information in the first area when the second group of thumbnails is displayed.

4. (New) The information processing apparatus according to claim 3,

wherein the controller controls the output unit to display the first group of thumbnails in a second area when the first group of thumbnails is displayed, the second area being different from the first area,

wherein the controller controls the output unit to display the second group of thumbnails in the second area when the second group of thumbnails is displayed.

5. (New) The information processing apparatus according to claim 4,
wherein, when the one video information is deleted from the first group of video information, the controller removes the one video information from the first group of video information without deleting the one video information recorded on the recording medium.

6. (New) An information processing system comprising:
a recording unit configured to record a plurality of video information on a recording medium;
a reproducing unit configured to reproduce selected video information read out from the recording medium; and
a display unit configured to output a menu display for a user to select one group of video information among a plurality of groups of video information by specifying a position of a character corresponding to the one group of video information;

wherein, when a first group of video information is selected in the menu display by specifying a position of a character corresponding to the first group of video information, a first group of thumbnails corresponding to the first group of video information is displayed on the display,

wherein, when a second group of video information is selected in the menu display by specifying a position of a character corresponding to the second group of video information, a second group of thumbnails corresponding to the second group of video information is displayed on the display, and

wherein, when one video information recorded on the recording medium that is included in both the first group of video information and the second group of video information is deleted from the first group of video information, the one video information continues to be included in the second group of video information, and a thumbnail corresponding to the one video information is displayed as one of the thumbnails of the second group of thumbnails when the second group of thumbnails is displayed on the display.

7. (New) The information processing system according to claim 6,

wherein the display displays a first character corresponding to the first group of video information in a first area when the first group of thumbnails is displayed on the display,

wherein the display displays a second character corresponding to the second group of video information in the first area when the second group of thumbnails is displayed on the display.

8. (New) The information processing system according to claim 7,
wherein the display displays the first group of thumbnails in a second area when the first group of thumbnails is displayed on the display, the second area being different from the first area,

wherein the display displays the second group of thumbnails in the second area when the second group of thumbnails is displayed on the display.

9. (New) The information processing system according to claim 8, further comprising:

a controller,

wherein, when the one video information is deleted from the first group of video information, the controller removes the one video information from the first group of video information without deleting the one video information recorded on the recording medium.

10. (New) An information processing method comprising:

recording, by a recording unit, a plurality of video information on a recording medium;

outputting, by an output unit, a menu display for a user to select one group of video information among a plurality of groups of video information by specifying a position of a character corresponding to the one group of video information;

reproducing, by a reproducing unit, selected video information read out from the recording medium;

controlling, by a controller, the output unit to display a first group of thumbnails corresponding to the first group of video information, when a first group of video information is selected in the menu display by specifying a position of a character corresponding to the first group of video information,

controlling, by a controller, the output unit to display a second group of thumbnails corresponding to the second group of video information, when a second group of video information is selected in the menu display by specifying a position of a character corresponding to the second group of video information,

wherein, when one video information recorded on the recording medium that is included in both the first group of video information and the second group of video information is deleted from the first group of video information, the controller continues to include the one video information in the second group of video information, and a thumbnail corresponding to the one video information is displayed as one of the thumbnails of the second group of thumbnails when the controller controls the output unit to display the second group of thumbnails.

11. (New) The information processing method according to claim 10,

further comprising:

controlling, by the controller, the output unit to display a first character corresponding to the first group of video information in a first area when the first group of thumbnails is displayed; and

controlling, by the controller, the output unit to display a second character corresponding to the second group of video information in the first area when the second group of thumbnails is displayed.

12. (New) The information processing method according to claim 11,

further comprising:

controlling, by the controller, the output unit to display the first group of thumbnails in a second area when the first group of thumbnails is displayed, the second area being different from the first area; and

controlling, by the controller, the controller controls the output unit to display the second group of thumbnails in the second area when the second group of thumbnails is displayed.

13. (New) The information processing method according to claim 12,

wherein, when the one video information is deleted from the first group of video information, the controller removes the one video information from the first group of video information without deleting the one video information recorded on the recording medium.

14. (New) An information processing system comprising:

a recording unit configured to record a plurality of video information on a recording medium;

a reproducing unit configured to read video information from the recording medium;

a display unit; and

a controller, wherein the controller is configured to:

control the display unit to display a menu display that includes a plurality of selectable characters that respectively correspond to a plurality of groups of video information,

upon selection of a character corresponding to a first group of video information in the menu display by specifying a position of the character corresponding to the first group of video information, control the display unit to display a first group of thumbnails corresponding to the first group of video information, and

upon selection of a character corresponding to the second group of video information in the menu display by specifying a position of the character corresponding to the second group of video information, control the display unit to display a second group of thumbnails corresponding to the second group of video information,

wherein when one video information recorded on the recording medium is included in both the first group of video information and the second group of video information, and upon deletion of the one video information from the first group of video information, the one video information continues to be included in the second group of video information, and the controller controls the display unit to display a thumbnail corresponding to the one video information as one of the thumbnails of the second group of thumbnails.

15. (New) The information processing system according to claim 14,

wherein upon display of the first group of thumbnails on the display unit, the control unit controls the display unit to display a first character corresponding to the first group of video information in a first area,

wherein upon display of the second group of thumbnails on the display unit, the controller controls the display unit to display a second character corresponding to the second group of video information in the first area.

16. (New) The information processing system according to claim 15,

wherein upon display of the first group of thumbnails on the display unit, the controller controls the display unit to display the first group of thumbnails in a second area, the second area being different from the first area, and

wherein upon display of the second group of thumbnails on the display unit, the controller controls the display unit to display the second group of thumbnails in the second area.

17. (New) The information processing system according to claim 16, wherein, upon deletion of the one video information from the first group of video information, the controller removes the one video information from the first group of video information without instructing the deletion of the one video information recorded on the recording medium.

Serial No. 15/176,435
Amendment filed May 31, 2017
Responsive to Office Action mailed March 23, 2017

REMARKS

Claims 2-17 are presently pending. Claim 1 has been canceled without prejudice or disclaimer. Claims 2-17 are new. No new matter has been added.

Claim for Priority

Applicants appreciate the Examiner's acknowledgement of the claim for foreign priority and the safe receipt of the certified priority document.

Information Disclosure Statement

Applicant respectfully requests that the Examiner officially consider the references submitted in the Information Disclosure Statement filed February 22, 2017.

Rejections Under 35 U.S.C. §112

The Examiner has rejected claim 1 under 35 U.S.C. § 112(b) or 35 U.S.C. § 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Without admitting to the propriety of the rejection, claim 1 has been canceled without prejudice or disclaimer thereby rendering the rejection moot.

Serial No. 15/176,435
Amendment filed May 31, 2017
Responsive to Office Action mailed March 23, 2017

Double Patenting Rejections

Claim 1 stands rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 of prior U.S. Patent 8,644,684. Claim 1 has been amended without prejudice or disclaimer thereby rendering the rejection moot.

New Claims

New claims 2-17 have been added. Claims 2-5 are directed to an information processing apparatus, claims 6-9 are directed to an information processing system, claims 10-13 are directed to an information processing method, and claims 14-17 are directed to an information processing system. Each of claims 2-17 is asserted to be patentable.

Serial No. 15/176,435
Amendment filed May 31, 2017
Responsive to Office Action mailed March 23, 2017

Conclusion

In view of the foregoing amendments and remarks, Applicants request reconsideration of the rejection and allowance of the claims.

The Commissioner is authorized to charge any shortage in the fees due, or credit any overpayment, to Deposit Account No. 50-1417 (referencing Attorney Docket No. ASA-10782-04).

Respectfully submitted,

MATTINGLY & MALUR, PC

/John R. Mattingly/
John R. Mattingly
Registration No. 30,293
703-684-1120

Electronic Patent Application Fee Transmittal				
Application Number:		15176435		
Filing Date:		08-Jun-2016		
Title of Invention:		Editing Method and Recording and Reproducing Device		
First Named Inventor/Applicant Name:		Susumu YOSHIDA		
Filer:		John Roberts Mattingly/Krista Hargrove		
Attorney Docket Number:		ASA-10782-04		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
INDEPENDENT CLAIMS IN EXCESS OF 3	1201	1	420	420
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				420

Electronic Acknowledgement Receipt	
EFS ID:	29349648
Application Number:	15176435
International Application Number:	
Confirmation Number:	6859
Title of Invention:	Editing Method and Recording and Reproducing Device
First Named Inventor/Applicant Name:	Susumu YOSHIDA
Customer Number:	24956
Filer:	John Roberts Mattingly/Krista Hargrove
Filer Authorized By:	John Roberts Mattingly
Attorney Docket Number:	ASA-10782-04
Receipt Date:	31-MAY-2017
Filing Date:	08-JUN-2016
Time Stamp:	11:54:45
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$420
RAM confirmation Number	053117INTEFSW11565900
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Authorized User	Krista Hargrove
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: 37 CFR 1.16 (National application filing, search, and examination fees) 37 CFR 1.17 (Patent application and reexamination processing fees)	

37 CFR 1.19 (Document supply fees)					
37 CFR 1.20 (Post Issuance fees)					
37 CFR 1.21 (Miscellaneous fees and charges)					
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		10782-04-AMD01.pdf	53458	yes	14
			0ef54dd98eb3bb228416eb077176f7831a0e234e		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	11	
	Applicant Arguments/Remarks Made in an Amendment		12	14	
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30548	no	2
			5065375523f0c4b5caa8805966dc9824452824c2		
Warnings:					
Information:					
Total Files Size (in bytes):			84006		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/176,435	06/08/2016	Susumu YOSHIDA	ASA-10782-04	6859
24956 7590 03/23/2017 MATTINGLY & MALUR, PC 1800 DIAGONAL ROAD SUITE 210 ALEXANDRIA, VA 22314			EXAMINER ZHAO, DAQUAN	
			ART UNIT 2484	PAPER NUMBER
			NOTIFICATION DATE 03/23/2017	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail@mmiplaw.com

Office Action Summary	Application No. 15/176,435	Applicant(s) YOSHIDA ET AL.	
	Examiner DAQUAN ZHAO	Art Unit 2484	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/8/2016.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) ☒ Claim(s) 1 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 6/8/2016 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☒ All b) ☐ Some** c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date ____.
- 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 4) ☐ Other: ____.

1. The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Claim Rejections - 35 USC § 112

2. The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim1 is rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Claim elements “an output means” and “a reproduction means” are limitations that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to disclose the corresponding structure, material, or acts for the claimed function.

Applicant may:

- (a) Amend the claim so that the claim limitation will no longer be interpreted as a limitation under 35 U.S.C. 112, sixth paragraph; or
- (b) Amend the written description of the specification such that it expressly recites what structure, material, or acts perform the claimed function without introducing any new matter (35 U.S.C. 132(a)).

If applicant is of the opinion that the written description of the specification already implicitly or inherently discloses the corresponding structure, material, or acts so that one of ordinary skill in the art would recognize what structure, material, or acts perform the claimed function, applicant should clarify the record by either:

(a) Amending the written description of the specification such that it expressly recites the corresponding structure, material, or acts for performing the claimed function and clearly links or associates the structure, material, or acts to the claimed function, without introducing any new matter (35 U.S.C. 132(a)); or

(b) Stating on the record what the corresponding structure, material, or acts, which are implicitly or inherently set forth in the written description of the specification, perform the claimed function. For more information, see 37 CFR 1.75(d) and MPEP §§ 608.01(o) and 2181.

Double Patenting

4. A rejection based on double patenting of the “same invention” type finds its support in the language of 35 U.S.C. 101 which states that “whoever invents or discovers any new and useful process... may obtain a patent therefor...” (Emphasis added). Thus, the term “same invention,” in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957).¹

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the claims that are directed to the same invention so they are no

longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claim 1 is rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 1 of prior U.S. Patent No. 8,644,684. This is a statutory double patenting rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daquan Zhao whose telephone number is (571) 270-1119. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Thai Q, can be reached on (571)272-7382. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daquan Zhao

/Daquan Zhao/

Primary Examiner, Art Unit 2484

Notice of References Cited	Application/Control No. 15/176,435	Applicant(s)/Patent Under Reexamination YOSHIDA ET AL.	
	Examiner DAQUAN ZHAO	Art Unit 2484	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-7,512,622 B2	03-2009	Volk; Andrew R.	G06F17/30038	707/999.102
	B	US-				
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes 	Application/Control No. 15176435	Applicant(s)/Patent Under Reexamination YOSHIDA ET AL.
	Examiner DAQUAN ZHAO	Art Unit 2484

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner
h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92	3/17/2017	dz

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
386	239,240,278,280,281,282,326,353	3/17/2017	dz

SEARCH NOTES		
Search Notes	Date	Examiner
USPAT; USPGPUB; USOCR; EPO; JPO; DERWENT; IBM_TDB	3/17/2017	DZ

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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BIB DATA SHEET

CONFIRMATION NO. 6859

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
15/176,435	06/08/2016	386	2484	ASA-10782-04		
APPLICANTS Hitachi Maxell, Ltd., Osaka, JAPAN; INVENTORS Susumu YOSHIDA, Kawasaki, JAPAN; Junji SHIOKAWA, Chigasaki, JAPAN; Hiroo OKAMOTO, Yokohama, JAPAN; ** CONTINUING DATA ***** This application is a CON of 14/141,417 12/26/2013 PAT 9384783 which is a CON of 12/567,898 09/28/2009 PAT 8644684 which is a CON of 11/203,457 08/11/2005 PAT 7613383 ** FOREIGN APPLICATIONS ***** JAPAN 2004-378767 12/28/2004 JAPAN 2004-378768 12/28/2004 JAPAN 2004-349264 12/02/2004 ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 06/21/2016						
Foreign Priority claimed ☒ Yes ☐ No 35 USC 119(a-d) conditions met ☒ Yes ☐ No Verified and Acknowledged /DAQUAN ZHAO/ Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY JAPAN	SHEETS DRAWINGS 9	TOTAL CLAIMS 1	INDEPENDENT CLAIMS 1
ADDRESS MATTINGLY & MALUR, PC 1800 DIAGONAL ROAD SUITE 210 ALEXANDRIA, VA 22314 UNITED STATES						
TITLE Editing Method and Recording and Reproducing Device						
FILING FEE RECEIVED 1740	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

<i>Index of Claims</i> 	Application/Control No. 15176435	Applicant(s)/Patent Under Reexamination YOSHIDA ET AL.
	Examiner DAQUAN ZHAO	Art Unit 2484

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47									
CLAIM		DATE							
Final	Original	03/17/2017							
	1	✓							

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2017/03/17 21:20
L2	1	("7613383").PN.	USPAT; USOCR	OR	OFF	2017/03/17 21:25
L3	816	edit\$5 near5 thumbnail same select\$5 same user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2017/03/17 22:10
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S1	1	(11/203457).APP.	USPAT; USOCR	OR	OFF	2015/03/23 17:14
S2	1	(12/257898).APP.	USPAT; USOCR	OR	OFF	2015/03/23 17:23
S3	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2015/03/23 17:24
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S14	251	fujita.in. and video same time	USPAT	OR	OFF	2015/03/24 13:18
S15	58	fujita.in. and video same time and edit\$3	USPAT	OR	OFF	2015/03/24 13:18
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S38	16	S34 and S36	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/03/24 20:48
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			DERWENT; IBM_TDB			
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S44	1	("7313383").PN.	USPAT; USOCR	OR	OFF	2015/10/04 10:30
S45	1	("7613383").PN.	USPAT; USOCR	OR	OFF	2015/10/04 10:30
S46	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2015/10/04 10:35
S47	7	("20030063897" "20070022382" "6181870" "6470140" "6480669" "7257774").PN. OR ("8644684").URPN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/10/04 10:36
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S49	476	S43 not S48	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/10/04 11:28
S50	2	("5637871" "5856931").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2015/10/04 12:04
S51	4731	(h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/10/04 13:24
S52	9856	(386/239,240,278,280,281,282,326,353).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/10/04 13:24
S53	64	S43 and (S51 or S52)	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2015/10/04 13:25

			EPO; JPO; DERWENT; IBM_TDB			
S54	1	("8644684").PN.	USPAT; USOCR	OR	OFF	2016/05/15 12:03
S55	756	edit\$5 near5 thumbnail same select\$5 same user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/05/15 12:04
S56	5001	(h04n9/80 or g11b27/00 or h04n5/93 or h04n5/92).CPC.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/05/15 12:04
S57	9995	(386/239,240,278,280,281,282,326,353).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/05/15 12:04
S58	68	S55 and (S56 or S57)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/05/15 12:04
S62	1	("9384783").PN.	USPAT; USOCR	OR	OFF	2017/03/17 19:18

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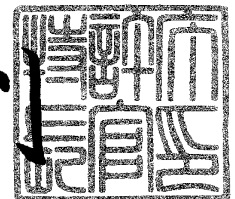
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【書類名】 特許請求の範囲

【請求項 1】

A Vデータとともに、該A Vデータの管理情報を記録媒体上に記録する記録再生装置において、

登録された全てのプレイリスト情報を管理する上位の管理単位を有することを特徴とする記録再生装置。

【請求項 2】

請求項 1 に記載の記録再生装置において、

前記管理単位は前記プレイリスト情報よりも上位の管理階層で管理するものとし、前記管理単位はA Vデータ全ての再生範囲を示す統合情報と同列に扱うように構成することを特徴とする記録再生装置。

【請求項 3】

請求項 1 及び請求項 2 に記載の記録再生装置において、

前記管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成することを特徴とする記録再生装置。

【請求項 4】

A Vデータとともに、該A Vデータの管理情報を記録された記録媒体において、

登録された全てのプレイリスト情報を管理する上位の管理単位を有することを特徴とする記録媒体。

【書類名】明細書

【発明の名称】記録再生装置及び記録媒体

【技術分野】

【0001】

本発明は、記録媒体にデータを記録及び再生する記録再生装置及び記録媒体に関する。

【背景技術】

【0002】

高能率符号化技術の進展に伴い、映像や音声といったＡＶデータをデジタルデータとして符号量圧縮し、ハードディスクや記録型光ディスクなどの大容量の記録媒体へリアルタイムに記録することが可能となっている。また、これらの記録媒体を備えた記録再生装置では、放送や通信により、既に符号量圧縮された状態でデジタルデータが外部から入力された場合、これらのデジタルデータをそのまま記録媒体へ記録することも可能である。

【0003】

これらの記録再生装置では、記録するデジタルデータを管理するための管理情報を生成し、同一の記録媒体上へ合わせて記録する。記録媒体として書換え可能なものを用いた場合、前記管理情報を書換えて再生順序を示すリスト（以降、プレイリストと呼ぶ）を生成、操作することにより、ユーザは記録再生装置上での編集作業ができる（例えば、特許文献１参照）。

【0004】

【特許文献１】特開２０００－１５２１８０

【発明の開示】

【発明が解決しようとする課題】

【0005】

上記従来技術においては、プレイリストはＡＶデータの部分をつなぎ合わせ、再生順序を指し示したものである、ということについて言及している。

【0006】

ところで、記録媒体上のＡＶデータの管理状態を図２に示す。２０１は記録媒体上のＡＶデータそのものであり、記録単位としてプログラム＃１～プログラム＃３が存在する場合を示している。２０２は管理情報における第２管理階層（管理レベル２）を示しており、オリジナルセル情報＃１～オリジナルセル情報＃３は、夫々プログラム＃１～プログラム＃３というプログラム単位の全ての再生範囲を示すものとなっている。またユーザ定義セル情報＃１～ユーザ定義セル情報＃２はユーザが任意に指定したプログラムの全体あるいは一部の再生範囲を示すものであり、その数はユーザの編集操作により増減する。２０３は管理情報の第１管理階層（管理レベル１）を示しており、プログラムセット情報は前記オリジナルセル情報＃１～オリジナルセル情報＃３の全てを含むものであり、これを元に再生することにより、ユーザは記録媒体上に記録された全てのＡＶデータを再生することができる。またプレイリスト情報＃１～プレイリスト情報＃ｋはユーザが任意に指定した前記ユーザ定義セル情報の再生順序を示すものであり、複数持つことが可能である。２０４で示す枠内が、管理情報におけるＡＶデータ全体を管理するオリジナル情報であり、２０５で示す枠内がユーザの編集操作によるプレイリストを管理するためのユーザ定義情報となる。

図２において、プレイリスト情報はプログラムセット情報と同列に、管理レベル１として管理されるため、複数のプレイリスト情報自体の順番は一意に決まってしまう、例えば複数のユーザが夫々好みのプレイリスト情報を生成、選択して管理したいと思っても実現することができなかった。またユーザが複数のプレイリストのうち、任意の幾つかのプレイリストを選択して管理するという点に関しても特に考慮されていなかった。

本発明に係る点に鑑みて成されたものであって、その目的はユーザが任意のプレイリストを選択管理できるような記録再生装置を提供することにある。

【課題を解決するための手段】

【0007】

上記目的を達成するために本発明では、登録された全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、該管理単位はＡＶデータ全ての再生範囲を示す統合情報と同列に扱うように構成する。また追加した管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成する。

【発明の効果】

【０００８】

本発明による記録再生装置によれば、ユーザは任意のプレイリスト、あるいは再生範囲を選択して管理することが可能となるため、単一の記録媒体を複数のユーザが共有する場合などでも、ユーザ毎に好みの再生内容を管理することができ、使い勝手が向上する。

【発明を実施するための最良の形態】

【０００９】

以下、図面を用いて本発明の実施形態について説明する。

【実施例１】

【００１０】

図１は本発明による記録再生装置における、記録媒体上のＡＶデータの管理状態を示す図である。１０１は図２における２０１と同様に、記録媒体上のＡＶデータそのものであり、記録単位としてプログラム＃１～プログラム＃３が存在する場合を示している。

【００１１】

１０２は図２における２０２に相当し、ここでは管理情報における第３管理階層（管理レベル３）を示している。プログラム情報＃１～プログラム情報＃３は、夫々プログラム＃１～プログラム＃３というプログラム単位の全ての再生範囲を示すものとなっている。またプログラム情報＃２ａ～プログラム情報＃３ａはユーザが任意に指定したプログラムの全体あるいは一部の再生範囲を示すものであり、ここでは夫々プログラム＃２の一部、プログラム＃３の一部を示している。プログラム情報＃１～プログラム情報＃３に相当する箇所は、ＡＶデータの追記、つまりプログラムの増加に伴いその情報も追加する。またプログラム情報＃２ａやプログラム情報＃３ａに相当する箇所は、ユーザの編集操作により、その情報の数が増減する。

【００１２】

１０３は図２における管理レベル１に相当するが、ここでは管理情報の第２管理階層（管理レベル２）を示しており、プレイリスト情報＃１～プレイリスト情報＃ｎのみを含む。夫々のプレイリスト情報は前記管理レベル３における任意のプログラム情報の再生順序を示すものであり、複数持つことが可能となっている。

【００１３】

１０４が本発明の特徴的な点として、新たに追加した管理情報の第１管理階層（管理レベル１）であり、複数の統合情報を含む。オリジナル統合情報は図２におけるプログラムセット情報に相当し、管理レベル３におけるプログラム情報＃１～プログラム情報＃３の全てを含み、これを元に再生することにより、ユーザは記録媒体上に記録された全てのＡＶデータを再生することが可能となる。プレイリスト統合情報は管理レベル２におけるプレイリスト情報＃１～プレイリスト情報＃ｎの全てを含み、これを元に再生することにより、ユーザは登録されている全てのプレイリストを順次再生することが可能となる。ユーザ定義統合情報＃１～ユーザ定義統合情報＃ｍは、管理レベル２におけるプレイリスト情報及び管理レベル３におけるプログラム情報のうちの任意の一つあるいは複数を含むものである。例えば複数のユーザが単一の記録媒体を用いる場合に、ユーザ単位に一つのユーザ定義統合情報を使用することにより、夫々のユーザの嗜好に合致した再生内容を管理することが可能となる。

【００１４】

次に本発明による記録再生装置の実施形態について、別の図を用い、もう少し具体的に説明する。

【００１５】

図3は本発明による記録再生装置の一例を示すブロック図であり、デジタル放送を受信して記録媒体に記録し、また記録したデータを再生し、再生出力を得ることができるような記録再生装置を示している。300は記録再生装置、301は入力端子、302は復調回路、303は記録系信号処理回路、304は記録媒体のドライブ機能を含めた記録再生系、305は記録媒体、306は再生系信号処理回路、307は切替え回路、308は分離回路、309は映像復号回路、310はデジタル／アナログ(D／A)変換回路、311は映像出力端子、312は音声復号回路、313はD／A変換回路、314は音声出力端子、315はTVセット、316はユーザI／F、317は制御部、318はシステムバス、319はOSD生成部、320は加算回路である。

【0016】

記録時においては、デジタル放送などにより送信され、受信された信号が、復調回路302において所定の方式により復調された後、記録系信号処理回路303においてタイミング調整用のデータ付加や変調などの必要な信号処理が施されて、記録再生系304により記録媒体305へ記録される。また制御部317は記録媒体305に記録したAVデータの管理情報を内部的に更新し、適当なタイミングで管理情報を記録媒体305へ記録する。

再生時においては、ユーザの指示に応じて記録媒体305から記録再生系304を介して読み出されたデジタルデータは、再生系信号処理回路306において所定の変調方式に則った形式で復調等の再生に必要な信号処理が施され、切替え回路307を介して分離回路308に送られる。映像復号回路309では所定の映像復号処理が施されて、D／A変換回路310においてデジタルデータからアナログ信号への変換が成された後、映像出力端子311を介してTVセット315のモニタ出力へと表示される。また音声復号回路312では所定の音声復号処理が成され、D／A変換回路313においてデジタルデータからアナログ信号への変換が成された後、音声出力端子314を介してTVセット315の音声出力機構により出力される。

【0017】

制御部317は、システムバス318を介して記録再生装置300の各部を制御するものであり、またユーザI／F316を介して入力されたユーザの指示入力に基づいた動作を行うように、装置全体を制御する。なおユーザへの指示入力要求、あるいは必要なユーザへのOSD表示は、OSD生成部319で用意され、加算回路320において、映像復号回路309の出力と適当なレベルで加算されて、最終的にTVセット315のモニタ画面に出力されることにより実現される。

【0018】

次に図1における管理情報構成の具体的な使用例として、管理レベル1における各統合情報を記録データのメニュー表示に使用した場合について説明する。

【0019】

図4は図1におけるオリジナル統合情報を使用してメニュー表示を行う一例である。315は図3におけるTVセットであり、401は全プログラム表示用のタグ、402はプログラム情報#1を示すサムネイル、403はプログラム情報#2を示すサムネイル、404はプログラム情報#3を示すサムネイルである。ユーザはリモコン等により画面上のカーソル位置を所望のサムネイルに移動して選択決定することにより、任意のプログラム、あるいは全てのプログラムを再生することができる。

【0020】

次に図5は図1におけるプレイリスト統合情報を使用してメニュー表示を行う一例である。501は全プレイリスト表示用のタグ、502はプレイリスト情報#1を示すサムネイル、503はプレイリスト情報#2を示すサムネイルである。ユーザは前述の場合と同様にリモコン等により画面上のカーソル位置を所望のサムネイルに移動して選択決定することにより、任意のプレイリスト、あるいは全てのプレイリストを再生することができる。なお前述の全プログラム表示用タグ401から全プレイリスト表示用タグ501への表示切り替えは、ユーザが例えばタグの文字位置でカーソルを移動することなどにより実現

することが可能である。

【0021】

次に図6は図1におけるユーザ定義統合情報#1を使用してメニュー表示を行う一例である。601はユーザ#1(ここでは「ママ」としている)用メニュー表示用のタグであり、402と502は図1からわかるように、プログラム情報#1及びプレイリスト情報#1を示すサムネイルとなっている。「ママ」はママ用メニュー表示用タグ601を自分専用のフォルダとして、自由に再生したいデータを登録、削除することが可能である。

【0022】

同様に図7は図1におけるユーザ定義統合情報#2を使用してメニュー表示を行う一例である。701はユーザ#2(ここでは「パパ」としている)用メニュー表示用のタグであり、503と502は図1からわかるように、プレイリスト情報#2及びプレイリスト情報#1を示すサムネイルとなっている。この場合「パパ」2つのプレイリストを選択しているが、その再生順序を変更することが可能となっている。また前述の「ママ」と同様に、「パパ」はパパ用メニュー表示用タグ701を自分専用のフォルダとして、自由に再生したいデータを登録、削除することが可能である。

【0023】

以上のように本発明の実施例によれば、登録された全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、AVデータ全ての再生範囲を示す統合情報と同列に扱うように構成し、また追加した管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成することにより、ユーザは任意のプレイリスト、あるいは再生範囲を選択して管理することが可能となるため、単一の記録媒体を複数のユーザが共有する場合などでも、ユーザ毎に好みの再生内容を管理することができ、使い勝手が向上する。

【0024】

なお以上の実施例では、デジタル放送を受信してデジタルデータをそのまま記録する場合について述べたが、これはこの限りではなく、ネットワークI/Fを具備し、外部ネットワークからAVデータを取得したり、符号化手段を具備し、アナログデータを符号化しながら記録媒体に記録するような構成でも良い。つまり本実施例は記録媒体上のデータ管理について言及しているものであり、その入力経路については特に限定されるものではない。

【0025】

また、オリジナル統合情報は管理レベル2においても良い。しかし、オリジナル統合情報は、実際は記録したプログラムの実体の管理を表すものであり、他のプレイリスト統合情報やユーザ定義統合情報から参照されるべきものではない。従って、オリジナル統合情報は、プレイリスト統合情報やユーザ定義統合情報と同じ階層に位置付けた方が良い。

【0026】

また、記録媒体への記録構造を図1のようにすれば、記録再生装置と同様に使い勝手を向上させることができる。

【図面の簡単な説明】

【0027】

- 【図1】 本発明による記録再生装置でAVデータの管理状態を示す図。
- 【図2】 従来例によるAVデータの管理状態を示す図。
- 【図3】 本発明による記録再生装置のブロック図。
- 【図4】 オリジナル統合情報の表示出力例。
- 【図5】 プレイリスト統合情報の表示出力例。
- 【図6】 ユーザ定義統合情報の第1の表示出力例。
- 【図7】 ユーザ定義統合情報の第2の表示出力例。

【符号の説明】

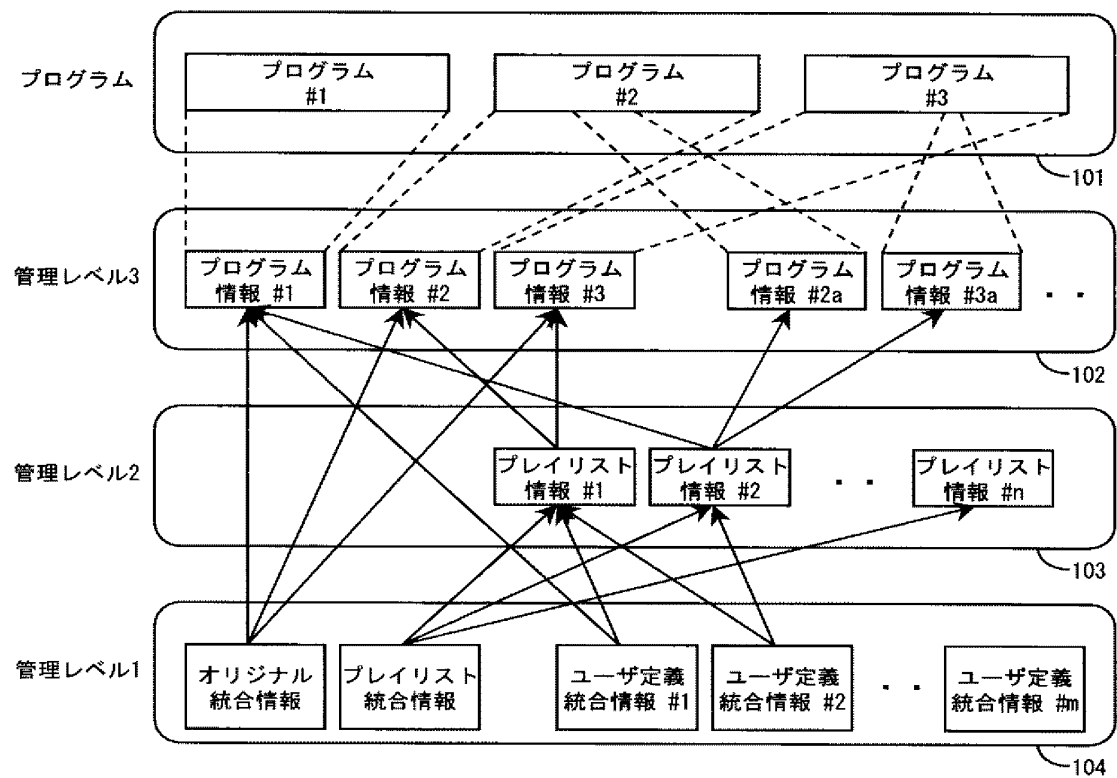
【0028】

101、201 … プログラム(AVストリーム)

1 0 2 … 管理情報における第 3 階層
1 0 3、2 0 2 … 管理情報における第 2 階層
1 0 4、2 0 3 … 管理情報における第 1 階層
3 0 3 … 記録系信号処理
3 0 4 … 記録再生系
3 0 5 … 記録媒体
3 0 6 … 再生系信号処理
3 1 5 … TVセット
3 1 6 … ユーザ I / F
3 1 7 … 制御部
3 1 8 … システムバス
3 1 9 … OSD生成部
4 0 1 … 全プログラム表示用タグ
5 0 1 … 全プレイリスト表示用タグ
6 0 1 … ユーザ # 1 用メニュー表示用タグ
7 0 1 … ユーザ # 2 用メニュー表示用タグ

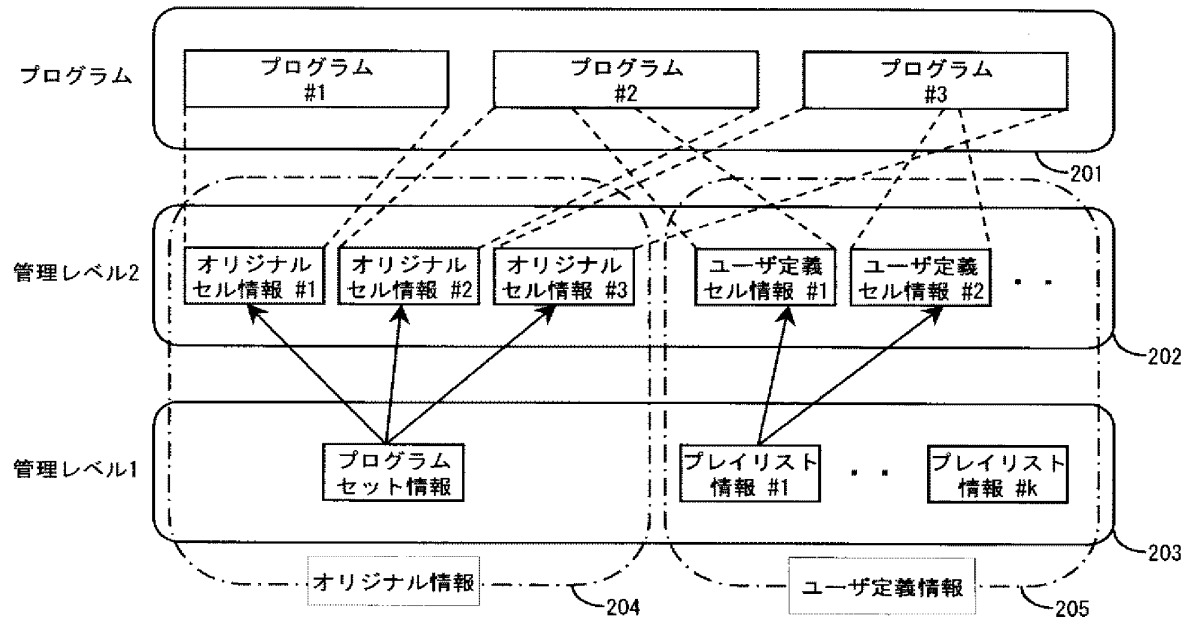
【書類名】 図面
 【図 1】

図 1



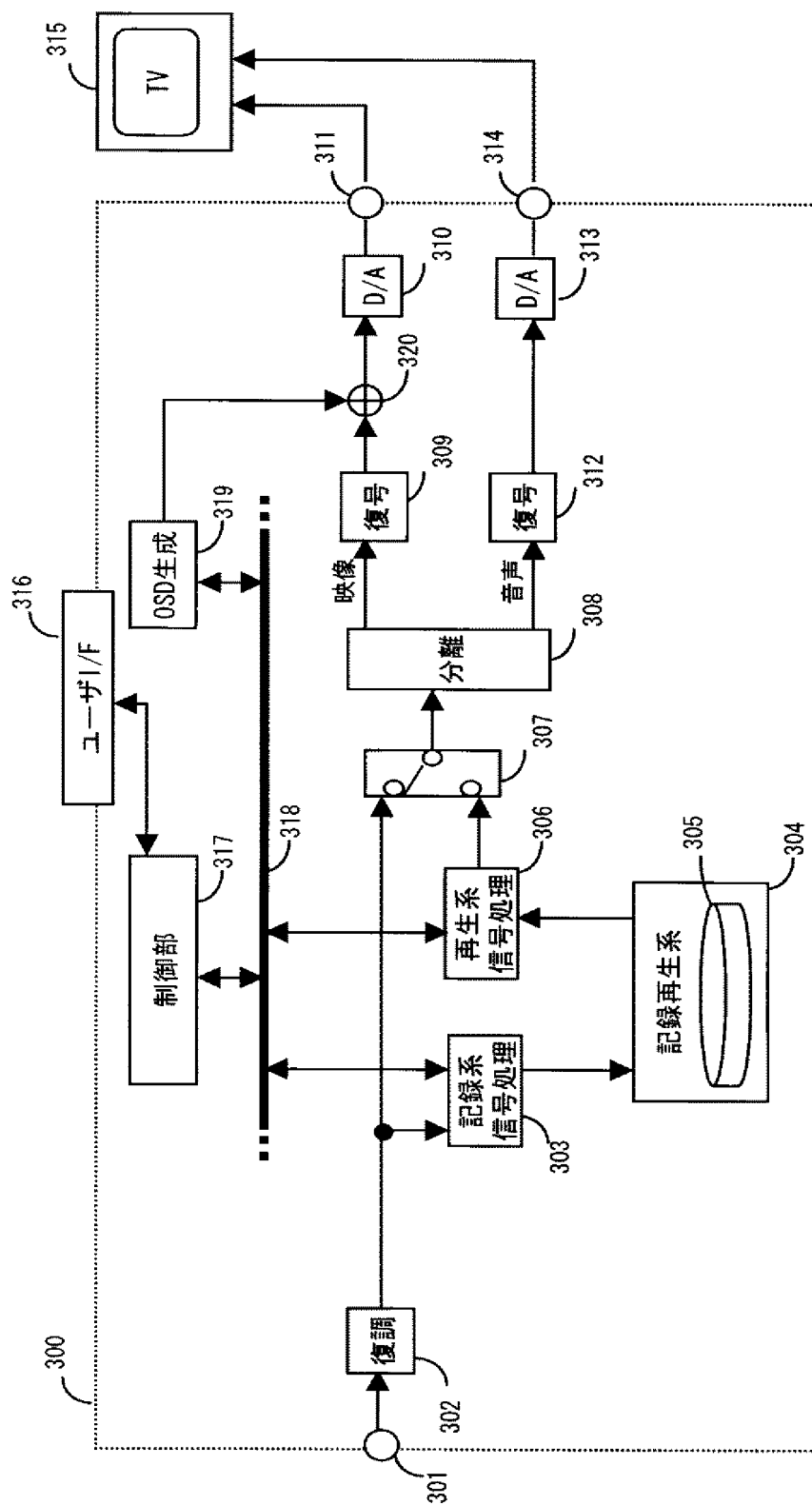
【図 2】

図 2



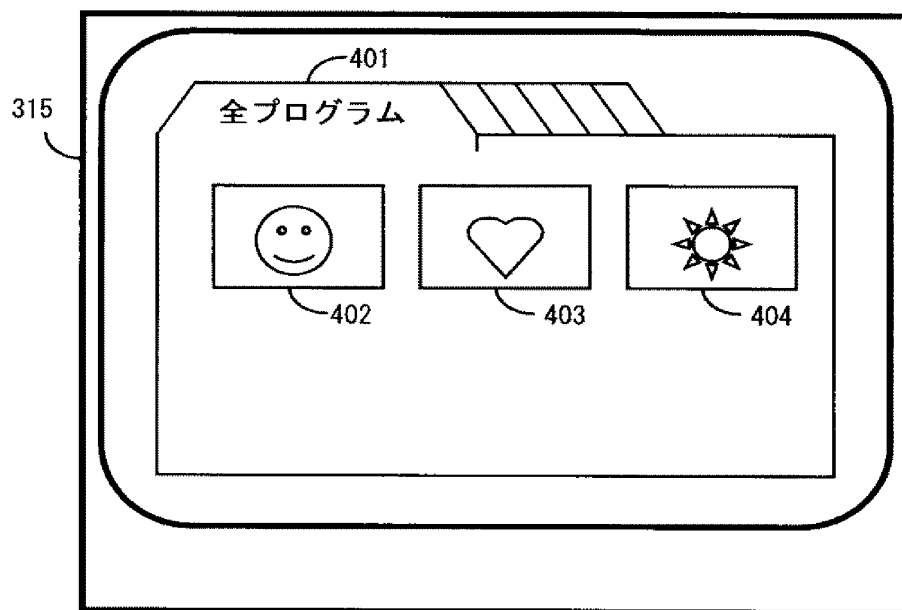
【図3】

図3



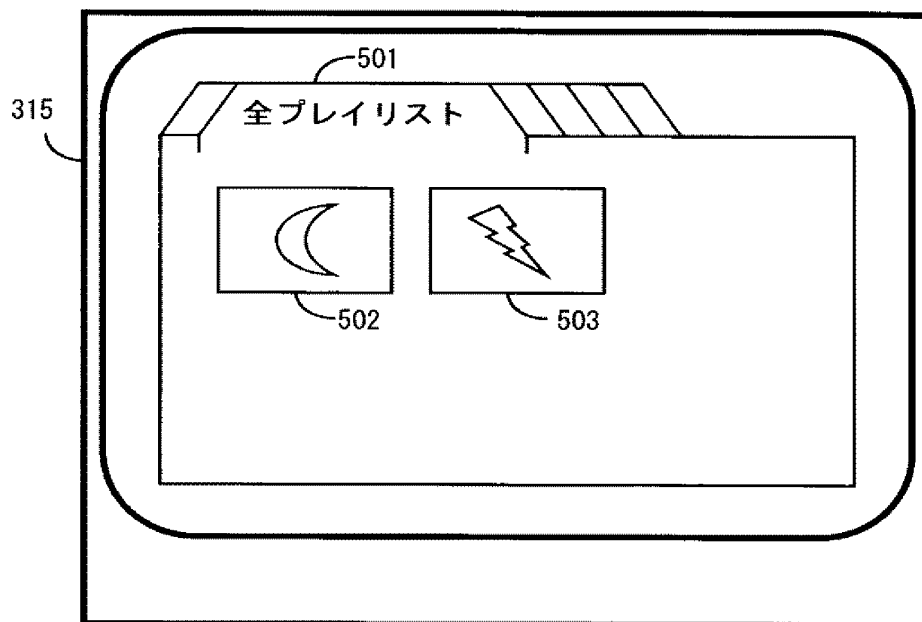
【図4】

図4



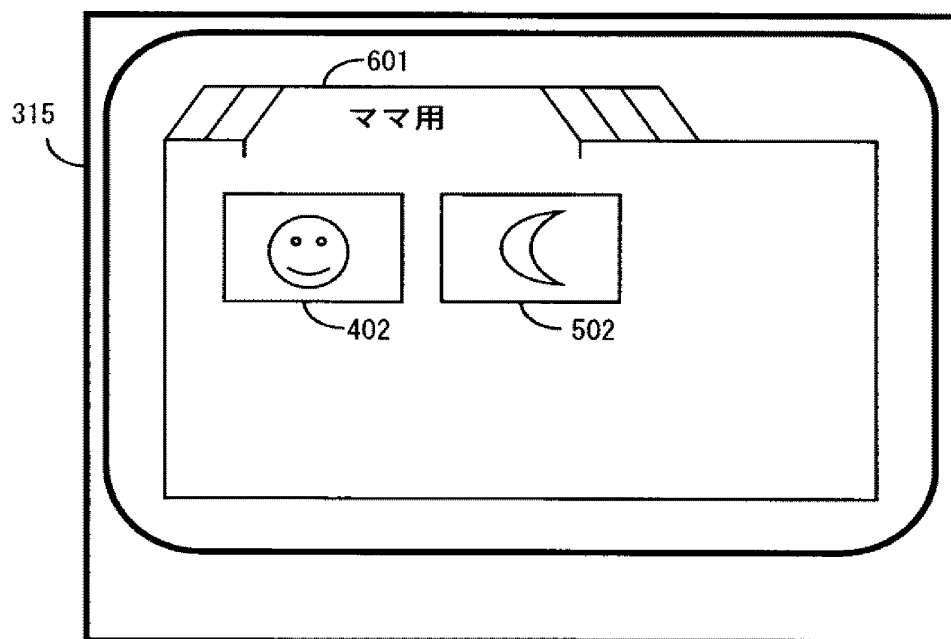
【図5】

図5



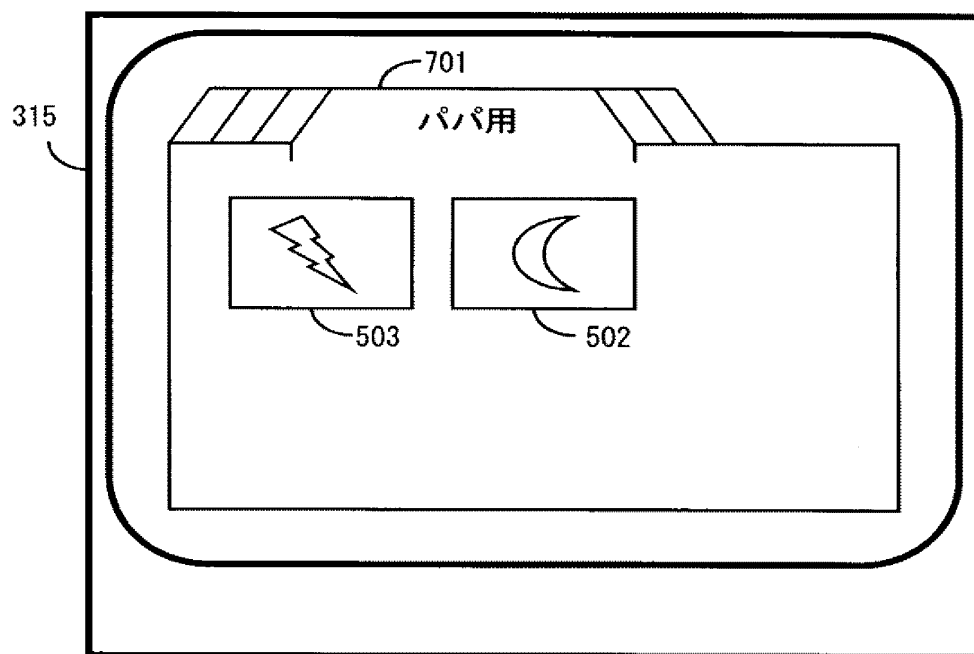
【図 6】

図 6



【図 7】

図 7



【書類名】 要約書

【要約】

【課題】 ユーザが任意のプレイリストを選択管理できるような記録再生装置を提供する

。

【解決手段】 登録された全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、該管理単位をAVデータ全ての再生範囲を示す統合情報と同列に扱うように構成する。また追加した管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成する。

【選択図】 図1

【書類名】 手続補正書
 【あて先】 特許庁長官 殿
 【事件の表示】
 【出願番号】 特願2004-349264
 【補正をする者】
 【識別番号】 000005108
 【氏名又は名称】 株式会社日立製作所
 【代理人】
 【識別番号】 100075096
 【弁理士】
 【氏名又は名称】 作田 康夫

【手続補正1】
 【補正対象書類名】 特許請求の範囲
 【補正対象項目名】 全文
 【補正方法】 変更
 【補正の内容】

 【書類名】 特許請求の範囲
 【請求項1】
 A Vデータと該A Vデータを管理する管理情報を記録する記録方法において、
 該管理情報は、
 該A Vデータと一対をなすプログラム情報と、
 該プログラム情報の履歴を管理するためのオリジナル統合情報と、
 ユーザが任意に定義可能であり、該A Vデータの再生位置を管理するユーザ定義による
 プログラム情報と、
 該ユーザ定義によるプログラム情報もしくは該A Vデータと一対をなすプログラム情
 報の再生シーケンスを管理するプレイリスト情報と、
 該プレイリスト情報の履歴の管理を行うプレイリスト統合情報とを含むことを特徴とす
 る記録方法。

 【請求項2】
 前記管理情報は、前記オリジナル統合情報と、前記プレイリスト統合情報を第1の管理
 階層とし、
 前記プレイリスト情報を第2の管理階層とし、
 前記前期AVデータと一対をなすプログラム情報と前記ユーザ定義によるプログラム情報
 とを第3の管理階層とすることを特徴とする請求項1記載の記録方法。

 【請求項3】
 前期オリジナル統合情報と、前期プレイリスト統合情報と、前期ユーザ定義統合情報を
 第1の管理階層とし、
 プレイリスト情報を第2の管理階層とし、
 前期AVデータと一対をなすプログラム情報とユーザ定義によるプログラム情報とを第3
 の管理階層とし、
 録画した番組のA Vデータを最下層の管理階層とすることを特徴とする請求項1記載の
 記録方法。

 【請求項4】
 入力されたA Vデータを受信する受信回路と、
 該受信回路で受信したA Vデータを記録媒体に記録する記録系信号処理回路と、
 該A Vデータを該記録媒体から再生する再生系信号処理回路と、
 該再生系信号処理回路より読み出されたA Vデータを出力する出力手段と、
 ユーザが操作をするためのユーザインターフェース手段と、
 該ユーザインターフェース手段からの入力により上記の各回路を制御する制御手段と、
 を有し、

記録時には、該制御手段と該記録系信号処理回路により
該ＡＶデータと、該ＡＶデータを管理する管理情報を記録する記録再生装置であって、
該管理情報は、
該ＡＶデータと一対をなすプログラム情報と、該プログラム情報の履歴を管理するための
オリジナル統合情報と、
ユーザが任意に定義可能であり、該ＡＶデータの再生位置を管理するユーザ定義による
プログラム情報と、
該ユーザ定義プログラム情報もしくは前期オリジナルプログラム情報の再生シーケンス
を管理するプレイリスト情報と、
該プレイリスト情報の履歴の管理を行うプレイリスト統合情報を含むことを特徴とする
記録再生装置。

【請求項５】

前記管理情報は、
前期オリジナル統合情報と、前期プレイリスト統合情報を第１の管理階層とし、
前期プレイリスト情報を第２の管理階層とし、
前期ＡＶデータと一対をなすプログラム情報と前期ユーザ定義によるプログラム情報とを
第３の管理階層とすることを特徴とする請求項４記載の記録再生装置。

【請求項６】

前記管理情報は、
前期オリジナル統合情報と、前期プレイリスト統合情報と、前期ユーザ定義統合情報を
第１の管理階層とし、
プレイリスト情報を第２の管理階層とし、
前期ＡＶデータと一対をなすプログラム情報とユーザ定義によるプログラム情報とを第３
の管理階層とすることを特徴とする請求項４記載の記録再生装置。

【請求項７】

記録媒体に記録されたＡＶデータ及び該ＡＶデータの管理情報を再生する再生系信号処
理回路と、
該再生系信号処理回路により再生されたＡＶデータを出力する出力手段と、
ユーザが操作をするためのユーザインターフェース手段と、
該ユーザインターフェース手段からの入力及び該再生系信号処理回路により再生された
該管理情報により上記の各回路を制御する制御手段と、を有し、
記録媒体上のＡＶデータを再生する再生装置であって、
該管理情報は、
該ＡＶデータと一対をなすプログラム情報と、該プログラム情報の履歴を管理するた
めのオリジナル統合情報と、
記録媒体にユーザが任意に定義可能であり、該ＡＶデータの再生位置を管理するユーザ
定義によるプログラム情報と、
該ユーザ定義によるプログラム情報もしくは該ＡＶデータと一対をなすプログラム情報
の再生シーケンスを管理するプレイリスト情報と、
該プレイリスト情報の履歴の管理を行うプレイリスト統合情報とを含み、
該制御手段は、該プレイリスト情報の履歴の管理を行うプレイリスト統合情報に基づい
て、ユーザ操作にしたがって再生制御を行うことを特徴とする再生装置。

【手続補正２】

【補正対象書類名】 明細書

【補正対象項目名】 発明の名称

【補正方法】 変更

【補正の内容】

【発明の名称】 記録方法、記録再生装置及び再生装置

【手続補正3】

【補正対象書類名】 明細書

【補正対象項目名】 0 0 0 7

【補正方法】 変更

【補正の内容】

【0 0 0 7】

上記目的は、特許請求の範囲に記載の発明により、解決される。

【書類名】 手続補正書
【あて先】 特許庁長官殿
【事件の表示】
【出願番号】 特願2004-349264
【補正をする者】
【識別番号】 000005108
【氏名又は名称】 株式会社日立製作所
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【識別番号】 100100310
【弁理士】
【氏名又は名称】 井上 学
【発送番号】 478500

【手続補正1】
【補正対象書類名】 特許請求の範囲
【補正対象項目名】 全文
【補正方法】 変更
【補正の内容】

【書類名】 特許請求の範囲

【請求項1】

プログラムと、前記プログラムを管理する管理情報を記録する記録方法であって、
前記プログラムを記録するステップと、
前記管理情報を記録するステップとを有し、
前記管理情報を記録する前記ステップは、
前記プログラムの全体の再生範囲を示すオリジナルプログラム情報と、前記プログラムの全体あるいは一部の再生範囲を示すユーザ定義プログラム情報と、前記オリジナルプログラム情報または前記ユーザ定義プログラム情報の再生順序を示すプレイリスト情報と、前記オリジナルプログラム情報及び前記プレイリスト情報のうちの少なくとも1つを含むユーザ定義フォルダ情報と、を有する管理情報を記録することを特徴とする記録方法。

【請求項2】

プログラムと、前記プログラムを管理する管理情報を記録媒体に記録する記録装置であって、

前記プログラムと前記管理情報を前記記録媒体に記録する記録手段と、
前記記録手段を制御する制御手段とを有し、
前記記録手段は、

前記プログラムの全体の再生範囲を示すオリジナルプログラム情報と、前記プログラムの全体あるいは一部の再生範囲を示すユーザ定義プログラム情報と、前記オリジナルプログラム情報または前記ユーザ定義プログラム情報の再生順序を示すプレイリスト情報と、前記オリジナルプログラム情報及び前記プレイリスト情報のうちの少なくとも1つを含むユーザ定義フォルダ情報と、を有する前記管理情報を記録することを特徴とする記録装置

。

【手続補正2】
【補正対象書類名】 明細書
【補正対象項目名】 発明の名称
【補正方法】 変更
【補正の内容】
【発明の名称】 記録方法、記録装置

出願人履歴

0 0 0 0 0 5 1 0 8

20040908

住所変更

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株式会社日立製作所

日 本 国 特 許 庁
JAPAN PATENT OFFICE

別紙添付の書類に記載されている事項は下記の出願書類に記載されている事項と同一であることを証明する。

This is to certify that the annexed is a true copy of the following application as filed with this Office.

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パリ条約による外国への出願
に用いる優先権の主張の基礎
となる出願の国コードと出願
番号
The country code and number
of your priority application,
to be used for filing abroad
under the Paris Convention, is

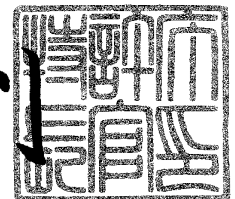
J P 2 0 0 4 — 3 7 8 7 6 7

出 願 人
Applicant(s): 株式会社日立製作所

特許庁長官
Commissioner,
Japan Patent Office

2 0 1 7 年 3 月 1 日

小宮義則



【書類名】	特許願	
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【あて先】	特許庁長官殿	
【国際特許分類】	H04N 5/92	
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【物件名】	特許請求の範囲 1	
【物件名】	明細書 1	
【物件名】	図面 1	
【物件名】	要約書 1	

【書類名】 特許請求の範囲

【請求項1】

ＡＶデータと、該ＡＶデータを管理する管理情報を記録する記録方法において、
該管理情報は、
該ＡＶデータと一対をなすプログラム情報と、
該プログラム情報の履歴を管理するためのオリジナル統合情報と、
ユーザが任意に定義可能であり、該ＡＶデータの再生位置を管理するユーザ定義プログラム情報と、
該ユーザ定義プログラム情報もしくは該ＡＶデータと一対をなすプログラム情報の再生シーケンスを管理するプレイリスト情報と、
該プレイリスト情報の履歴の管理を行うプレイリスト統合情報と、
前記ＡＶデータと一対をなすプログラム情報、もしくはプレイリスト情報とをグルーピングするためのユーザ定義統合情報を記録することを特徴とする記録方法。

【請求項2】

前期オリジナル統合情報と、前期プレイリスト統合情報と、前期ユーザ定義統合情報を第1の管理階層とし、
プレイリスト情報を第2の管理階層とし、
前期ＡＶデータと一対をなすプログラム情報とユーザ定義によるプログラム情報とを第3の管理階層とし、
録画した番組のＡＶデータを最下層の管理階層とすることを特徴とする請求項1記載の記録方法。

【請求項3】

入力されたＡＶデータを受信する受信回路と、
該受信回路で受信したＡＶデータを記録媒体に記録する記録系信号処理回路と、
該ＡＶデータを該記録媒体から再生する再生系信号処理回路と、
該再生系信号処理回路より読み出されたＡＶデータを出力する出力手段と、
ユーザが操作をするためのユーザインターフェース手段と、
該ユーザインターフェース手段からの入力により上記の各回路を制御する制御手段とを有し、
記録時には、該制御手段と該記録系信号処理回路により
該ＡＶデータと、該ＡＶデータを管理する管理情報を記録する記録再生装置であって、
該管理情報は、
該ＡＶデータと一対をなすプログラム情報と、これらプログラム情報の履歴を管理するためのオリジナル統合情報と、
ユーザが任意に定義可能であり、該ＡＶデータの再生位置を管理するユーザ定義によるプログラム情報と、
該ユーザ定義によるプログラム情報もしくは該ＡＶデータと一対をなすプログラム情報の再生シーケンスを管理するプレイリスト情報と、
該プレイリスト情報の履歴の管理を行うプレイリスト統合情報と、
該プレイリスト情報の履歴の管理を行うプレイリスト統合情報と、
前記オリジナルプログラム情報、もしくはプレイリスト情報とをグルーピングするためにユーザが定義可能なユーザ定義統合情報を含むことを特徴とする記録再生装置。

【請求項4】

記録媒体に記録されたＡＶデータ及び該ＡＶデータの管理情報を再生する再生系信号処理回路と、
該再生系信号処理回路により再生されたＡＶデータを出力する出力手段と、
ユーザが操作をするためのユーザインターフェース手段と、
該ユーザインターフェース手段からの入力及び該再生系信号処理回路により再生された該管理情報により上記の各回路を制御する制御手段とを有し、
記録媒体上のＡＶデータを再生する再生装置であって、

該管理情報は、
該ＡＶデータと一対をなすプログラム情報と、該プログラム情報の履歴を管理するためのオリジナル統合情報と、
記録媒体に記録された、ユーザが任意に定義可能であり、該ＡＶデータの再生位置を管理するユーザ定義によるプログラム情報と、
該ユーザ定義によるプログラム情報もしくは前期ＡＶデータと一対をなすプログラム情報の再生シーケンスを管理するプレイリスト情報と、
該プレイリスト情報の履歴の管理を行うプレイリスト統合情報とを含み、
該制御手段は、該ＡＶデータと一対をなすプログラム情報、もしくはプレイリスト情報とをグルーピングするためのユーザ定義統合情報をユーザ操作に応じて記録された管理情報に基づいて、ユーザ操作にしたがって再生制御を行うことを特徴とする再生装置。

【書類名】明細書

【発明の名称】記録方法、記録再生装置及び再生装置

【技術分野】

【0001】

本発明は、記録媒体にデータを記録及び再生する記録再生装置に関する。

【背景技術】

【0002】

高能率符号化技術の進展に伴い、映像や音声といったＡＶデータをデジタルデータとして符号量圧縮し、ハードディスクや記録型光ディスクなどの大容量の記録媒体へリアルタイムに記録することが可能となっている。また、これらの記録媒体を備えた記録再生装置では、放送や通信により、既に符号量圧縮された状態でデジタルデータが外部から入力された場合、これらのデジタルデータをそのまま記録媒体へ記録することも可能である。

【0003】

これらの記録再生装置では、記録するデジタルデータを管理するための管理情報を生成し、同一の記録媒体上へ合わせて記録する。記録媒体として書換え可能なものを用いた場合、前記管理情報を書換えて再生順序を示すリスト（以降、プレイリストと呼ぶ）を生成、操作することにより、ユーザは記録再生装置上での編集作業ができる（例えば、特許文献１参照）。

【0004】

【特許文献１】特開２０００－１５２１８０号公報

【発明の開示】

【発明が解決しようとする課題】

【0005】

上記従来技術においては、プレイリストはＡＶデータの部分をつなぎ合わせ、再生順序を指し示したものである、ということについて言及している。

【0006】

管理情報の一例として、記録媒体上のＡＶデータの管理状態を図２に示す。２０１は記録媒体上のＡＶデータそのものであり、記録単位としてプログラム＃１～プログラム＃３が存在する場合を示している。２０２は管理情報における第２管理階層（管理レベル２）を示しており、オリジナルセル情報＃１～オリジナルセル情報＃３は、夫々プログラム＃１～プログラム＃３というプログラム単位の全ての再生範囲を示すものとなっている。またユーザ定義セル情報＃１～ユーザ定義セル情報＃２はユーザが任意に指定したプログラムの全体あるいは一部の再生範囲を示すものであり、その数はユーザの編集操作により増減する。２０３は管理情報の第１管理階層（管理レベル１）を示しており、プログラムセット情報は前記オリジナルセル情報＃１～オリジナルセル情報＃３の全てを含むものであり、これを元に再生することにより、ユーザは記録媒体上に記録された全てのＡＶデータを再生することができる。またプレイリスト情報＃１～プレイリスト情報＃ｋはユーザが任意に指定した前記ユーザ定義セル情報の再生順序を示すものであり、複数持つことが可能である。２０４で示す枠内が、管理情報におけるＡＶデータ全体を管理するオリジナル情報であり、２０５で示す枠内がユーザの編集操作によるプレイリストを管理するためのユーザ定義情報となる。

【0007】

図２において、プレイリスト情報はプログラムセット情報と同列に、管理レベル１として管理されるため、複数のプレイリスト情報自体の順番は一意に決まってしまう、例えばプレイリストの一覧を、ユーザインターフェース上で、その表示順番を変更したりすることを行うことができなかった。

【0008】

本発明は、かかる点に鑑みてなされたものであり、その目的はユーザが任意にプレイリストの一覧表示順番を、ユーザインターフェース上で並べ替え操作できるような記録方式や装置を提供することにある。

【0009】

また、図2においては、複数のユーザが好みのプレイリスト情報を生成選択して管理するといった点についても考慮されていなかった。

【課題を解決するための手段】

【0010】

上記目的を達成するために本発明では、登録された全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、該管理単位はAVデータ全ての再生範囲を示す統合情報と同列に扱うように構成する。また追加した管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成する。

【0011】

本発明による記録再生装置によれば、ユーザは任意のプレイリスト、あるいは再生範囲を選択して管理することが可能となるため、単一の記録媒体を複数のユーザが共有する場合などでも、ユーザ毎に好みの再生内容を管理することができ、使い勝手が向上するし、プレイリストを統合管理するので、プレイリストの表示順などをユーザが任意に変更が可能となる。

【発明の効果】

【0012】

本発明により、使い勝手を向上した記録方法、記録再生装置及び再生装置を提供することができる。

【発明を実施するための最良の形態】

【0013】

以下、図面を用いて本発明の実施形態について説明する。図1は本発明による記録再生装置における、記録媒体上のAVデータの管理状態を示す図である。101は図2における201と同様に、記録媒体上のAVデータそのものであり、記録単位としてプログラム#1～プログラム#3が存在する場合を示している。

【0014】

102は図2における202に相当し、ここでは管理情報における第3管理階層(管理レベル3)を示している。プログラム情報#1～プログラム情報#3は、夫々プログラム#1～プログラム#3というプログラム単位の全ての再生範囲を示すものとなっている。またプログラム情報#2a～プログラム情報#3aはユーザが任意に指定したプログラムの全体あるいは一部の再生範囲を示すものであり、ここでは夫々プログラム#2の一部、プログラム#3の一部を示している。プログラム情報#1～プログラム情報#3に相当する箇所は、AVデータの追記、つまりプログラムの増加に伴いその情報も追加する。またプログラム情報#2aやプログラム情報#3aに相当する箇所は、ユーザの編集操作により、その情報の数が増減する。

【0015】

103は図2における管理レベル1に相当するが、ここでは管理情報の第2管理階層(管理レベル2)を示しており、プレイリスト情報#1～プレイリスト情報#nのみを含む。夫々のプレイリスト情報は前記管理レベル3における任意のプログラム情報の再生順序を示すものであり、複数持つことが可能となっている。

【0016】

104が本発明の特徴的な点として、新たに追加した管理情報の第1管理階層(管理レベル1)であり、複数の統合情報を含む。オリジナル統合情報は図2におけるプログラムセット情報に相当し、管理レベル3におけるプログラム情報#1～プログラム情報#3の全てを含み、これを元に再生することにより、ユーザは記録媒体上に記録された全てのAVデータを再生することが可能となる。プレイリスト統合情報は管理レベル2におけるプレイリスト情報#1～プレイリスト情報#nの全てを含み、これを元に再生することにより、ユーザは登録されている全てのプレイリストを順次再生することが可能となる。ユーザ定義統合情報#1～ユーザ定義統合情報#mは、管理レベル2におけるプレイリスト情

報及び管理レベル3におけるプログラム情報のうちの任意の一つあるいは複数を含むものである。例えば複数のユーザが単一の記録媒体を用いる場合に、ユーザ単位に一つのユーザ定義統合情報を使用することにより、夫々のユーザの嗜好に合致した再生内容を管理することが可能となる。

【0017】

次に本発明による記録再生装置の実施形態について、別の図を用い、もう少し具体的に説明する。

【0018】

図3は本発明による記録再生装置の一例を示すブロック図であり、デジタル放送を受信して記録媒体に記録し、また記録したデータを再生し、再生出力を得ることができるような記録再生装置を示している。300は記録再生装置、301はアンテナからの受信波を入力する入力端子、3011は他の機器からの圧縮された映像音声データを入力するための入力端子、3012はアナログ映像信号を入力するためのアナログ映像入力端子、3013はアナログ音声信号を入力するためのアナログ音声入力端子、333及び334は、アナログ信号をデジタル信号に変換するアナログ／デジタル（A／D）変換回路、302は復調回路、330は復調したデジタル信号を音声、映像、その他のデータに分離する分離回路、335はデジタル化された映像及び音声信号を圧縮する圧縮回路、303は記録系信号処理回路、331は記録するデータを暗号化するための暗号化回路、304は記録媒体のドライブ機能を含めた記録再生系、305は記録媒体、332は記録媒体上に暗号化され記録されたデータを非暗号化するための非暗号化回路、306は再生系信号処理回路、307は切替え回路、308は分離回路、309は映像復号回路、310はデジタル／アナログ（D／A）変換回路、311は映像出力端子、312は音声復号回路、313はD／A変換回路、314は音声出力端子、315はTVセット、316はユーザI／F、317は制御部、318はシステムバス、319はOSD生成部、320は加算回路である。

【0019】

記録時においては、デジタル放送などにより送信され、受信された信号が、復調回路302において所定の方式により復調された後、記録系信号処理回路303においてタイミング調整用のデータ付加や変調などの必要な信号処理が施されて、暗号化回路331にて暗号化された後、記録再生系304により記録媒体305へ記録される。また、デジタル入力端子3011より入力されたデジタル信号は記録系信号処理回路303においてタイミング調整用のデータ付加や変調などの必要な信号処理が施されて、暗号化回路331にて暗号化された後、記録再生系304により記録媒体305へ記録される。また、アナログ映像入力端子3012より入力されたアナログ映像信号と、アナログ音声入力端子3013より入力されたアナログ音声信号は、圧縮回路335によって圧縮処理がなされ、記録系信号処理回路303を介し、暗号化回路331にて暗号化された後、記録再生系304により記録媒体305へ記録される。

【0020】

再生時においては、ユーザの指示に応じて記録媒体305から記録再生系304を介して読み出された暗号化されたデジタルデータは、非暗号化回路332にて非暗号化され、再生系信号処理回路306において所定の復調方式に則った形式で復調等の再生に必要な信号処理が施され、切替え回路307を介して分離回路308に送られる。映像復号回路309では所定の映像復号処理が施されて、D／A変換回路310においてデジタルデータからアナログ信号への変換が成された後、映像出力端子311を介してTVセット315のモニタ出力へと表示される。また音声復号回路312では所定の音声復号処理が成され、D／A変換回路313においてデジタルデータからアナログ信号への変換が成された後、音声出力端子314を介してTVセット315の音声出力機構により出力される。

【0021】

制御部317は、システムバス318を介して記録再生装置300の各部を制御するものであり、またユーザI／F316を介して入力されたユーザの指示入力に基づいた動作

を行うように、装置全体を制御する。なおユーザへの指示入力要求、あるいは必要なユーザへのOSD表示は、OSD生成部319で用意され、加算回路320において、映像復号回路309の出力と適当なレベルで加算されて、最終的にTVセット315のモニタ画面に出力されることにより実現される。

【0022】

次に図1における管理情報構成の具体的な使用例として、管理レベル1における各統合情報を記録データのメニュー表示に使用した場合について説明する。

【0023】

図4は図1におけるオリジナル統合情報を使用してメニュー表示を行う一例である。315は図3におけるTVセットであり、401は全プログラム表示用のタグ、402はプログラム情報#1を示すサムネイル、403はプログラム情報#2を示すサムネイル、404はプログラム情報#3を示すサムネイルである。ユーザはリモコン等により画面上のカーソル位置を所望のサムネイルに移動して選択決定することにより、任意のプログラム、あるいは全てのプログラムを再生することができる。

【0024】

次に図5は図1におけるプレイリスト統合情報を使用してメニュー表示を行う一例である。501は全プレイリスト表示用のタグ、502はプレイリスト情報#1を示すサムネイル、503はプレイリスト情報#2を示すサムネイルである。ユーザは前述の場合と同様にリモコン等により画面上のカーソル位置を所望のサムネイルに移動して選択決定することにより、任意のプレイリスト、あるいは全てのプレイリストを再生することができる。なお前述の全プログラム表示用タグ401から全プレイリスト表示用タグ501への表示切り替えは、ユーザが例えばタグの文字位置でカーソルを移動することなどにより実現することが可能である。

【0025】

次に図6は図1におけるユーザ定義統合情報#1を使用してメニュー表示を行う一例である。601はユーザ#1(ここでは「ママ」としている)用メニュー表示用のタグであり、402と502は図1からわかるように、プログラム情報#1及びプレイリスト情報#1を示すサムネイルとなっている。「ママ」はママ用メニュー表示用タグ601を自分専用のフォルダとして、自由に再生したいデータを登録、削除することが可能である。

【0026】

同様に図7は図1におけるユーザ定義統合情報#2を使用してメニュー表示を行う一例である。701はユーザ#2(ここでは「パパ」としている)用メニュー表示用のタグであり、503と502は図1からわかるように、プレイリスト情報#2及びプレイリスト情報#1を示すサムネイルとなっている。この場合「パパ」2つのプレイリストを選択しているが、その再生順序を変更することが可能となっている。また前述の「ママ」と同様に、「パパ」はパパ用メニュー表示用タグ701を自分専用のフォルダとして、自由に再生したいデータを登録、削除することが可能である。

【0027】

以上のように本発明の実施例によれば、登録された全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、AVデータ全ての再生範囲を示す統合情報と同列に扱うように構成し、また追加した管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成することにより、ユーザは任意のプレイリスト、あるいは再生範囲を選択して管理することが可能となるため、単一の記録媒体を複数のユーザが共有する場合などでも、ユーザ毎に好みの再生内容を管理することができ、使い勝手が向上する。

【0028】

なお以上の実施例では、デジタル放送を受信してデジタルデータをそのまま記録する場合について述べたが、これはこの限りではなく、ネットワークI/Fを具備し、外部ネットワークからAVデータを取得したり、符号化手段を具備し、アナログデータを符号化しながら記録媒体に記録するような構成でも良い。つまり本実施例は記録媒体上のデータ管

理について言及しているものであり、その入力経路については特に限定されるものではない。

【0029】

図8に、上記に述べたプログラムやプログラム情報、プレイリスト情報、及びオリジナル統合情報、プレイリスト統合情報、ユーザ定義情報を、実際に記録媒体305（図3）上にどのようなファイル構成で記録するかの一例を示す。本記録媒体は、デジタル記録再生を行う媒体であり、媒体上の各ファイルは、いわゆるパーソナルコンピュータなど記録媒体の管理に用いられるのと同様のファイルシステムで管理されている。同図においてROOT800は、ファイルディレクトリの最上位階層を示し、TV_REC801はその下層のディレクトリであり、本発明にかかる図1に示した管理構造を実現する各ファイルのTVREC、MAN802、PGRG、IFO803、PGR、IFO804、PROG0001、TS805・・・がTV_REC801内に記録される。TVREC、MAN802は、図1に示すところの管理レベル1のオリジナル統合情報と、プレイリスト統合情報と、ユーザ定義統合情報#1から#mまでの情報が、管理テーブルとして記述される。またPGRGIFO803は、図1に示すところの管理レベル2のプレイリスト情報#1から#nの各情報は管理テーブルとして記録される。PGR、IFO804には、図1に管理レベル3の各情報プログラム情報#1～#3aの情報が管理テーブルが記録される。PROG0001、TS805、PROG0002、TS806、PROG0003、TS807は、各プログラムのAVデータの実体ファイルであり、例えば一回の記録開始から記録停止までをPROG0001、TSとし、次の記録開始から記録停止までをPROG0002、TSという具合にファイル名を更新して記録し、そののちに各上記管理ファイル802から804を更新する。

【0030】

なお、各ファイルの管理構造TVREC、MAN802、PGRG、IFO803、PGR、IFO804、PROG0001、TS805、・・・に関してのファイル構造、管理テーブルの構成自体は、いかなる方法にて構成されてもよいが、図1の場合の管理構成を、上記各ファイルによっていかに実現するかの一例を以下に示す。

【0031】

図9は、TVREC、MAN801（図8）の管理テーブル構成を示したものである。オリジナル統合情報901として、プログラム情報数9011として記録されたAVデータの数、すなわちAVデータの実体ファイル（PROG0001、TS805、PROG0002、TS806、PROG0003、TS807で、この場合は3は入る）の総数が記述され、さらにその下に各オリジナルのプログラム情報の位置テーブル9012が記録される。また、プレイリスト統合情報902として、各プレイリスト#1から#3aまでのプレイリスト位置情報テーブル9021以下に記録される。また9031以降には、ユーザ定義統合情報の数が記録され、それ以降にユーザ定義情報の#1から#mまでの内容が記録される。

【0032】

また図13は、前記したユーザ定義情報#mの内容を表した図である。ユーザ定義情報#mは、どのオリジナルのプログラム情報と、どのプレイリスト情報から組み合わせられているかを、テーブルとして持つ。

【0033】

図10は、図1の管理レベル2に相当する、PGRG、IFO803（図8）の管理テーブルを示したものである。プレイリスト情報1001として、最初にプレイリスト情報の総数が10011記述され（この場合はn）、その下の10012から各プレイリスト情報#1から#nまでの内容が記述してある位置をテーブルとして記録される。さらに10013から各プレイリスト#1から#nまでの内容（再生シーケンスの内容で、後述するAVデータの再生開始位置や再生終了位置などをしめす、プログラム情報などを、どう組み合わせるか、の管理テーブル）が記録される。

【0034】

図11は図1の管理レベル3に相当する、PGR、IFO804（図8）の管理テーブルを示したものである。プログラム情報1101として、プログラム情報（オリジナル情報のプログラム#1、#2、#3（図1））に一对をなすプログラム情報と、ユーザが定義したプログラム情報#2aや3a（図1）のすべてを含むプログラム情報の数が11011に記録され、以降の11012にプログラム情報#1から#3aまでの各プログラム情報の内容を記述した位置を示すテーブルが、さらに11013以降に各プログラム情報#1から#3aの内容（各AVデータファイルのPROG0001、TS805、PROG0002、TS806、PROG0003、TS807（図8）のどこからどこまでを再生する位置を記述）が記録される。

【0035】

以上のように管理すれば、たとえばプレイリスト位置テーブル9021の位置情報をソートして、プレイリストをGUI画面上に表示する順番などを図5の状態から図12の状態に変更することが可能となり、プレイリストの数が非常に多くなった場合、ユーザの使用頻度の高いプレイリストをGUI画面上の最初に表示するようにできるので、ユーザにとって使い勝手のよい記録再生装置、もしくは再生装置もしくは記録方法を実現できるし、例えば複数のユーザが自分の見たいプレイリストや記録されたオリジナルのコンテンツを自由に個別に設定できるので、記録しているプログラムの数が非常に多数にわたった場合でも、自分の見たいプログラムを、自分が定義したフォルダを参照することができるので、すばやく見たいプログラムを見つけ出すことができる。

【0036】

なお、本実施例では、ユーザ定義のプレイリスト統合情報と、ユーザ定義統合情報#1から#mを明確に区別しているが、はユーザ定義統合情報のオリジナルのプログラム情報とのリンクを持たないユーザ定義のプレイリスト統合情報の位置付けであってもよい。

【図面の簡単な説明】

【0037】

【図1】本実施例による記録再生装置でAVデータの管理状態を示す図。

【図2】AVデータの管理状態を示す図。

【図3】本実施例による記録再生装置のブロック図。

【図4】オリジナル統合情報の表示出力例。

【図5】プレイリスト統合情報の表示出力例。

【図6】ユーザ定義統合情報の第1の表示出力例。

【図7】ユーザ定義統合情報の第2の表示出力例。

【図8】各オリジナル統合情報、プレイリスト統合情報、ユーザ定義統合情報、及びプレイリスト情報、プログラム情報、AVデータ（プログラム）のファイル構造の一例を示した図。

【図9】各オリジナル統合情報、プレイリスト統合情報、ユーザ定義統合情報の管理テーブル構造の一例を示したものの。

【図10】プレイリスト情報の管理テーブルの一例を示したものの

【図11】プログラム情報の管理テーブルの一例をしめしたものの

【図12】プレイリスト統合情報の表示出力例。

【図13】ユーザ定義情報#mの内容の示すテーブルの一例をしめしたものの

【符号の説明】

【0038】

101、201 … プログラム(AVストリーム)

102 … 管理情報における第3階層

103、202 … 管理情報における第2階層

104、203 … 管理情報における第1階層

303 … 記録系信号処理

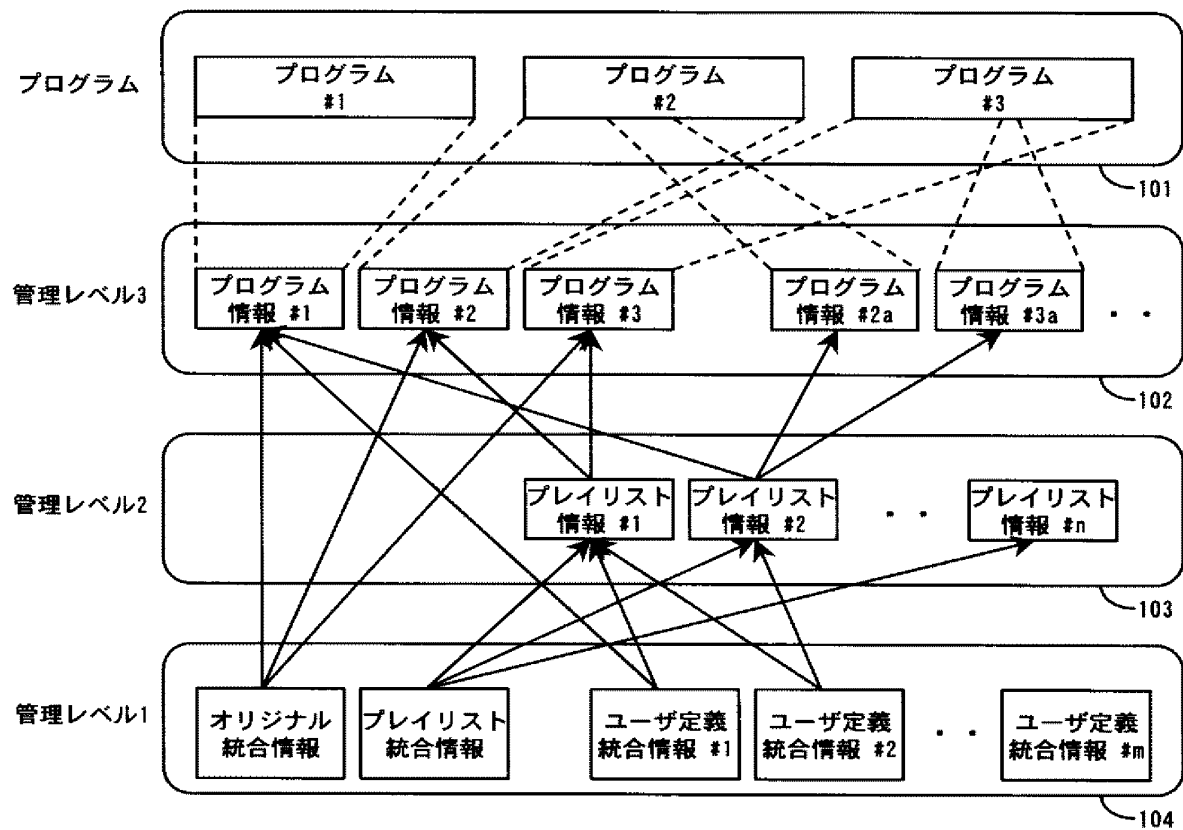
304 … 記録再生系

305 … 記録媒体

3 0 6 ... 再生系信号処理
3 1 5 ... TVセット
3 1 6 ... ユーザ I / F
3 1 7 ... 制御部
3 1 8 ... システムバス
3 1 9 ... OSD生成部
4 0 1 ... 全プログラム表示用タグ
5 0 1 ... 全プレイリスト表示用タグ
6 0 1 ... ユーザ # 1 用メニュー表示用タグ
7 0 1 ... ユーザ # 2 用メニュー表示用タグ

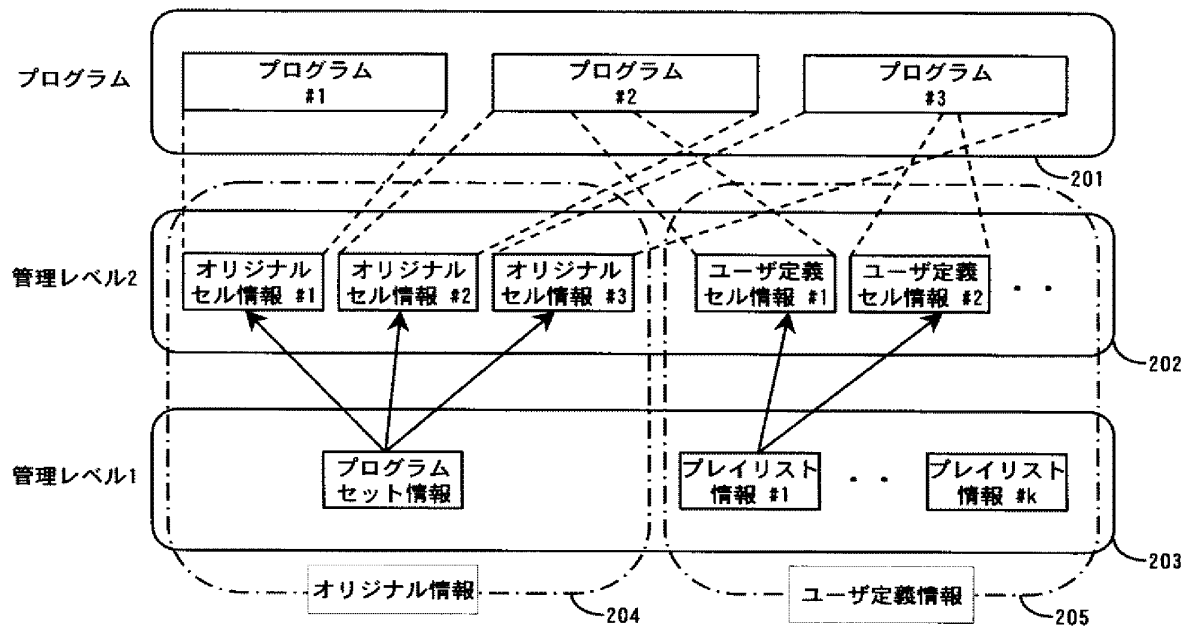
【書類名】 図面
【図 1】

図 1



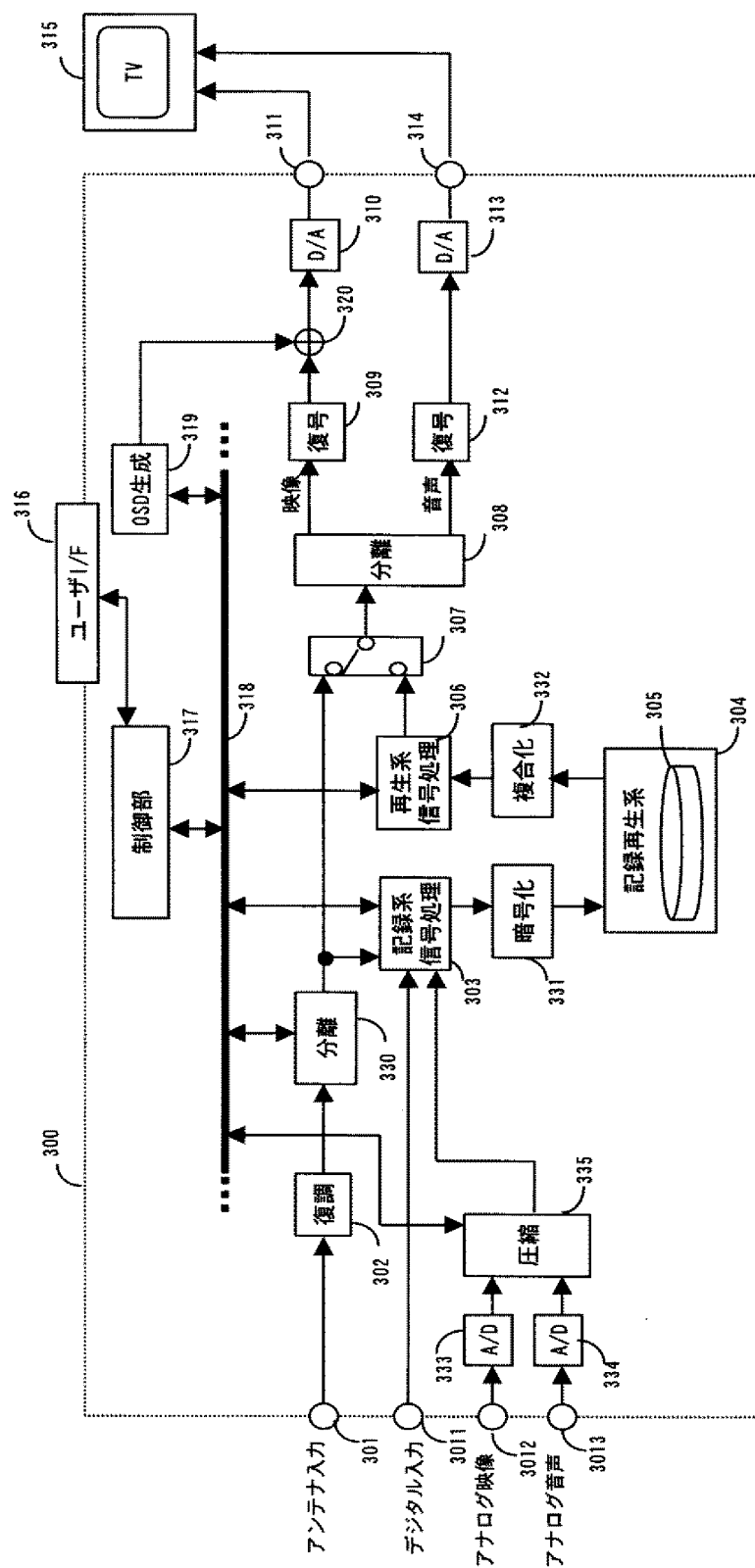
【図 2】

図 2



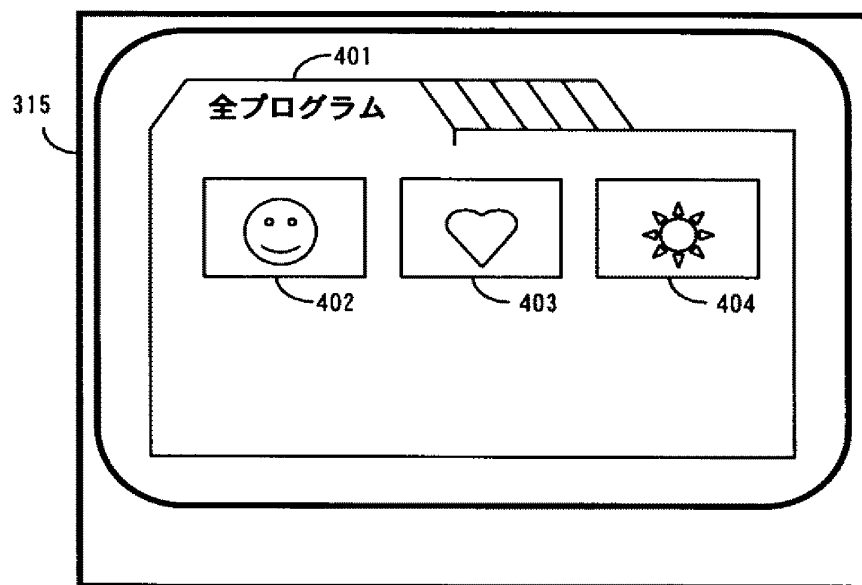
【図 3】

図 3



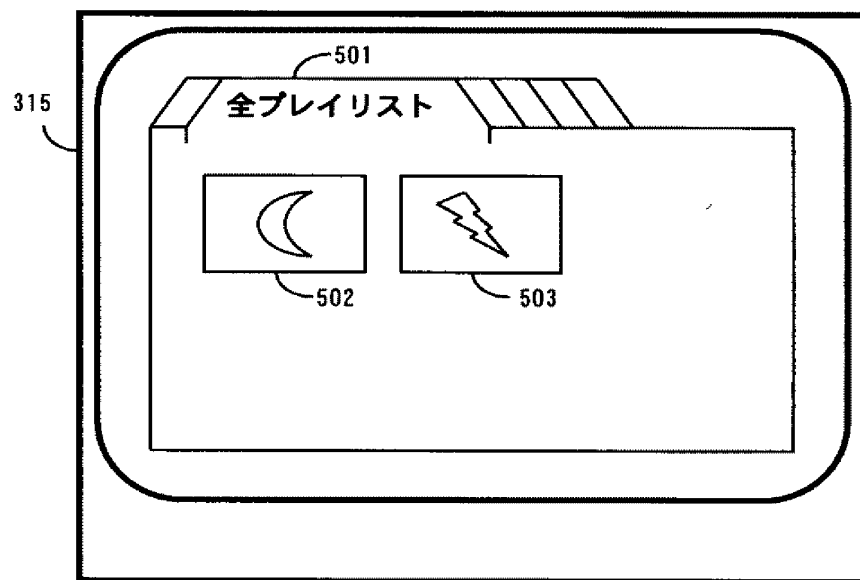
【図4】

図4



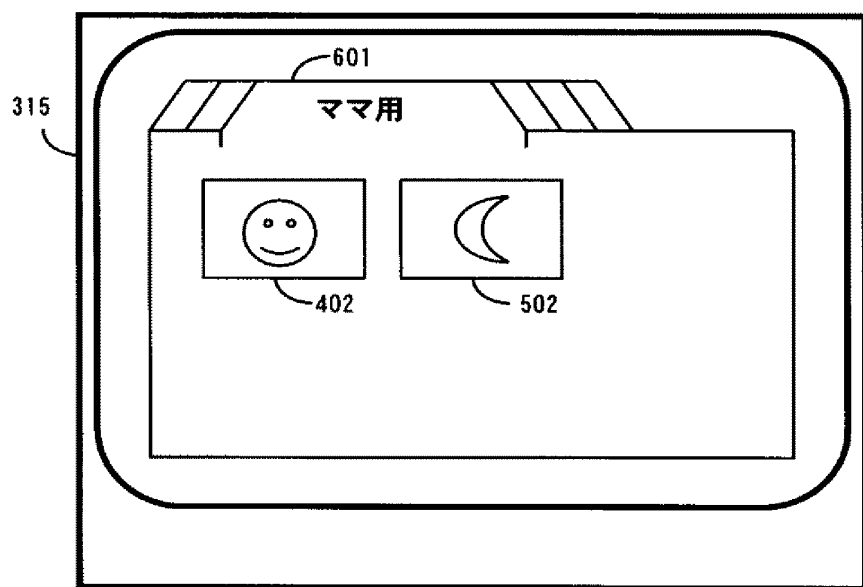
【図5】

図5



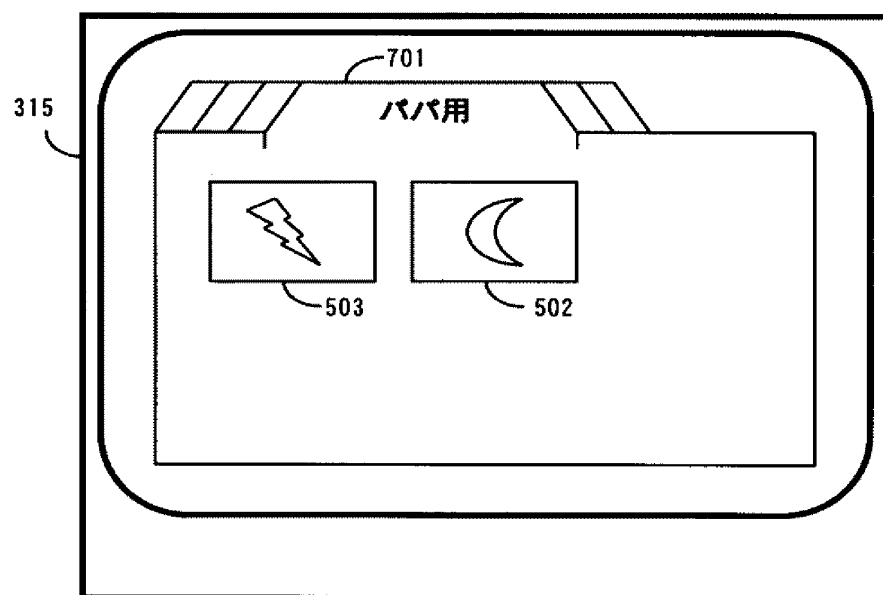
【図6】

図6



【図7】

図7



【図 8】

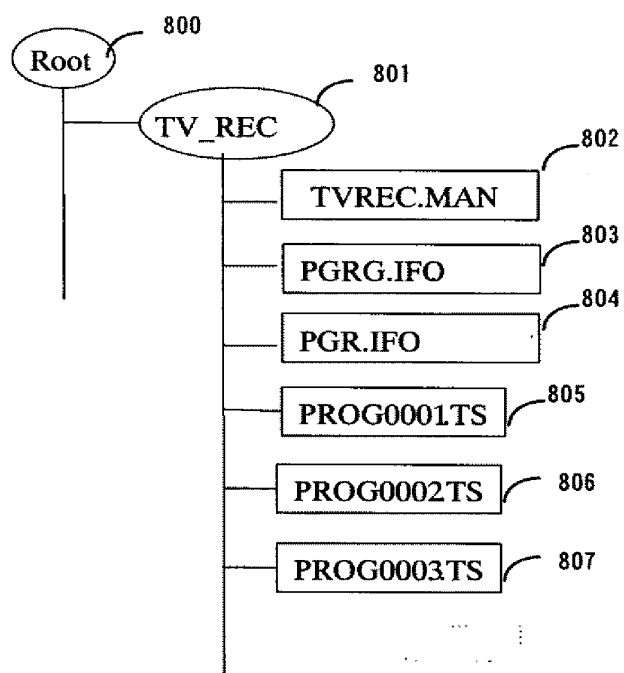


図 8

The diagram illustrates a data structure for program and playlist information. It consists of three main components: 901, 902, and 903.

- 901** is a container for program information, including:
 - オリジナル統合情報 (Original Integrated Information)
 - プレイリスト統合情報 (Playlist Integrated Information)
 - ユーザ定義統合情報 (User-defined Integrated Information)
- 902** is a container for program information, including:
 - プログラム情報数 (Program Information Count)
 - プログラム情報 # 1 の位置 (Position of Program Information # 1)
 - プログラム情報 # 2 の位置 (Position of Program Information # 2)
 - プログラム情報 # 3 の位置 (Position of Program Information # 3)
 - プレイリスト情報 # 1 の位置 (Position of Playlist Information # 1)
 - プレイリスト情報 # 2 の位置 (Position of Playlist Information # 2)
 - ...
 - プレイリスト情報 # 3 a の位置 (Position of Playlist Information # 3 a)
- 903** is a container for user-defined information, including:
 - ユーザ定義統合情報の数 (Number of User-defined Integrated Information)
 - ユーザ定義情報 # 1 の内容の位置 (Position of Content of User-defined Information # 1)
 - ユーザ定義情報 # 2 の内容の位置 (Position of Content of User-defined Information # 2)
 - ...
 - ユーザ定義情報 # m の内容の位置 (Position of Content of User-defined Information # m)
 - ユーザ定義情報 # 1 内容 (Content of User-defined Information # 1)
 - ユーザ定義情報 # 2 の内容 (Content of User-defined Information # 2)
 - ...
 - ユーザ定義情報 # m の内容 (Content of User-defined Information # m)

图 9

【図 1 0】

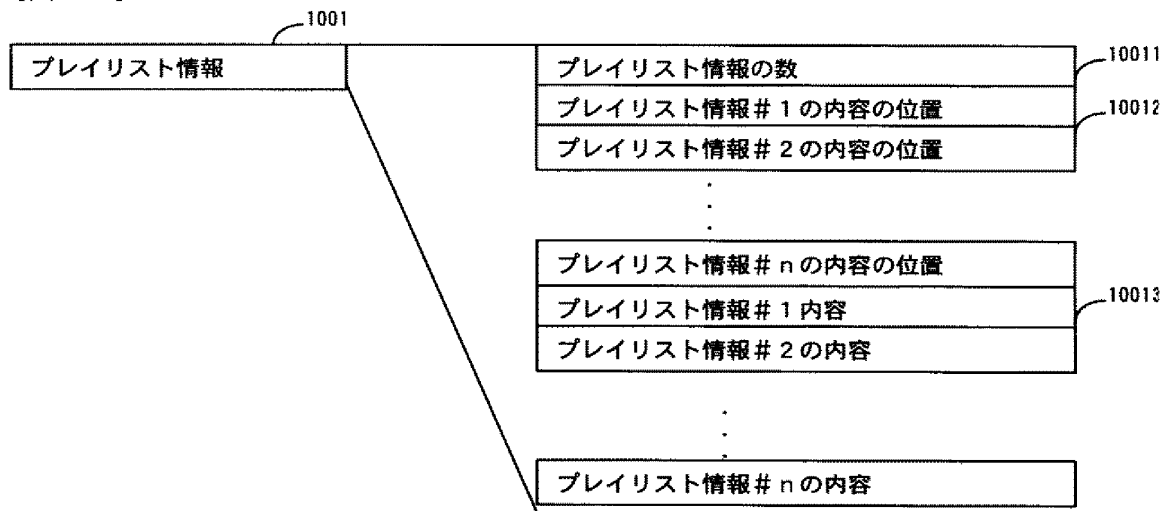


図 1 0

【図 1 1】

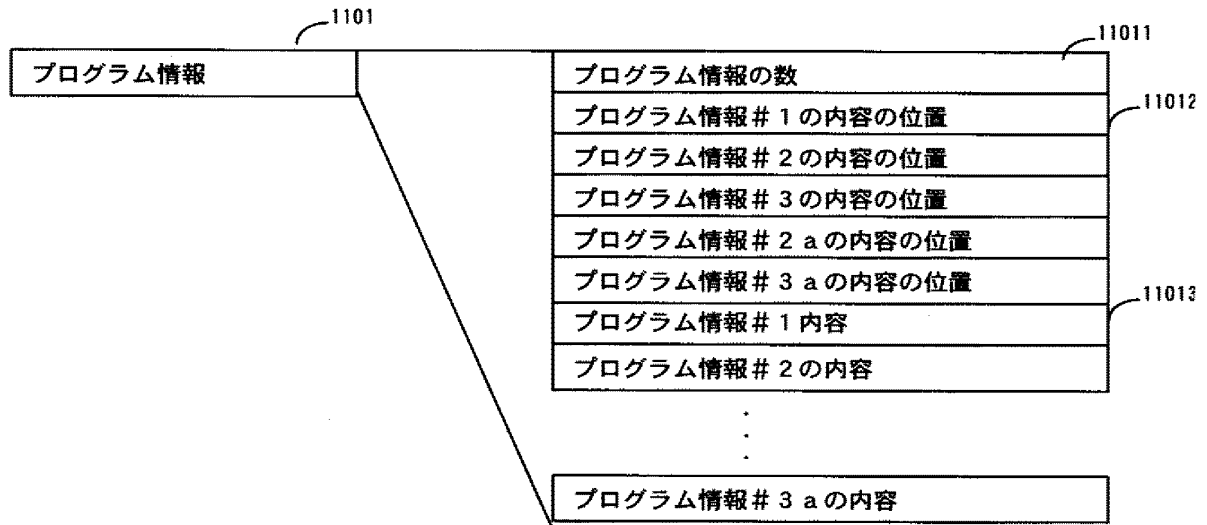
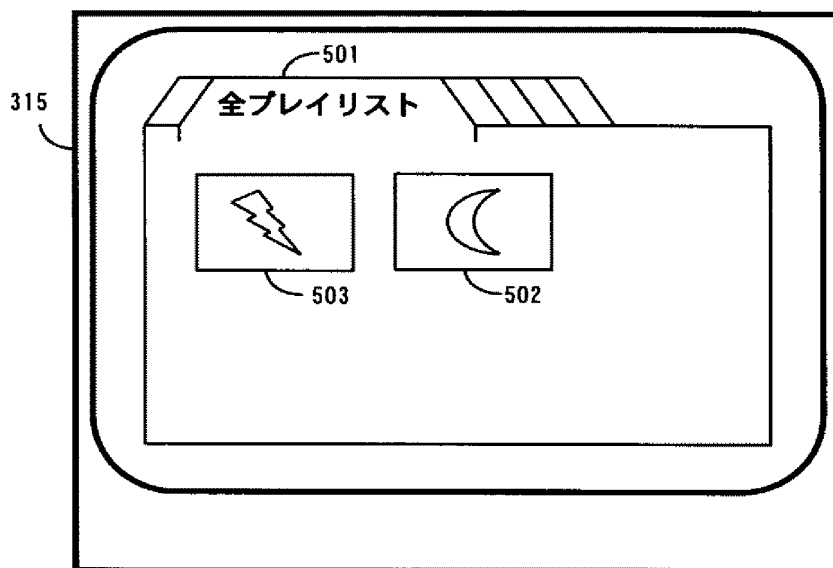


図 1 1

【図 1 2】

図 1 2



【図 1 3】

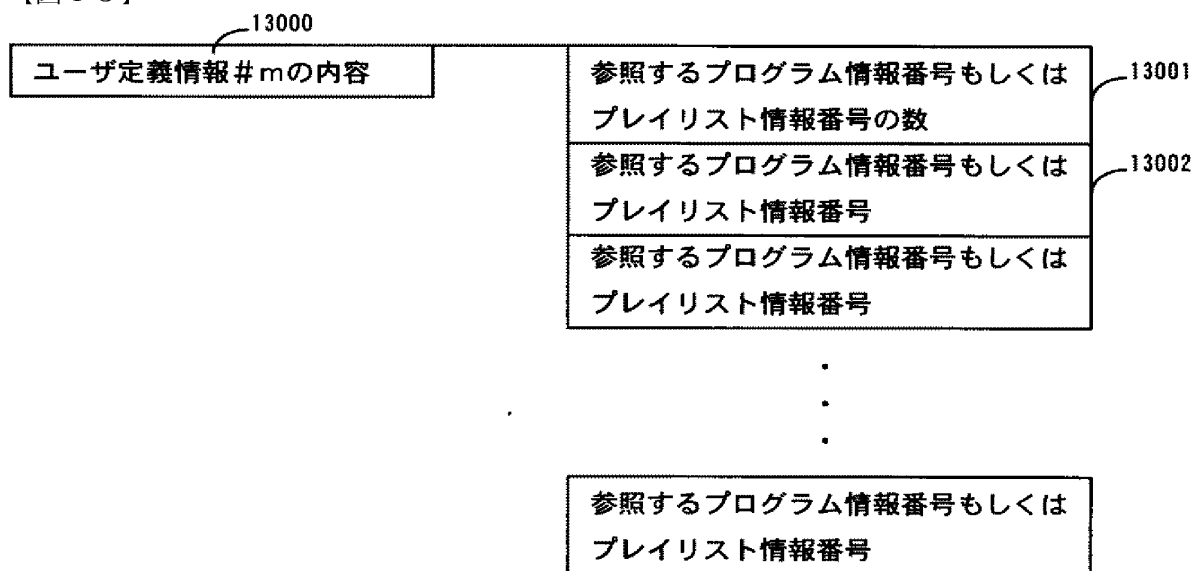


図 1 3

【書類名】 要約書

【要約】

【課題】 ユーザが任意のプレイリストを選択管理できるような記録再生装置を提供する

。

【解決手段】 登録された全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、該管理単位をAVデータ全ての再生範囲を示す統合情報と同列に扱うように構成する。また追加した管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成する。

【選択図】 図1

【書類名】 手続補正書
【あて先】 特許庁長官殿
【事件の表示】
【出願番号】 特願2004-378767
【補正をする者】
【識別番号】 000005108
【氏名又は名称】 株式会社日立製作所
【代理人】
【識別番号】 100100310
【弁理士】
【氏名又は名称】 井上 学
【発送番号】 691044
【手続補正1】
【補正対象書類名】 特許請求の範囲
【補正対象項目名】 全文
【補正方法】 変更
【補正の内容】
【書類名】 特許請求の範囲

【請求項1】
プログラムと、前記プログラムを管理する管理情報を記録する記録方法であって、
前記プログラムを記録するステップと、
前記管理情報を記録するステップとを有し、
前記管理情報を記録する前記ステップは、
前記プログラムの全体の再生範囲を示すオリジナルプログラム情報と、前記プログラムの全体あるいは一部の再生範囲を示すユーザ定義プログラム情報と、前記オリジナルプログラム情報または前記ユーザ定義プログラム情報の再生順序を示すプレイリスト情報と、前記オリジナルプログラム情報及び前記プレイリスト情報のうちの少なくとも1つを含むユーザ定義フォルダ情報と、を有する管理情報を記録し、
前記管理情報は、
前記ユーザ定義フォルダ情報を第1の管理階層とし、
前記プレイリスト情報を第2の管理階層とし、
前記オリジナルプログラム情報と前記ユーザ定義プログラム情報を第3の管理階層とし、
前記プログラムと前記管理情報を同一の記録媒体に記録することを特徴とする記録方法
。

【請求項2】
プログラムと、前記プログラムを管理する管理情報を記録媒体に記録する記録装置であって、
前記プログラムと前記管理情報を前記記録媒体に記録する記録手段と、
前記記録手段を制御する制御手段とを有し、
前記記録手段は、
前記プログラムの全体の再生範囲を示すオリジナルプログラム情報と、前記プログラムの全体あるいは一部の再生範囲を示すユーザ定義プログラム情報と、前記オリジナルプログラム情報または前記ユーザ定義プログラム情報の再生順序を示すプレイリスト情報と、前記オリジナルプログラム情報及び前記プレイリスト情報のうちの少なくとも1つを含むユーザ定義フォルダ情報と、を有する前記管理情報を記録し、
前記管理情報は、
前記ユーザ定義フォルダ情報を第1の管理階層とし、
前記プレイリスト情報を第2の管理階層とし、
前記オリジナルプログラム情報と前記ユーザ定義プログラム情報を第3の管理階層とし、
前記プログラムと前記管理情報を同一の記録媒体に記録することを特徴とする

徴とする記録装置。

【手続補正2】

【補正対象書類名】 明細書
【補正対象項目名】 0010
【補正方法】 変更
【補正の内容】
【0010】

上記目的を達成するために本発明では、一例として、特許請求範囲記載の構成を用いる

。

【手続補正3】

【補正対象書類名】 明細書
【補正対象項目名】 0011
【補正方法】 削除

【手続補正4】

【補正対象書類名】 明細書
【補正対象項目名】 0036
【補正方法】 変更
【補正の内容】
【0036】

なお、本実施例では、ユーザ定義のプレイリスト統合情報と、ユーザ定義統合情報#1から#mを明確に区別しているが、はユーザ定義統合情報のオリジナルのプログラム情報とのリンクを持たないユーザ定義のプレイリスト統合情報の位置付けであってもよい。

以上、本発明の好適な実施例について説明した。本発明の一実施態様によれば、登録された全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、該管理単位はAVデータ全ての再生範囲を示す統合情報と同列に扱うように構成する。また追加した管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成する。

本発明による記録再生装置によれば、ユーザは任意のプレイリスト、あるいは再生範囲を選択して管理することが可能となるため、単一の記録媒体を複数のユーザが共有する場合などでも、ユーザ毎に好みの再生内容を管理することができ、使い勝手が向上するし、プレイリストを統合管理するので、プレイリストの表示順などをユーザが任意に変更が可能となる。

【書類名】 手続補正書
 【あて先】 特許庁長官殿
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 【識別番号】 100100310
 【弁理士】
 【氏名又は名称】 井上 学
 【発送番号】 587343
 【手続補正1】
 【補正対象書類名】 特許請求の範囲
 【補正対象項目名】 全文
 【補正方法】 変更
 【補正の内容】

 【書類名】 特許請求の範囲
 【請求項 1】
 プログラムと、前記プログラムを管理する管理情報を記録する記録方法であって、
 前記プログラムを記録するステップと、
 前記管理情報を記録するステップとを有し、
 前記管理情報を記録する前記ステップは、
 前記プログラムの全体の再生範囲を示すオリジナルプログラム情報と、前記プログラムの全体あるいは一部の再生範囲を示すユーザ定義プログラム情報と、前記オリジナルプログラム情報または前記ユーザ定義プログラム情報の再生順序を示すプレイリスト情報と、前記オリジナルプログラム情報及び前記プレイリスト情報のうちの少なくとも1つを含むユーザ定義フォルダ情報と、を有する管理情報を記録し、
 前記管理情報は、
 前記ユーザ定義フォルダ情報を第1の管理階層とし、
 前記プレイリスト情報を第2の管理階層とし、
 前記オリジナルプログラム情報と前記ユーザ定義プログラム情報を第3の管理階層とし、
 前記第1から第3の管理階層はそれぞれ異なる管理階層であり、
 前記ユーザ定義フォルダ情報は前記オリジナルプログラム情報と前記プレイリスト情報の双方を参照可能であることを特徴とする記録方法。

 【請求項 2】
 プログラムと、前記プログラムを管理する管理情報を記録媒体に記録する記録装置であって、
 前記プログラムと前記管理情報を前記記録媒体に記録する記録手段と、
 前記記録手段を制御する制御手段とを有し、
 前記記録手段は、
 前記プログラムの全体の再生範囲を示すオリジナルプログラム情報と、前記プログラムの全体あるいは一部の再生範囲を示すユーザ定義プログラム情報と、前記オリジナルプログラム情報または前記ユーザ定義プログラム情報の再生順序を示すプレイリスト情報と、前記オリジナルプログラム情報及び前記プレイリスト情報のうちの少なくとも1つを含むユーザ定義フォルダ情報と、を有する前記管理情報を記録し、
 前記管理情報は、
 前記ユーザ定義フォルダ情報を第1の管理階層とし、
 前記プレイリスト情報を第2の管理階層とし、
 前記オリジナルプログラム情報と前記ユーザ定義プログラム情報を第3の管理階層とし、

前記第 1 から第 3 の管理階層はそれぞれ異なる管理階層であり、
前記ユーザ定義フォルダ情報は前記オリジナルプログラム情報と前記プレイリスト情報
の双方を参照可能である
ことを特徴とすることを特徴とする記録装置。

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住所変更

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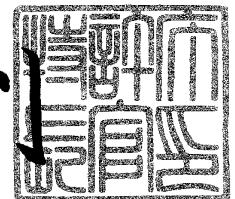
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【書類名】 特許請求の範囲

【請求項 1】

記録媒体に記録されている A V データと該 A V データを管理する管理情報の編集を行う編集方法において、

該管理情報は、

該 A V データと一対をなすプログラム情報と、

該プログラム情報の履歴を管理するためのオリジナル統合情報と、

ユーザが任意に定義可能であり、該 A V データの再生位置を管理するユーザ定義によるプログラム情報と、

該ユーザ定義によるプログラム情報もしくは該 A V データと一対をなすプログラム情報の再生シーケンスを管理するプレイリスト情報と、

該プレイリスト情報の履歴の管理を行うプレイリスト統合情報を持ち、

該プレイリスト統合情報の履歴を書きかえることにより、プレイリスト一覧の表示順序を変更することを特徴とする編集方法。

【請求項 2】

入力された A V データを受信する受信回路と、

該受信回路で受信した A V データを記録媒体に記録する記録系信号処理回路と、

該 A V データを該記録媒体から再生する再生系信号処理回路と、

該再生系信号処理回路より読み出された A V データを出力する出力手段と、

ユーザが操作をするためのユーザインターフェース手段と、

該ユーザインターフェース手段からの入力により上記の各回路を制御する制御手段とを有し、

記録時には、該制御手段と該記録系信号処理回路により

該 A V データと、該 A V データを管理する管理情報を記録する記録再生装置であって、

該管理情報は、

該 A V データと一対をなすプログラム情報と、該プログラム情報の履歴を管理するためのオリジナル統合情報と、

ユーザが任意に定義可能であり、該 A V データの再生位置を管理するユーザ定義によるプログラム情報と、

該ユーザ定義プログラム情報もしくは前期オリジナルプログラム情報の再生シーケンスを管理するプレイリスト情報と、

該プレイリスト情報の履歴の管理を行うプレイリスト統合情報を持ち、

前期ユーザインターフェース手段からの指示により、前期制御部は、該プレイリスト統合情報の履歴の登録順序を書きかえることにより、プレイリスト一覧の表示順序を変更することを特徴とする記録再生装置。

【書類名】明細書

【発明の名称】編集方法、記録再生装置

【技術分野】

【0001】

本発明は、記録媒体にデータを記録及び再生する記録再生装置に関する。

【背景技術】

【0002】

高能率符号化技術の進展に伴い、映像や音声といったＡＶデータをデジタルデータとして符号量圧縮し、ハードディスクや記録型光ディスクなどの大容量の記録媒体へリアルタイムに記録することが可能となっている。また、これらの記録媒体を備えた記録再生装置では、放送や通信により、既に符号量圧縮された状態でデジタルデータが外部から入力された場合、これらのデジタルデータをそのまま記録媒体へ記録することも可能である。

【0003】

これらの記録再生装置では、記録するデジタルデータを管理するための管理情報を生成し、同一の記録媒体上へ合わせて記録する。記録媒体として書換え可能なものを用いた場合、前記管理情報を書換えて再生順序を示すリスト（以降、プレイリストと呼ぶ）を生成、操作することにより、ユーザは記録再生装置上での編集作業ができる（例えば、特許文献１参照）。

【0004】

【特許文献１】特開２０００－１５２１８０号公報

【発明の開示】

【発明が解決しようとする課題】

【0005】

上記従来技術においては、プレイリストはＡＶデータの部分をつなぎ合わせ、再生順序を指し示したものである、ということについて言及している。一例として、上記従来技術における記録媒体上のＡＶデータの管理状態を図２に示す。

【0006】

２０１は記録媒体上のＡＶデータそのものであり、記録単位としてプログラム＃１～プログラム＃３が存在する場合を示している。２０２は管理情報における第２管理階層（管理レベル２）を示しており、オリジナルセル情報＃１～オリジナルセル情報＃３は、夫々プログラム＃１～プログラム＃３というプログラム単位の全ての再生範囲を示すものとなっている。またユーザ定義セル情報＃１～ユーザ定義セル情報＃２はユーザが任意に指定したプログラムの全体あるいは一部の再生範囲を示すものであり、その数はユーザの編集操作により増減する。２０３は管理情報の第１管理階層（管理レベル１）を示しており、プログラムセット情報は前記オリジナルセル情報＃１～オリジナルセル情報＃３の全てを含むものであり、これを元に再生することにより、ユーザは記録媒体上に記録された全てのＡＶデータを再生することができる。またプレイリスト情報＃１～プレイリスト情報＃ｋはユーザが任意に指定した前記ユーザ定義セル情報の再生順序を示すものであり、複数持つことが可能である。２０４で示す枠内が、管理情報におけるＡＶデータ全体を管理するオリジナル情報であり、２０５で示す枠内がユーザの編集操作によるプレイリストを管理するためのユーザ定義情報となる。

【0007】

図２において、プレイリスト情報はプログラムセット情報と同列に、管理レベル１として管理されるため、複数のプレイリスト情報自体の順番は一意に決まってしまう、例えばプレイリストの一覧を、ユーザインターフェース上で、その表示順番を変更したりすることを行うことができなかった。本発明は、かかる点に鑑みてなされたものであり、その目的はユーザが任意にプレイリストの一覧表示順番を、ユーザインターフェース上で並べ替え操作できるような記録方式や装置を提供することにある。

【0008】

また、従来例では、複数のユーザが好みのプレイリスト情報を生成選択して管理すると

いった点についても考慮されていなかった。例えば複数のユーザが夫々好みのプレイリスト情報を生成、選択して管理したいと思っても実現することができなかった。またユーザが複数のプレイリストのうち、任意の幾つかのプレイリストを選択して管理するという点に関しても特に考慮されていなかった。

【0009】

本発明は係る点に鑑みて成されたものであって、その目的はユーザが任意のプレイリストを選択管理できるような記録再生装置を提供することにある。

【課題を解決するための手段】

【0010】

上記目的を達成するために本発明では、登録された全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、該管理単位はAVデータ全ての再生範囲を示す統合情報と同列に扱うように構成する。また追加した管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成する。

【0011】

本発明による記録再生装置によれば、ユーザは任意のプレイリスト、あるいは再生範囲を選択して管理することが可能となるため、単一の記録媒体を複数のユーザが共有する場合などでも、ユーザ毎に好みの再生内容を管理することができ、使い勝手が向上するし、プレイリストを統合管理するので、プレイリストの表示順などをユーザが任意に変更が可能となる。

【発明の効果】

【0012】

本発明により、使い勝手を向上した記録再生装置を提供することができる。

【発明を実施するための最良の形態】

【0013】

以下、図面を用いて本発明の実施形態について説明する。図1は本発明による記録再生装置における、記録媒体上のAVデータの管理状態を示す図である。101は図2における201と同様に、記録媒体上のAVデータそのものであり、記録単位としてプログラム#1～プログラム#3が存在する場合を示している。

【0014】

102は図2における202に相当し、ここでは管理情報における第3管理階層(管理レベル3)を示している。プログラム情報#1～プログラム情報#3は、夫々プログラム#1～プログラム#3というプログラム単位の全ての再生範囲を示すものとなっている。またプログラム情報#2a～プログラム情報#3aはユーザが任意に指定したプログラムの全体あるいは一部の再生範囲を示すものであり、ここでは夫々プログラム#2の一部、プログラム#3の一部を示している。プログラム情報#1～プログラム情報#3に相当する箇所は、AVデータの追記、つまりプログラムの増加に伴いその情報も追加する。またプログラム情報#2aやプログラム情報#3aに相当する箇所は、ユーザの編集操作により、その情報の数が増減する。

【0015】

103は図2における管理レベル1に相当するが、ここでは管理情報の第2管理階層(管理レベル2)を示しており、プレイリスト情報#1～プレイリスト情報#nのみを含む。夫々のプレイリスト情報は前記管理レベル3における任意のプログラム情報の再生順序を示すものであり、複数持つことが可能となっている。

【0016】

104が本発明の特徴的な点として、新たに追加した管理情報の第1管理階層(管理レベル1)であり、複数の統合情報を含む。オリジナル統合情報は図2におけるプログラムセット情報に相当し、管理レベル3におけるプログラム情報#1～プログラム情報#3の全てを含み、これを元に再生することにより、ユーザは記録媒体上に記録された全てのAVデータを再生することが可能となる。プレイリスト統合情報は管理レベル2におけるプ

レイリスト情報#1～プレイリスト情報#nの全てを含み、これを元に再生することにより、ユーザは登録されている全てのプレイリストを順次再生することが可能となる。ユーザ定義統合情報#1～ユーザ定義統合情報#mは、管理レベル2におけるプレイリスト情報及び管理レベル3におけるプログラム情報のうちの任意の一つあるいは複数を含むものである。例えば複数のユーザが単一の記録媒体を用いる場合に、ユーザ単位に一つのユーザ定義統合情報を使用することにより、夫々のユーザの嗜好に合致した再生内容を管理することが可能となる。

次に本発明による記録再生装置の実施形態について、別の図を用い、もう少し具体的に説明する。

【0017】

図3は本発明による記録再生装置の一例を示すブロック図であり、デジタル放送を受信して記録媒体に記録し、また記録したデータを再生し、再生出力を得ることができるような記録再生装置を示している。300は記録再生装置、301はアンテナからの受信波を入力する入力端子、3011は他の機器からの圧縮された映像音声データを入力するための入力端子、3012はアナログ映像信号を入力するためのアナログ映像入力端子、3013はアナログ音声信号を入力するためのアナログ音声入力端子、333及び334は、アナログ信号をデジタル信号に変換するアナログ／デジタル（A／D）変換回路、302は復調回路、330は復調したデジタル信号を音声、映像、その他のデータに分離する分離回路、335はデジタル化された映像及び音声信号を圧縮する圧縮回路、303は記録系信号処理回路、331は記録するデータを暗号化するための暗号化回路、304は記録媒体のドライブ機能を含めた記録再生系、305は記録媒体、332は記録媒体上に暗号化され記録されたデータを非暗号化するための非暗号化回路、306は再生系信号処理回路、307は切替え回路、308は分離回路、309は映像復号回路、310はデジタル／アナログ（D／A）変換回路、311は映像出力端子、312は音声復号回路、313はD／A変換回路、314は音声出力端子、315はTVセット、316はユーザI／F、317は制御部、318はシステムバス、319はOSD生成部、320は加算回路である。

【0018】

記録時においては、デジタル放送などにより送信され、受信された信号が、復調回路302において所定の方式により復調された後、記録系信号処理回路303においてタイミング調整用のデータ付加や変調などの必要な信号処理が施されて、暗号化回路331にて暗号化された後、記録再生系304により記録媒体305へ記録される。また、デジタル入力端子3011より入力されたデジタル信号は記録系信号処理回路303においてタイミング調整用のデータ付加や変調などの必要な信号処理が施されて、暗号化回路331にて暗号化された後、記録再生系304により記録媒体305へ記録される。また、アナログ映像入力端子3012より入力されたアナログ映像信号と、アナログ音声入力端子3013より入力されたアナログ音声信号は、圧縮回路335によって圧縮処理がなされ、記録系信号処理回路303を介し、暗号化回路331にて暗号化された後、記録再生系304により記録媒体305へ記録される。

【0019】

再生時においては、ユーザの指示に応じて記録媒体305から記録再生系304を介して読み出された暗号化されたデジタルデータは、非暗号化回路332にて非暗号化され、再生系信号処理回路103において所定の変調方式に則った形式で復調等の再生に必要な信号処理が施され、切替え回路307を介して分離回路308に送られる。映像復号回路309では所定の映像復号処理が施されて、D／A変換回路310においてデジタルデータからアナログ信号への変換が成された後、映像出力端子311を介してTVセット315のモニタ出力へと表示される。また音声復号回路312では所定の音声復号処理が成され、D／A変換回路313においてデジタルデータからアナログ信号への変換が成された後、音声出力端子314を介してTVセット315の音声出力機構により出力される。

【0020】

制御部317は、システムバス318を介して記録再生装置300の各部を制御するものであり、またユーザI/F316を介して入力されたユーザの指示入力に基づいた動作を行うように、装置全体を制御する。なおユーザへの指示入力要求、あるいは必要なユーザへのOSD表示は、OSD生成部319で用意され、加算回路320において、映像復号回路309の出力と適当なレベルで加算されて、最終的にTVセット315のモニタ画面に出力されることにより実現される。

【0021】

次に図1における管理情報構成の具体的な使用例として、管理レベル1における各統合情報を記録データのメニュー表示に使用した場合について説明する。

【0022】

図4は図1におけるオリジナル統合情報を使用してメニュー表示を行う一例である。315は図3におけるTVセットであり、401は全プログラム表示用のタグ、402はプログラム情報#1を示すサムネイル、403はプログラム情報#2を示すサムネイル、404はプログラム情報#3を示すサムネイルである。ユーザはリモコン等により画面上のカーソル位置を所望のサムネイルに移動して選択決定することにより、任意のプログラム、あるいは全てのプログラムを再生することができる。

【0023】

次に図5は図1におけるプレイリスト統合情報を使用してメニュー表示を行う一例である。501は全プレイリスト表示用のタグ、502はプレイリスト情報#1を示すサムネイル、503はプレイリスト情報#2を示すサムネイルである。ユーザは前述の場合と同様にリモコン等により画面上のカーソル位置を所望のサムネイルに移動して選択決定することにより、任意のプレイリスト、あるいは全てのプレイリストを再生することができる。なお前述の全プログラム表示用タグ401から全プレイリスト表示用タグ501への表示切り替えは、ユーザが例えばタグの文字位置でカーソルを移動することなどにより実現することが可能である。

【0024】

次に図6は図1におけるユーザ定義統合情報#1を使用してメニュー表示を行う一例である。601はユーザ#1(ここでは「ママ」としている)用メニュー表示用のタグであり、402と502は図1からわかるように、プログラム情報#1及びプレイリスト情報#1を示すサムネイルとなっている。「ママ」はママ用メニュー表示用タグ601を自分専用のフォルダとして、自由に再生したいデータを登録、削除することが可能である。同様に図7は図1におけるユーザ定義統合情報#2を使用してメニュー表示を行う一例である。701はユーザ#2(ここでは「パパ」としている)用メニュー表示用のタグであり、503と502は図1からわかるように、プレイリスト情報#2及びプレイリスト情報#1を示すサムネイルとなっている。この場合「パパ」2つのプレイリストを選択しているが、その再生順序を変更することが可能となっている。また前述の「ママ」と同様に、「パパ」はパパ用メニュー表示用タグ701を自分専用のフォルダとして、自由に再生したいデータを登録、削除することが可能である。

【0025】

以上のように本発明の実施例によれば、登録された全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、AVデータ全ての再生範囲を示す統合情報と同列に扱うように構成し、また追加した管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成することにより、ユーザは任意のプレイリスト、あるいは再生範囲を選択して管理することが可能となるため、単一の記録媒体を複数のユーザが共有する場合などでも、ユーザ毎に好みの再生内容を管理することができ、使い勝手が向上する。

【0026】

なお以上の実施例では、デジタル放送を受信してデジタルデータをそのまま記録する場合について述べたが、これはこの限りではなく、ネットワークI/Fを具備し、外部ネットワークからAVデータを取得したり、符号化手段を具備し、アナログデータを符号化し

ながら記録媒体に記録するような構成でも良い。つまり本実施例は記録媒体上のデータ管理について言及しているものであり、その入力経路については特に限定されるものではない。

【0027】

図8に、上記に述べたプログラムやプログラム情報、プレイリスト情報、及びオリジナル統合情報、プレイリスト統合情報、ユーザ定義情報を、実際に記録媒体305（図3）上にどのようなファイル構成で記録するかの一例を示す。本記録媒体は、デジタル記録再生を行う媒体であり、媒体上の各ファイルは、いわゆるパーソナルコンピュータなど記録媒体の管理に用いられるのと同様のファイルシステムで管理されている。同図においてROOT800は、ファイルディレクトリの最上位階層を示し、TV_REC801はその下層のディレクトリであり、本発明にかかる図1に示した管理構造を実現する各ファイルのTVREC、MAN802、PGRG、IFO803、PGR、IFO804、PROG0001、TS805・・・がTV_REC801内に記録される。TVREC、MAN802は、図1に示すところの管理レベル1のオリジナル統合情報と、プレイリスト統合情報と、ユーザ定義統合情報#1から#mまでの情報が、管理テーブルとして記述される。またPGRGIFO803は、図1に示すところの管理レベル2のプレイリスト情報#1から#nの各情報は管理テーブルとして記録される。PGR、IFO804には、図1に管理レベル3の各情報プログラム情報#1～#3aの情報が管理テーブルが記録される。PROG0001、TS805、PROG0002、TS806、PROG0003、TS807は、各プログラムのAVデータの実体ファイルであり、例えば一回の記録開始から記録停止までをPROG0001、TSとし、次の記録開始から記録停止までをPROG0002、TSという具合にファイル名を更新して記録し、そののちに各上記管理ファイル802から804を更新する。

【0028】

なお、各ファイルの管理構造TVREC、MAN802、PGRG、IFO803、PGR、IFO804、PROG0001、TS805、・・・に関してのファイル構造、管理テーブルの構成自体は、いかなる方法にて構成されてもよいが、図1の場合の管理構成を、上記各ファイルによっていかに実現するかの一例を以下に示す。

【0029】

図9は、TVREC、MAN801（図8）の管理テーブル構成を示したものである。オリジナル統合情報901として、プログラム情報数9011として記録されたAVデータの数、すなわちAVデータの実体ファイル（PROG0001、TS805、PROG0002、TS806、PROG0003、TS807で、この場合は3は入る）の総数が記述され、さらにその下に各オリジナルのプログラム情報の位置テーブル9012が記録される。また、プレイリスト統合情報902として、各プレイリスト#1から#3aまでのプレイリスト位置情報テーブル9021以下に記録される。また903以降には、ユーザ定義統合情報の数が記録され、それ以降にユーザ定義情報の#1から#mまでの内容が記録される。

【0030】

また図13は、前記したユーザ定義情報#mの内容を表した図である。ユーザ定義情報#mは、どのオリジナルのプログラム情報と、どのプレイリスト情報から組み合わせられているかを、テーブルとして持つ。

【0031】

図10は、図1の管理レベル2に相当する、PGRG、IFO803（図8）の管理テーブルを示したものである。プレイリスト情報1001として、最初にプレイリスト情報の総数が10011記述され（この場合はn）、その下の10012から各プレイリスト情報#1から#nまでの内容が記述してある位置をテーブルとして記録される。さらに10013から各プレイリスト#1から#nまでの内容（再生シーケンスの内容で、後述するAVデータの再生開始位置や再生終了位置などをしめす、プログラム情報などを、どう組み合わせるか、の管理テーブル）が記録される。

【0032】

図11は図1の管理レベル3に相当する、PGR、IFO804（図8）の管理テーブルを示したものである。プログラム情報1101として、プログラム情報（オリジナル情報のプログラム#1、#2、#3（図1））に一对をなすプログラム情報と、ユーザが定義したプログラム情報#2aや3a（図1）のすべてを含むプログラム情報の数が11011に記録され、以降の11012にプログラム情報#1から#3aまでの各プログラム情報の内容を記述した位置を示すテーブルが、さらに11013以降に各プログラム情報#1から#3aの内容（各AVデータファイルのPROG0001、TS805、PROG0002、TS806、PROG0003、TS807（図8）のどこからどこまでを再生する位置を記述）が記録される。

【0033】

以上のように管理すれば、たとえばプレイリスト位置テーブル9021の位置情報をソートして、プレイリストをGUI画面上に表示する順番などを図5の状態から図12の状態に変更することが可能となり、プレイリストの数が非常に多くなった場合、ユーザの使用頻度の高いプレイリストをGUI画面上の最初に表示するようにできるので、ユーザにとって使い勝手のよい記録再生装置、もしくは再生装置もしくは記録方法を実現できるし、例えば複数のユーザが自分の見たいプレイリストや記録されたオリジナルのコンテンツを自由に個別に設定できるので、記録しているプログラムの数が非常に多数にわたった場合でも、自分の見たいプログラムを、自分が定義したフォルダを参照することができるので、すばやく見たいプログラムを見つけ出すことができる。

【0034】

なお、本実施例では、ユーザ定義のプレイリスト統合情報と、ユーザ定義統合情報#1から#mを明確に区別しているが、はユーザ定義統合情報のオリジナルのプログラム情報とのリンクを持たないユーザ定義のプレイリスト統合情報の位置付けであってもよい。

【図面の簡単な説明】

【0035】

【図1】 実施例による記録再生装置でAVデータの管理状態を示す図。

【図2】 従来例によるAVデータの管理状態を示す図。

【図3】 実施例による記録再生装置のブロック図。

【図4】 オリジナル統合情報の表示出力例。

【図5】 プレイリスト統合情報の表示出力例。

【図6】 ユーザ定義統合情報の第1の表示出力例。

【図7】 ユーザ定義統合情報の第2の表示出力例。

【図8】 各オリジナル統合情報、プレイリスト統合情報、ユーザ定義統合情報、及びプレイリスト情報、プログラム情報、AVデータ（プログラム）のファイル構造の一例を示した図。

【図9】 各オリジナル統合情報、プレイリスト統合情報、ユーザ定義統合情報の管理テーブル構造の一例を示したものの。

【図10】 プレイリスト情報の管理テーブルの一例を示したものの

【図11】 プログラム情報の管理テーブルの一例をしめしたものの

【図12】 プレイリスト統合情報の表示出力例。

【図13】 ユーザ定義情報#mの内容の示すテーブルの一例をしめしたものの

【符号の説明】

【0036】

101、201 … プログラム(AVストリーム)

102 … 管理情報における第3階層

103、202 … 管理情報における第2階層

104、203 … 管理情報における第1階層

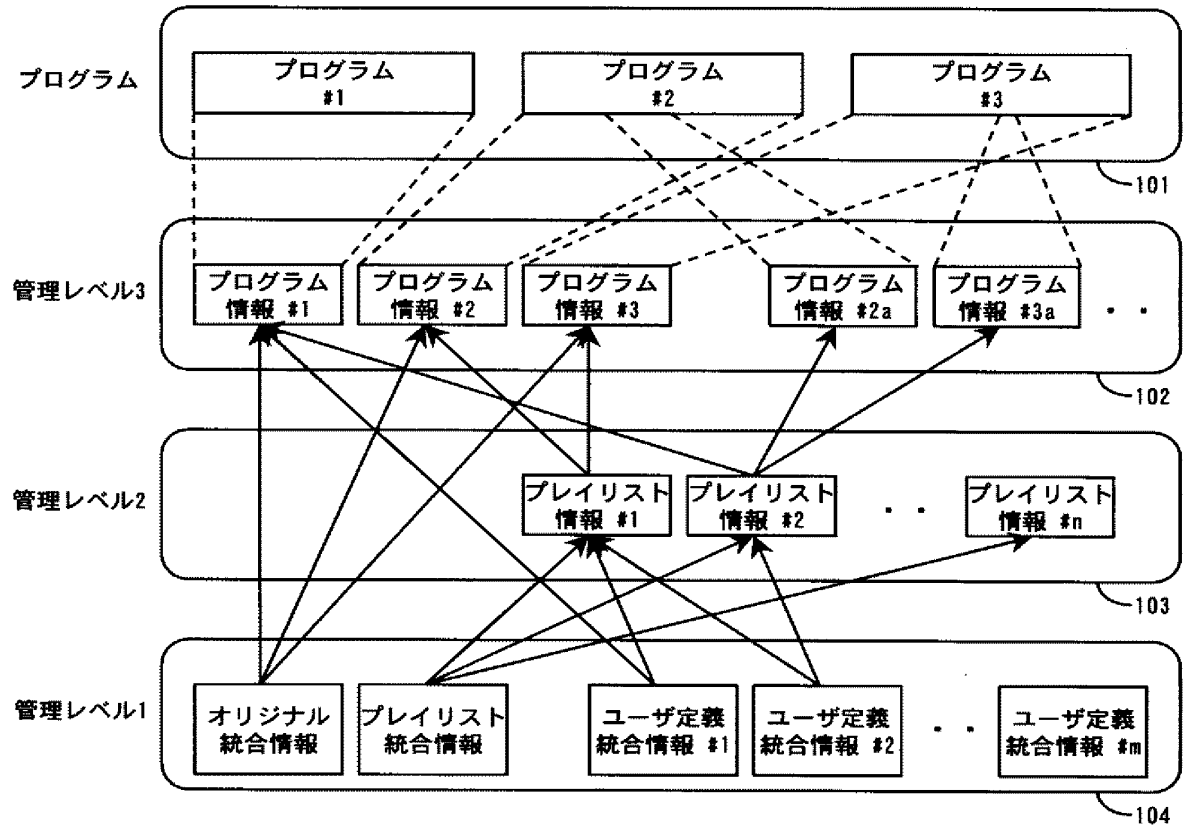
303 … 記録系信号処理

304 … 記録再生系

3 0 5 ... 記録媒体
3 0 6 ... 再生系信号処理
3 1 5 ... TVセット
3 1 6 ... ユーザ I / F
3 1 7 ... 制御部
3 1 8 ... システムバス
3 1 9 ... OSD生成部
4 0 1 ... 全プログラム表示用タグ
5 0 1 ... 全プレイリスト表示用タグ
6 0 1 ... ユーザ # 1 用メニュー表示用タグ
7 0 1 ... ユーザ # 2 用メニュー表示用タグ

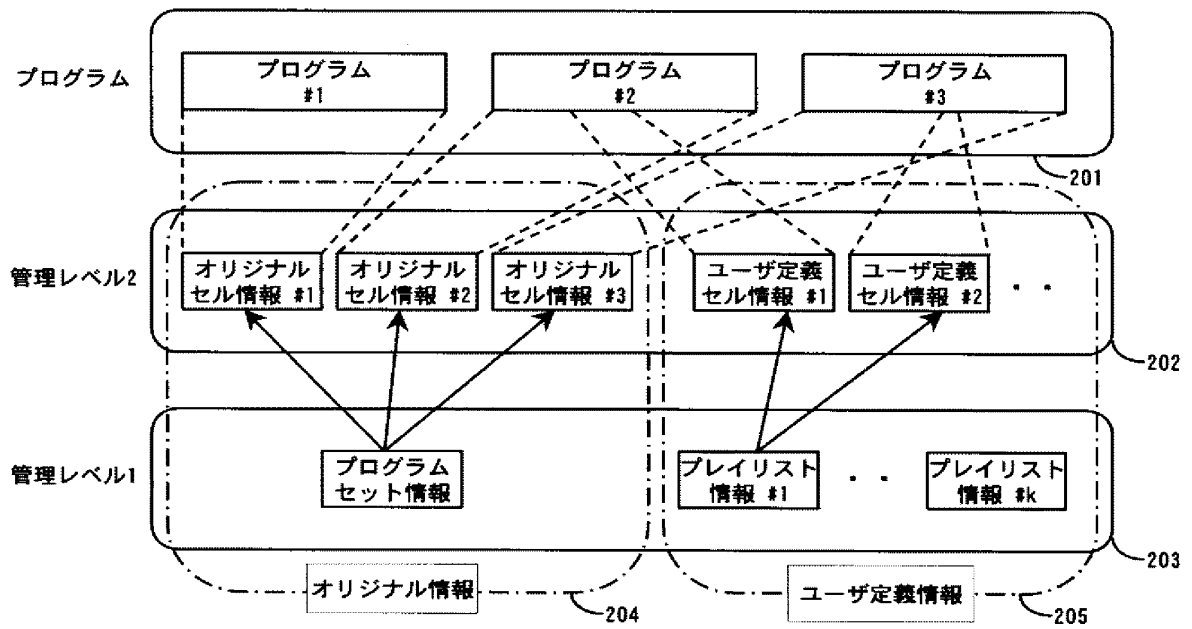
【書類名】 図面
【図 1】

図 1



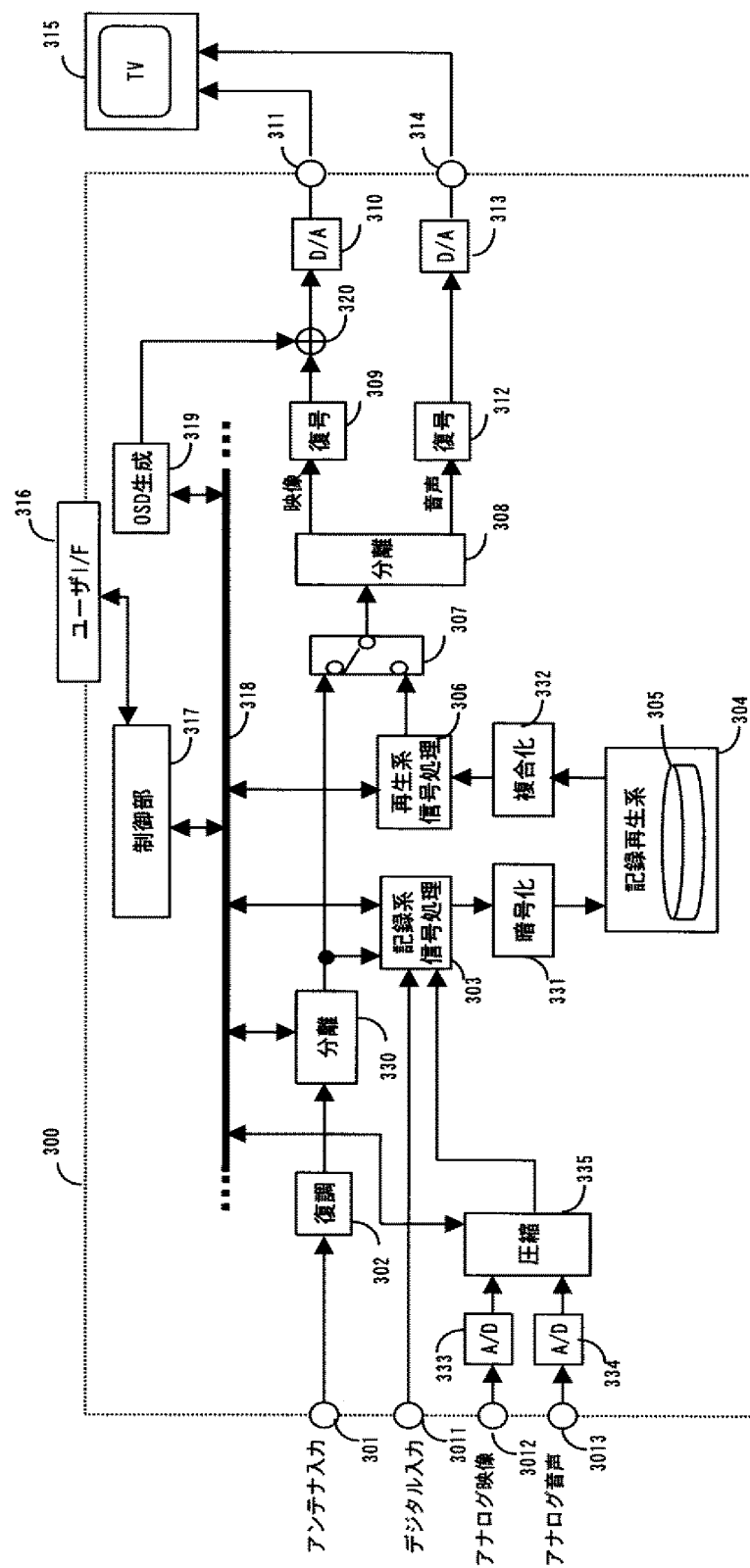
【図2】

図2



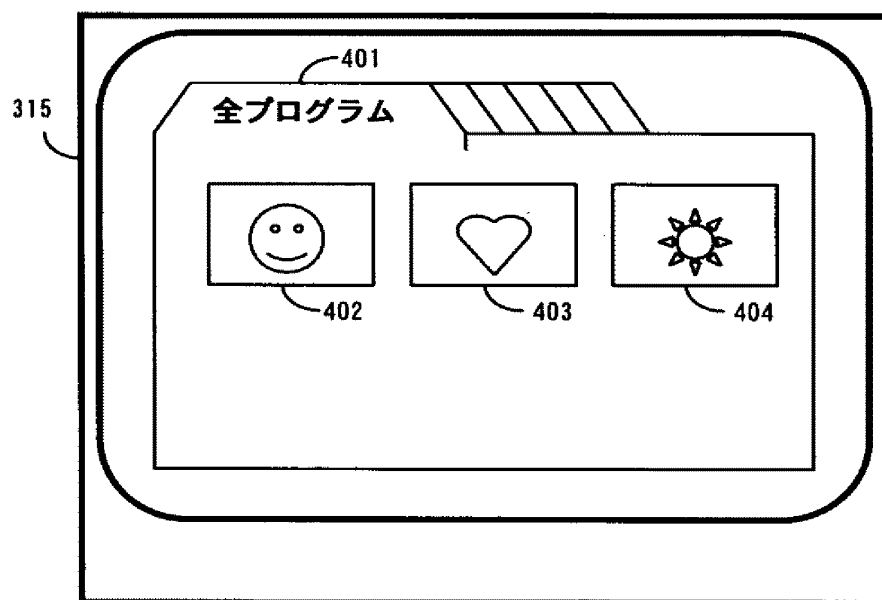
【図 3】

図 3



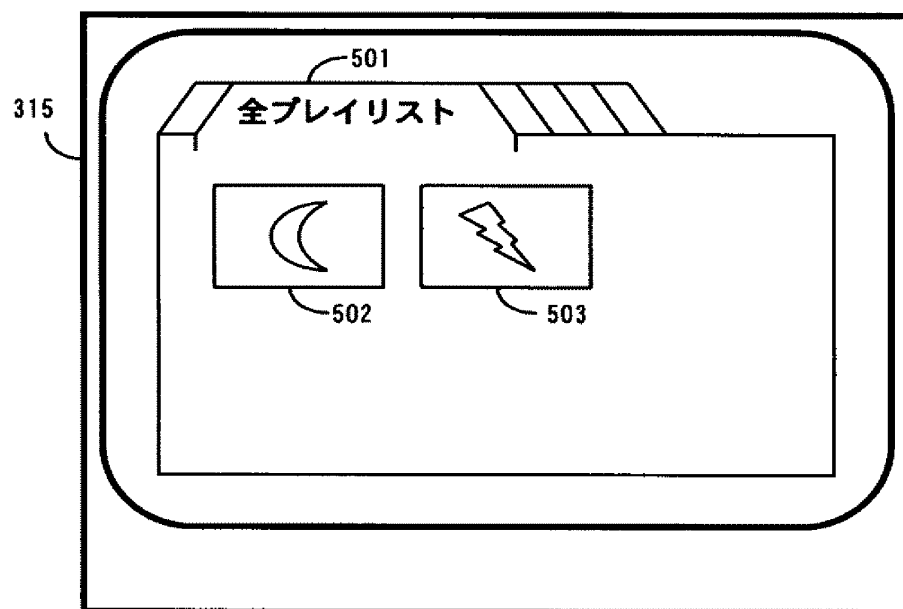
【図4】

図4



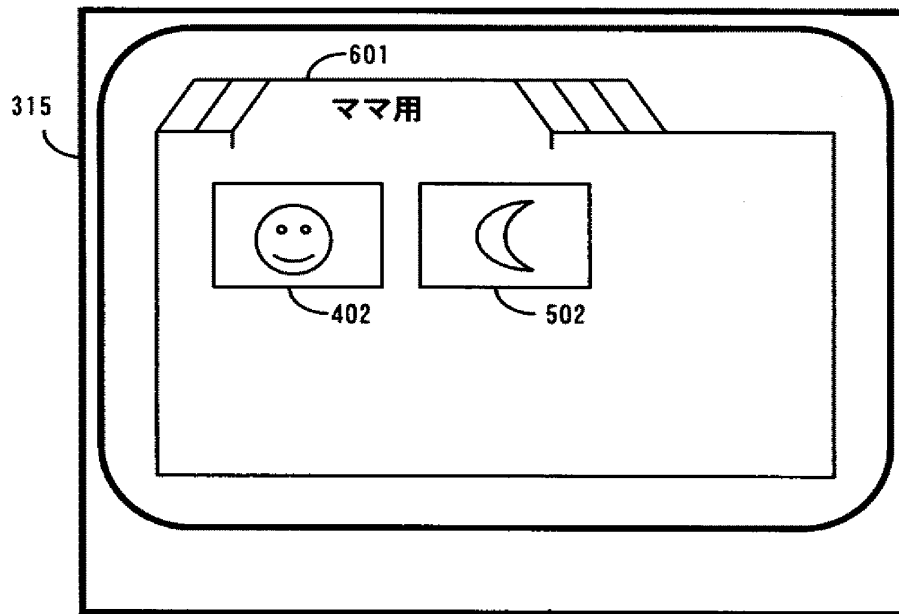
【図5】

図5



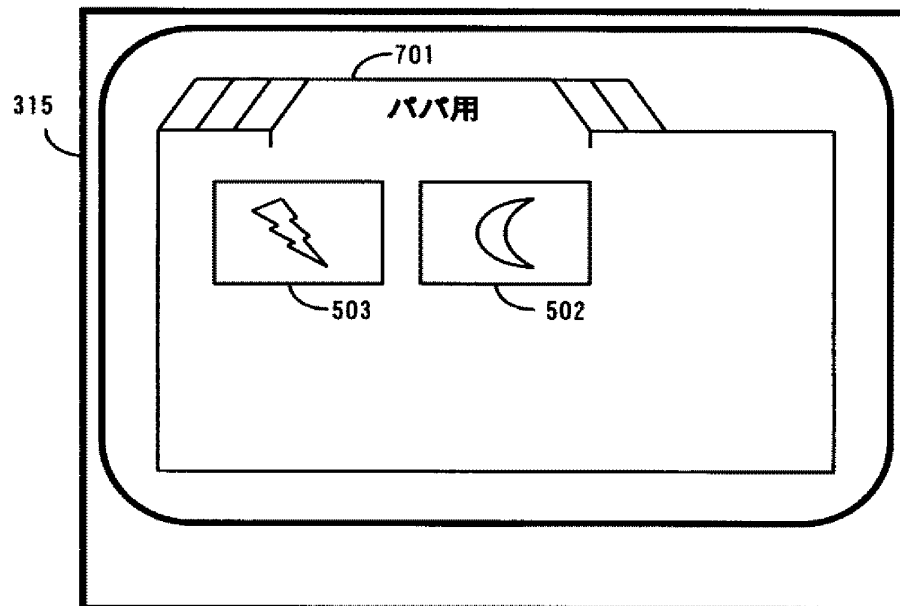
【図6】

図6



【図7】

図7



【図 8】

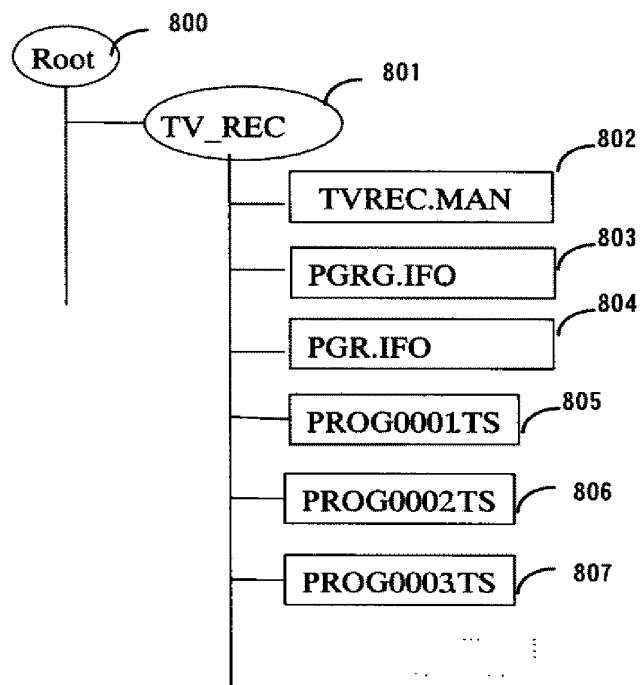


図 8

【図 9】

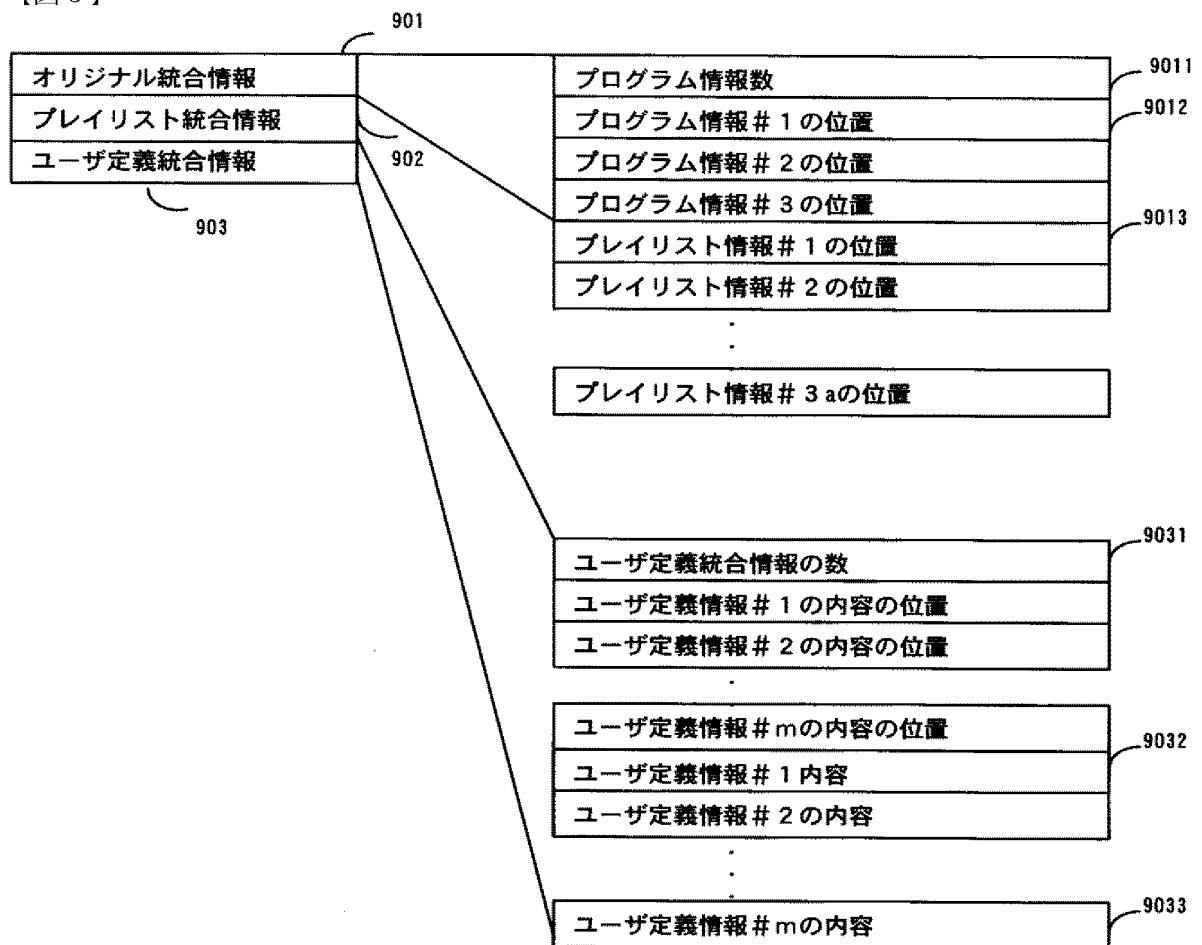


図 9

【図 1 0】

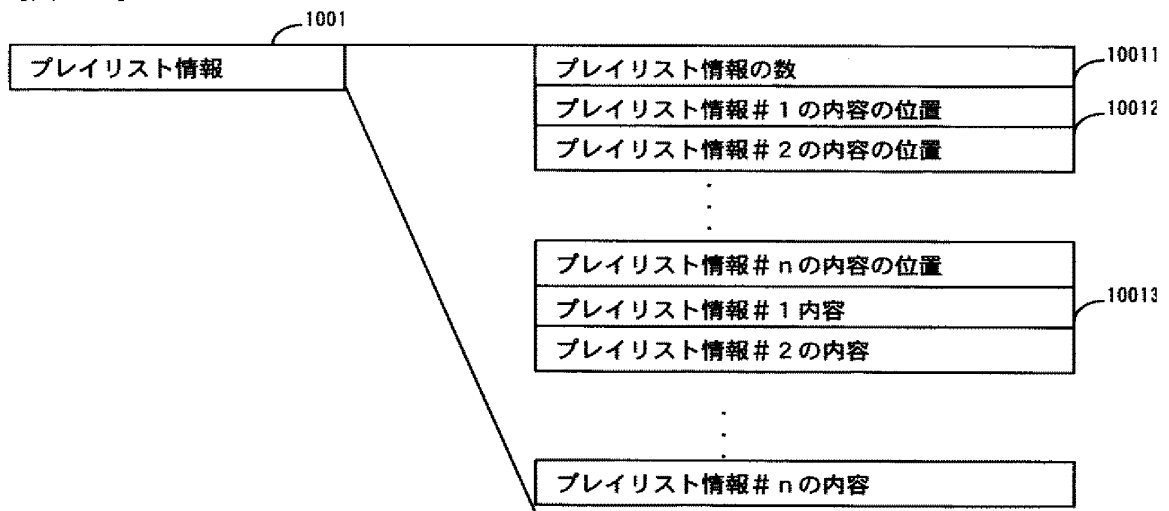


図 1 0

【図 1 1】

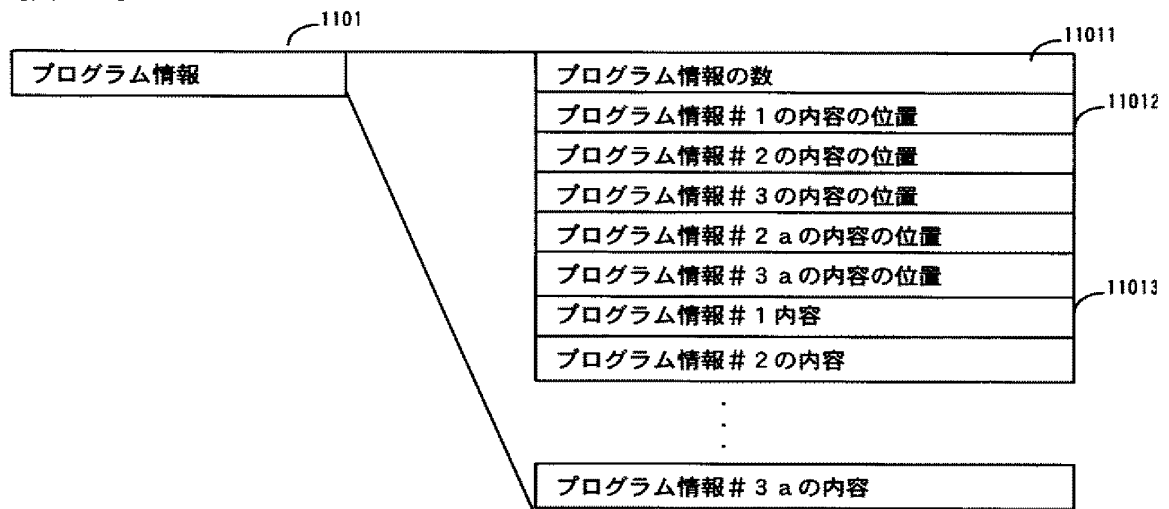
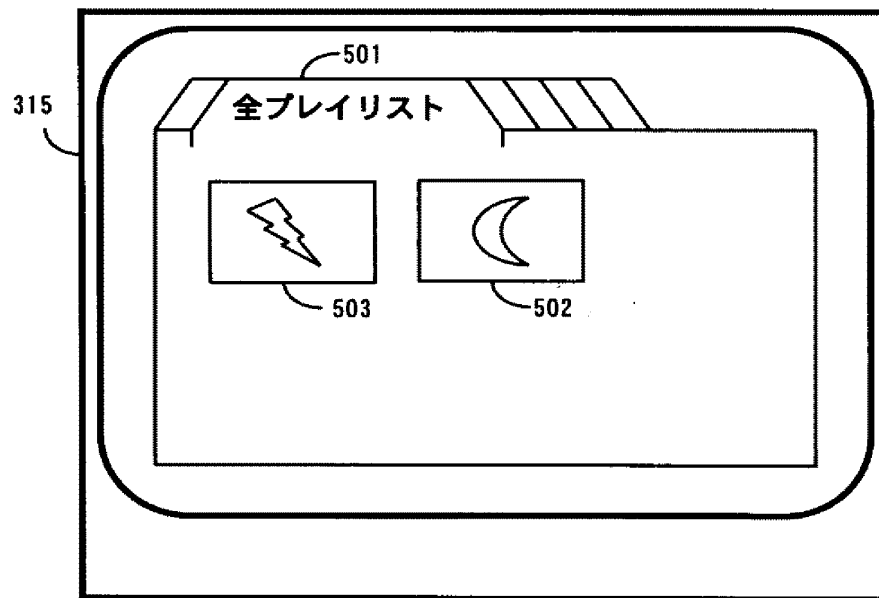


図 1 1

【図12】

図12



【図13】

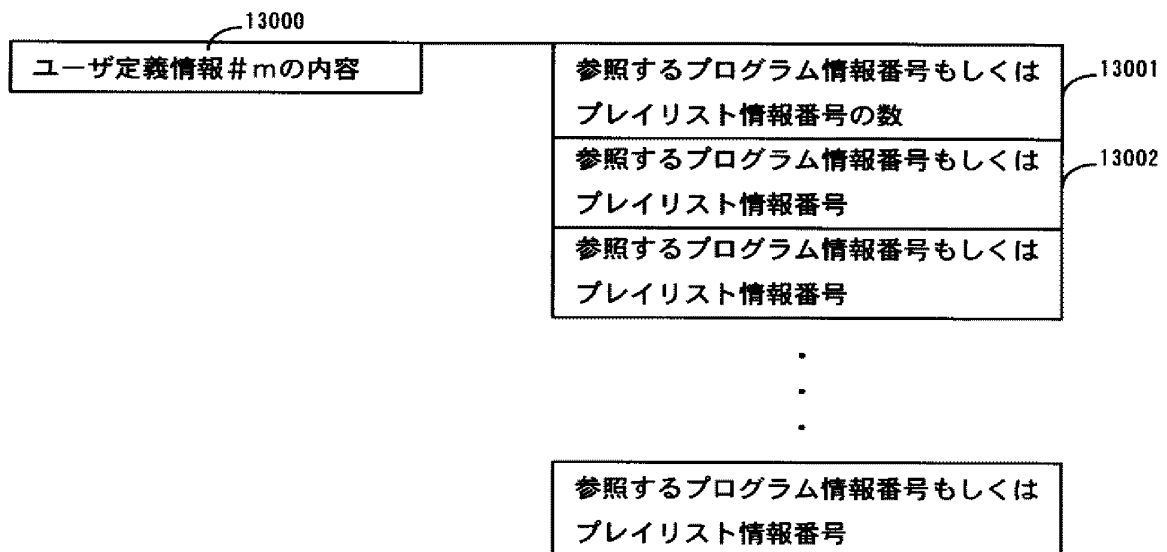


図13

【書類名】 要約書

【要約】

【課題】 ユーザが任意のプレイリストを選択管理できるような記録再生装置を提供する

。

【解決手段】 登録された全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、該管理単位をAVデータ全ての再生範囲を示す統合情報と同列に扱うように構成する。また追加した管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層に含まれる任意の再生範囲を登録できるように構成する。

【選択図】 図1

【書類名】 手続補正書
【あて先】 特許庁長官殿
【事件の表示】
【出願番号】 特願2004-378768
【補正をする者】
【識別番号】 000005108
【氏名又は名称】 株式会社日立製作所
【代理人】
【識別番号】 100100310
【弁理士】
【氏名又は名称】 井上 学
【発送番号】 691043
【手続補正1】
【補正対象書類名】 特許請求の範囲
【補正対象項目名】 全文
【補正方法】 変更
【補正の内容】
【書類名】 特許請求の範囲

【請求項1】
プログラムと、前記プログラムを管理する管理情報を記録する記録方法であって、
前記プログラムを記録するステップと、
前記管理情報を記録するステップとを有し、
前記管理情報を記録する前記ステップは、
前記プログラムの全体の再生範囲を示すオリジナルプログラム情報と、前記プログラムの全体あるいは一部の再生範囲を示すユーザ定義プログラム情報と、前記オリジナルプログラム情報または前記ユーザ定義プログラム情報の再生順序を示すプレイリスト情報と、前記オリジナルプログラム情報及び前記プレイリスト情報のうちの少なくとも1つを含むユーザ定義フォルダ情報と、を有する管理情報を記録し、
前記管理情報は、
前記ユーザ定義フォルダ情報を第1の管理階層とし、
前記プレイリスト情報を第2の管理階層とし、
前記オリジナルプログラム情報と前記ユーザ定義プログラム情報を第3の管理階層とし、
前記プログラムと前記管理情報を同一の記録媒体に記録し、
前記ユーザ定義フォルダ情報は前記オリジナルプログラム情報と前記プレイリスト情報の双方を参照可能であることを特徴とする記録方法。

【請求項2】
プログラムと、前記プログラムを管理する管理情報を記録媒体に記録する記録装置であって、
前記プログラムと前記管理情報を前記記録媒体に記録する記録手段と、
前記記録手段を制御する制御手段とを有し、
前記記録手段は、
前記プログラムの全体の再生範囲を示すオリジナルプログラム情報と、前記プログラムの全体あるいは一部の再生範囲を示すユーザ定義プログラム情報と、前記オリジナルプログラム情報または前記ユーザ定義プログラム情報の再生順序を示すプレイリスト情報と、前記オリジナルプログラム情報及び前記プレイリスト情報のうちの少なくとも1つを含むユーザ定義フォルダ情報と、を有する前記管理情報を記録し、
前記管理情報は、
前記ユーザ定義フォルダ情報を第1の管理階層とし、
前記プレイリスト情報を第2の管理階層とし、
前記オリジナルプログラム情報と前記ユーザ定義プログラム情報を第3の管理階層とし、

前記プログラムと前記管理情報を同一の記録媒体に記録し、
前記ユーザ定義フォルダ情報は前記オリジナルプログラム情報と前記プレイリスト情報の
双方を参照可能であることを特徴とすることを特徴とする記録装置。

【手続補正2】

【補正対象書類名】 明細書
【補正対象項目名】 0010
【補正方法】 変更
【補正の内容】
【0010】

上記目的を達成するために本発明では、一例として、特許請求の範囲記載の構成を用い
る。

【手続補正3】

【補正対象書類名】 明細書
【補正対象項目名】 0011
【補正方法】 削除

【手続補正4】

【補正対象書類名】 明細書
【補正対象項目名】 0034
【補正方法】 変更
【補正の内容】
【0034】

なお、本実施例では、ユーザ定義のプレイリスト統合情報と、ユーザ定義統合情報#1
から#mを明確に区別しているが、はユーザ定義統合情報のオリジナルのプログラム情報
とのリンクを持たないユーザ定義のプレイリスト統合情報の位置付けであってもよい。

以上、本発明の好適な実施例について説明した。本発明の一実施態様によれば、登録さ
れた全てのプレイリスト情報を管理する管理単位及び上位の管理階層を追加し、該管理単
位はAVデータ全ての再生範囲を示す統合情報と同列に扱うように構成する。また追加し
た管理階層でユーザ定義による統合情報を扱うように構成し、この統合情報には下位階層
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能となる。

出願人履歴

0 0 0 0 0 5 1 0 8

20040908

住所変更

東京都千代田区丸の内一丁目 6 番 6 号

株式会社日立製作所

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-15)

Approved for use through 07/31/2016. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	15176435
	Filing Date	2016-06-08
	First Named Inventor	YOSHIDA, S.
	Art Unit	2484
	Examiner Name	TBD
	Attorney Docket Number	ASA-10782-04

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6181870	B1	2001-01-30	OKADA et al.	
	2	7512622	B2	2009-03-31	VOLK et al.	
	3	6480669	B1	2002-11-12	TSUGUMAGARI et al.	
	4	7257774	B2	2007-04-14	DENOUE et al.	
	5	6470140	B1	2002-10-22	SUGIMOTO et al.	
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030063897	A1	2003-04-03	JUNG-KWON	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		15176435	
	Filing Date		2016-06-08	
	First Named Inventor	YOSHIDA, S.		
	Art Unit	2484		
	Examiner Name	TBD		
	Attorney Docket Number	ASA-10782-04		

	2	20010023436	A1	2001-09-20	SRINIVASAN et al.	
	3	20070022382	A1	2007-01-25	HONKANIEMI	

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	2004-192779	JP	A	2004-07-08	HITACHI, LTD.		
	2	2003-36652	JP	A	2003-02-07	TOSHIBA CORP.		
	3	11-32301	JP	A	1999-02-02	SONY CORP.		
	4	2000-152180	JP	A	2000-05-30	MATSUSHITA ELECTRIC IND CO LTD		
	5	2003-100055	JP	A	2003-04-04	MATSUSHITA ELECTRIC IND CO LTD.		
	6	2002-150503	JP	A	2002-05-24	PIONEER ELECTRONIC CORP.		
	7	1243596	CN	A	2000-02-02	MATSUSHITA ELECTRIC IND CO LTD.		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	15176435
	Filing Date	2016-06-08
	First Named Inventor	YOSHIDA, S.
	Art Unit	2484
	Examiner Name	TBD
	Attorney Docket Number	ASA-10782-04

8	2003-123389	JP	A	2003-04-25	SONY CORP.		
9	2002-197806	JP	A	2002-07-12	TOSHIBA CORP.		

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Japan Patent Office (JPO) office action for JPO patent application JP2008-268104 (June 12, 2009).	
	2	Japan Patent Office (JPO) office action for JPO patent application JP2004-349264 (August 6, 2008).	
	3	Chinese Intellectual Property Office (SIPO) office action for SIPO patent application CN2005-100935522 (May 26, 2008).	
	4	Toshiba HDD & DVD Video Recorder Instruction Manual RD-X5 Operating Instructions, Toshiba Corporation, pp. 148-159 (2004).	
	5	Office action for Japan Patent Office patent application JP2008-31843 (December 21, 2010).	

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	15176435
	Filing Date	2016-06-08
	First Named Inventor	YOSHIDA, S.
	Art Unit	2484
	Examiner Name	TBD
	Attorney Docket Number	ASA-10782-04

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	15176435
	Filing Date	2016-06-08
	First Named Inventor	YOSHIDA, S.
	Art Unit	2484
	Examiner Name	TBD
	Attorney Docket Number	ASA-10782-04

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/John R. Mattingly/	Date (YYYY-MM-DD)	2017-02-22
Name/Print	John R. Mattingly	Registration Number	30,293

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	28424564
Application Number:	15176435
International Application Number:	
Confirmation Number:	6859
Title of Invention:	Editing Method and Recording and Reproducing Device
First Named Inventor/Applicant Name:	Susumu YOSHIDA
Customer Number:	24956
Filer:	John Roberts Mattingly/Emily Scotti
Filer Authorized By:	John Roberts Mattingly
Attorney Docket Number:	ASA-10782-04
Receipt Date:	22-FEB-2017
Filing Date:	08-JUN-2016
Time Stamp:	11:49:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	10782-04-IDS.pdf	21695	no	3
			341b0be8b052fccc3b2cedbdf7ed4a9d55c9fbc9		

Warnings:

Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	10782-04-SB08A.pdf	1036166	no	6
			78ea197aee3872e9975219a1a97c829ea6d57dea		
Warnings:					
Information:					
Total Files Size (in bytes):			1057861		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 15/176,435 Confirmation No. : 6859
Applicant : Hitachi Maxell, Ltd. TC/GAU : 2484
Filed : June 8, 2016 Examiner : Not yet assigned
Title : Editing Method and Recording and Reproducing Device
Customer No.: 24956

INFORMATION DISCLOSURE STATEMENT (IDS)
UNDER § 1.97 AND § 1.98

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

February 22, 2017

Sir:

In the matter of the above-identified application, Applicant is submitting herewith a copy, where required, of the documents listed in the attached form PTO/SB/08a. It is requested that the information be considered by the Examiner during prosecution of the application, and that the references be made of record therein.

1. This IDS is filed:

- ☐ (a) with the filing of an application (new or continuing) or Request for Continued Examination (RCE). No certification or fee is required.
- ☐ (b) within three months of the filing date of the present application, or within three months of the filing date of the National Stage as set forth in § 1.491 in an international application. No certification or fee is required.
- ☒ (c) before the mailing date of a first Office Action on the merits under 37 CFR 1.97 (b) (1-4). No certification or fee is required.
- ☐ (d) before the mailing date of either a Final Rejection under § 1.113 or a Notice of Allowance under § 1.311. Included herein is a certification in section 3 below, **OR** a fee of \$180.00;

☐ (e) prior to the payment of the Issue Fee. A certification is included in section 3 below. Applicant(s) hereby petition(s) and request(s) consideration of this IDS, **AND** submits a fee of \$180.00.

2. When 1(a)-(e) do not apply, then it is requested that this IDS be placed in the file.

3. The undersigned hereby states:

☐ (a) that each item of information contained in this IDS was first cited in any communication from a foreign patent office in a counterpart foreign application, as indicated on the copy of the communication submitted herewith, which communication was dated not more than three months prior to the filing of this IDS; or

☐ (b) that no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in § 1.56(c) more than three months prior to the filing of this IDS.

4. One or more references cited on the attached PTO/SB/08a was cited by or submitted to the U.S. Patent and Trademark Office in Parent Application Nos. 14/141,417, filed December 26, 2013, 12/567,898, filed September 28, 2009 and 11/203,457, filed August 11, 2005 which are relied upon for an earlier filing date under 35 U.S.C. §120. No copies of the references are attached pursuant to 37 CFR §1.98(d).

5. Fee Payment.

☐ The fee of \$180 is enclosed.

☒ No fee is believed to be due.

If a fee or additional fee is required, the Commissioner is hereby authorized to charge any fee or additional fee that may be required and credit any excess to Deposit Account No. 50-1417.

Application No. 15/176,435
Attorney Docket No.: ASA-10782-04

6. If the PTO determines that part(s) of the required content is inadvertently omitted, then it is requested that the Applicant(s) be given additional time and specific identification of such omission(s) to enable full compliance.

Respectfully submitted,

MATTINGLY & MALUR, PC

/John R. Mattingly/
John R. Mattingly, Reg. No. 30,293
(703) 684-1120



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/176,435	06/08/2016	Susumu YOSHIDA	ASA-10782-04

CONFIRMATION NO. 6859

24956
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

PUBLICATION NOTICE



OC000000088755764

Title:Editing Method and Recording and Reproducing Device

Publication No.US-2017-0025156-A1

Publication Date:01/26/2017

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/176,435	06/08/2016	Susumu YOSHIDA	ASA-10782-04

CONFIRMATION NO. 6859

POA ACCEPTANCE LETTER

24956
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314



Date Mailed: 01/18/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/11/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/cnguyen/



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UNITED STATES DEPARTMENT OF COMMERCE
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
15/176,435	06/08/2016	2484	1740	ASA-10782-04	1	1

CONFIRMATION NO. 6859

CORRECTED FILING RECEIPT



0000000088505830

24956
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

Date Mailed: 01/18/2017

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Susumu YOSHIDA, Kawasaki, JAPAN;
Junji SHIOKAWA, Chigasaki, JAPAN;
Hiroo OKAMOTO, Yokohama, JAPAN;

Applicant(s)

Hitachi Maxell, Ltd., Osaka, JAPAN;

Power of Attorney: The patent practitioners associated with Customer Number 24956

Domestic Priority data as claimed by applicant

This application is a CON of 14/141,417 12/26/2013 PAT 9384783
which is a CON of 12/567,898 09/28/2009 PAT 8644684
which is a CON of 11/203,457 08/11/2005 PAT 7613383

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

JAPAN 2004-378767 12/28/2004

JAPAN 2004-378768 12/28/2004

JAPAN 2004-349264 12/02/2004

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 06/21/2016

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/176,435**

Projected Publication Date: 01/26/2017

Non-Publication Request: No

Early Publication Request: No

Title

Editing Method and Recording and Reproducing Device

Preliminary Class

386

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

page 2 of 4

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

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This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
15/176,435	06/08/2016	3714	1740	~~086890-1014135 (161030US)~~ <u>ASA-10782-04</u>	1	1

CONFIRMATION NO. 6859

UPDATED FILING RECEIPT



0000000088399673

~~20350-~~

~~KILPATRICK TOWNSEND & STOCKTON LLP~~

~~Mailstop: IP Docketing - 22~~

~~1100 Peachtree Street~~

~~Suite 2800~~

~~Atlanta, GA 30309~~

~~24956~~

~~Mattingly & Malur, PC~~

~~1800 Diagonal Road~~

~~Suite 210~~

~~Alexandria, VA 22314~~

Date Mailed: 10/20/2016

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Susumu YOSHIDA, Kawasaki, JAPAN;
Junji SHIOKAWA, Chigasaki, JAPAN;
Hiroo OKAMOTO, Yokohama, JAPAN;

Applicant(s)

~~Hitachi, Ltd., Tokyo, JAPAN;~~ Hitachi Maxell, Ltd., Osaka, JAPAN

Power of Attorney: ~~None~~ 24956

Domestic Priority data as claimed by applicant

This application is a CON of 14/141,417 12/26/2013 PAT 9384783
which is a CON of 12/567,898 09/28/2009 PAT 8644684
which is a CON of 11/203,457 08/11/2005 PAT 7613383

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

JAPAN 2004-378767 12/28/2004

JAPAN 2004-378768 12/28/2004

JAPAN 2004-349264 12/02/2004

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(c).

I hereby appoint:



Practitioners associated with Customer Number:

24956

OR



Practitioner(s) named below (If more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

As attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignments documents attached to this form in accordance with 37 CFR 3.73(c).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(c) to:



The address associated with Customer Number:

24956

OR

☐	Firm or Individual Name		
☐	Address		
☐	City		
☐	Country		
☐	Telephone		Email

Assignee Name and Address: HITACHI MAXELL, LTD.
1-88, Ushitora 1-chome, Ibaraki-shi, Osaka 567-8567, Japan

A copy of this form, together with a statement under 37 CFR 3.73(c) (Form PTO/SB/96 or equivalent) is required to be Filed in each application in which this form is used. The statement under 37 CFR 3.73(c) may be completed by one of The practitioners appointed in this form, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	27/08/2014
Name	Yoshihiro SENZAI	Telephone	
Title	President & Chief Executive Officer, HITACHI MAXELL, LTD.		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Hitachi Maxell, Ltd.
Application No./Patent No.: 15/176,435 Filed/Issue Date: June 8, 2016
Titled: Editing Method and Recording and Reproducing Device
Hitachi Maxell, Ltd., a Corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☒ The assignee of the entire right, title, and interest.
2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):
- ☐ The extent (by percentage) of its ownership interest is ____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.
- ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (e.g., bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: YOSHIDA, S. et al. To: Hitachi, Ltd.

The document was recorded in the United States Patent and Trademark Office at
Reel 040902, Frame 0505, or for which a copy thereof is attached.

2. From: Hitachi, Ltd. To: Hitachi Maxell, Ltd.

The document was recorded in the United States Patent and Trademark Office at
Reel 040902, Frame 0525, or for which a copy thereof is attached.

[Page 1 of 2]

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

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Reel _____, Frame _____, or for which a copy thereof is attached.

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Reel _____, Frame _____, or for which a copy thereof is attached.

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6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/John R. Mattingly/

Signature

John R. Mattingly

Printed or Typed Name

2017-01-11

Date

30,293

Title or Registration Number

Privacy Act Statement

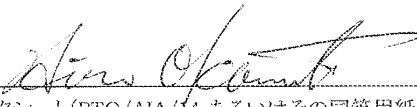
The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

申請データシート(37 CFR 1.76)を使った実用及び意匠登録出願宣言書(37 CFR 1.63) DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)	
発明の名称 Title of Invention	EDITING METHOD AND RECORDING AND REPRODUCING DEVICE
下記発明者である私は、つぎのことがらを宣言します。 As the below named inventor, I hereby declare that: 本宣言は This declaration is directed to: ☐ 添付されている、あるいは The attached application, or _____に、米国出願あるいは PCT 国際出願番号 _____ として出願されているものに ☒ 宛てられています。 United States application or PCT international application number 14/141417 filed on December 26, 2013 上記の出願は私自身、あるいは私が権限を譲与したものによって行われたものです。 The above-identified application was made or authorized to be made by me. 私は本出願書中にあらわれるもとの発明者、あるいはもとの共同発明者です。 I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. 私は本宣言書において故意に虚偽の申し立てを行った場合は 18 U.S.C. 1001 により、罰金あるいは最高五(5)年の禁固刑、あるいはその両方による罰則の対象となることを認めます。 I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. 私は、特許請求の範囲を含む上記の明細書を確認し内容を理解しています。 I have reviewed and understand the contents of the above-identified application, including the claims. 私は、連邦規則法典第 37 編規則 1.56 に定義されている、特許性について重要な情報を開示する義務があることを認めます。 I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.	
発明者の正式氏名: LEGAL NAME OF INVENTOR: SUSUMU YOSHIDA	
署名: Signature: <i>Susumu Yoshida</i> 日付(任意): Date (Optional): <i>Feb. 17, 2014</i>	
備考: 出願データシート(PTO/AIA/14 あるいはその同等用紙)は、発明の自主独立体全体の命名を含め、本用紙に添付すること。 なお残余の発明者ごとにこの用紙の写しを使用する。 Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional copy of the present form for each additional inventor.	

申請データシート(37 CFR 1.76)を使った実用及び意匠登録出願宣言書(37 CFR 1.63) DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)	
発明の名称 Title of Invention	EDITING METHOD AND RECORDING AND REPRODUCING DEVICE
下記発明者である私は、つぎのことがらを宣言します。 As the below named inventor, I hereby declare that: 本宣言は This declaration is directed to: ☐ 添付されている、あるいは The attached application, or _____に、米国出願あるいは PCT 国際出願番号 _____として出願されているものに ☒ 宛てられています。 United States application or PCT international application number <u>14/141417</u> filed on <u>December 26, 2013</u> 上記の出願は私自身、あるいは私が権限を譲与したものによって行われたものです。 The above-identified application was made or authorized to be made by me. 私は本出願書中にあらわれるもとの発明者、あるいはもとの共同発明者です。 I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. 私は本宣言書において故意に虚偽の申し立てを行った場合は 18 U.S.C. 1001 により、罰金あるいは最高五(5)年の禁固刑、あるいはその両方による罰則の対象となることを認めます。 I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. 私は、特許請求の範囲を含む上記の明細書を確認し内容を理解しています。 I have reviewed and understand the contents of the above-identified application, including the claims. 私は、連邦規則法典第 37 編規則 1.56 に定義されている、特許性について重要な情報を開示する義務があることを認めます。 I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.	
発明者の正式氏名: LEGAL NAME OF INVENTOR: <u>JUNJI SHIOKAWA</u>	
署名: Signature: <u><i>Junji Shiohawa</i></u> 日付(任意): Date (Optional): <u>Feb 25, 2014</u>	
備考: 出願データシート (PTO/AIA/14 あるいはその同等用紙) は、発明の自主独立体全体の命名を含め、本用紙に添付すること。 なお残余の発明者ごとにこの用紙の写しを使用する。 Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional copy of the present form for each additional inventor.	

申請データシート(37 CFR 1.76)を使った実用及び意匠登録出願宣言書(37 CFR 1.63) DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)	
発明の名称 Title of Invention	EDITING METHOD AND RECORDING AND REPRODUCING DEVICE
下記発明者である私は、つぎのことがらを宣言します。 As the below named inventor, I hereby declare that: 本宣言は This declaration is directed to: ☐ 添付されている、あるいは The attached application, or _____に、米国出願あるいは PCT 国際出願番号 _____として出願されているものに ☒ 宛てられています。 United States application or PCT international application number <u>14/141417</u> filed on <u>December 26, 2013</u> 上記の出願は私自身、あるいは私が権限を譲与したものによって行われたものです。 The above-identified application was made or authorized to be made by me. 私は本出願書中にあらわれるもとの発明者、あるいはもとの共同発明者です。 I believe that I am the original inventor or an original joint inventor of a claimed invention in the application. 私は本宣言書において故意に虚偽の申し立てを行った場合は 18 U.S.C. 1001 により、罰金あるいは最高五(5)年の禁固刑、あるいはその両方による罰則の対象となることを認めます。 I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both. 私は、特許請求の範囲を含む上記の明細書を確認し内容を理解しています。 I have reviewed and understand the contents of the above-identified application, including the claims. 私は、連邦規則法典第 37 編規則 1.56 に定義されている、特許性について重要な情報を開示する義務があることを認めます。 I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.	
発明者の正式氏名: LEGAL NAME OF INVENTOR: HIROO OKAMOTO	
署名: Signature:  日付(任意): Date (Optional): <u>Feb. 25, 2014</u>	
備考: 出願データシート (PTO/AIA/14 あるいはその同等用紙) は、発明の自主独立体全体の命名を含め、本用紙に添付すること。 なお残余の発明者ごとにこの用紙の写しを使用する。 Note: An application data sheet (PTO/AIA/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use an additional copy of the present form for each additional inventor.	

CERTIFICATE OF TRANSLATION

I, the below-named translator, of 6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo, Japan hereby declare that I am conversant with the Japanese and English languages and that to the best of my knowledge and belief the attached Declaration includes a true and accurate translation into English of the Japanese text contained in the Declaration.

Dated July 17, 2014

Signature of Translator:


Takeshi Kanai

Electronic Acknowledgement Receipt	
EFS ID:	28029563
Application Number:	15176435
International Application Number:	
Confirmation Number:	6859
Title of Invention:	Editing Method and Recording and Reproducing Device
First Named Inventor/Applicant Name:	Susumu YOSHIDA
Customer Number:	24956
Filer:	John Roberts Mattingly/Emlly Scotti
Filer Authorized By:	John Roberts Mattingly
Attorney Docket Number:	ASA-10782-04
Receipt Date:	11-JAN-2017
Filing Date:	08-JUN-2016
Time Stamp:	13:52:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	10782-04-ReqChgApplicant.pdf	16843	no	2
			c812b891292da5990831a7e27398bf900246446b		

Warnings:

Information:					
2	Application Data Sheet	10782-04-MarkedUpADS.pdf	1064410	no	8
			5dbe23570cd49a8b2e17d8728d46a764a986b70c		
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Request for Corrected Filing Receipt	10782-04-MarkedUpOFR.pdf	975995	no	1
			e10353585d22c02067b8f032f9e2a3f7199f3292		
Warnings:					
Information:					
4	Power of Attorney	10782-04-POA-HitachiMaxell-80.pdf	42979	no	1
			bbb785ce9a13fc69f871c8ad17c5f9c950eb4661		
Warnings:					
Information:					
5	Assignee showing of ownership per 37 CFR 3.73	10782-04-POA-373c.pdf	120304	no	3
			1b3fbd25f071ec96dd101e2e693b4a63f202312f		
Warnings:					
Information:					
6	Oath or Declaration filed	10782-04-Declaration.pdf	299928	no	4
			93fe63bacb2fb49a8fb8f512e334f398f54df973		
Warnings:					
Information:					
Total Files Size (in bytes):			2520459		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 15/176,435 Confirmation No. : 6859
Inventor(s) : YOSHIDA, S. et al. TC/GAU : 2484
Filed : June 8, 2016 Examiner : TBD

Title : EDITING METHOD AND RECORDING AND REPRODUCING DEVICE

Customer No.: 24956

REQUEST TO CHANGE APPLICANT,
REQUEST FOR CORRECTED OFFICIAL FILING RECEIPT,
REQUEST FOR NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY AND
SUBMISSION OF DECLARATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

January 11, 2017

Sir:

Applicant submits the following request to change the name of the Applicant, which is hereby supported by the required documents, as follows.

Applicant submits herewith a corrected Application Data Sheet correcting the Applicant Information section. The Organization Name should read "Hitachi Maxell, Ltd.". It is also respectfully requested that a Corrected Official Filing Receipt be issued in connection with this filing.

Applicant hereby requests a Corrected Official Filing Receipt. The Applicant(s) section currently lists "Hitachi, Ltd., Tokyo, JAPAN", and should read "Hitachi Maxell, Ltd., Osaka, JAPAN". Also, the Power of Attorney section reads "None" and should read "24956". A copy of the Official Filing Receipt with the changes indicated thereon is attached hereto.

Atty Docket No.: ASA-10782-04

Also attached is the Power of Attorney PTO/AIA/80 form signed by Yoshihiro SENZAI, President and Chief Executive Officer of Hitachi Maxell, Ltd. Also, a statement under §3.73 (c) is submitted.

Also, in response to the Informational Notice to Applicant dated October 20, 2016, please find attached hereto a Declaration for submission under 37 CFR §1.63, executed by each of the inventors in the above-identified application. The Applicant is electronically filing this response.

The Commissioner is hereby authorized to charge any fee or additional fee that may be required and credit any excess to Deposit Account No. 50-1417.

MATTINGLY & MALUR, PC

/John R. Mattingly/
John R. Mattingly, Reg. No. 30,293
(703) 684-1120

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~000000-1014135 (161030US)~~ ASA-10782-04
		Application Number	15/176,435
Title of Invention	Editing Method and Recording and Reproducing Device		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove				
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service				
City		State/Province	Country of Residence	
Mailing Address of Inventor:				
Address 1				
Address 2				
City		State/Province		
Postal Code		Country		
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. Add				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence Information of this application.			
Customer Number	~~20350~~ 24956		
Email Address	ptomail@mmpiaw.com		Add Email Remove Email

Application Information:

Title of the Invention			
Attorney Docket Number		Small Entity Status Claimed	☐
Application Type			
Subject Matter			
Total Number of Drawing Sheets (if any)		Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~066890-1014135 (161030US)~~ <u>ASA-10782-04</u>
		Application Number	<u>15/176,435</u>
Title of Invention	Editing Method and Recording and Reproducing Device		

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)
Customer Number	~~20350~~ <u>24956</u>		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status			
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~086896-1014135 (161030US)~~ ASA-10782-04
		Application Number	<u>15/176.435</u>
Title of Invention	Editing Method and Recording and Reproducing Device		

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)
			

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~086890-1014135 (161030US)~~ <u>ASA-10782-04</u>
		Application Number	<u>15/176,435</u>
Title of Invention	Editing Method and Recording and Reproducing Device		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~000000-1014135 (161030US)~~ <u>ASA-10782-04</u>
		Application Number	<u>15/176,435</u>
Title of Invention	Editing Method and Recording and Reproducing Device		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.			
Applicant 1			
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.			
Clear			
☒ Assignee		☐ Legal Representative under 35 U.S.C. 117	
☐ Person to whom the inventor is obligated to assign.		☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor:			
If the Applicant is an Organization check here. ☒			
Organization Name	~~Hitachi, Ltd.~~ <u>Hitachi Maxell, Ltd.</u>		
Mailing Address Information For Applicant:			
Address 1	~~6-6, Marunouchi 1-chome, Chiyoda-ku~~ <u>1-88, Ushitora 1-chome, Ibaraki-shi</u>		
Address 2			
City	~~Tokyo~~ <u>Osaka</u>	State/Province	
Country	JP	Postal Code	~~400-8220~~ <u>567-8567</u>
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button.			

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~086890-1014135 (161030UG)~~ ASA-10782-04
		Application Number	<u>15/176,435</u>
Title of Invention	Editing Method and Recording and Reproducing Device		

Assignee 1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
If the Assignee or Non-Applicant Assignee is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country ⁱ		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/John R. Mattingly/		Date (YYYY-MM-DD)	2017-01-11
First Name	John	Last Name	Mattingly	Registration Number
				30,293
Additional Signature may be generated within this form by selecting the Add button.				

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	~~086890-1014135 (161030UG)~~ ASA-10782-04
		Application Number	<u>15/176.435</u>
Title of Invention	Editing Method and Recording and Reproducing Device		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/176,435	06/08/2016	Susumu YOSHIDA	ASA-10782-04

CONFIRMATION NO. 6859

POA ACCEPTANCE LETTER

24956
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314



Date Mailed: 01/10/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/05/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/cnguyen/

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

単数又は複数の特許弁護士への委任状伝送書 TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

注記：37 CFR 1.5に従い、委任状が示す出願を特定するため、本書類は「出願人による委任状(PTO/AIA/82B)」と共に提出すること。ただし、「出願人による委任状」で出願番号および出願日が特定されている場合を除く。委任状が示す出願が、PTO/AIA/82AおよびPTO/AIA/82Bのどちらにもおいても特定されていない場合、同出願においての代理権は認められない。

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

出願番号 Application Number	15/176,435
出願日 Filing Date	June 8, 2016
第一発明者 First Named Inventor	Susumu YOSHIDA
名称 Title	Editing Method and Recording and Reproducing Device
技術審査部門 Art Unit	3714
審査官氏名 Examiner Name	
特許弁護士整理番号 Attorney Docket Number	ASA-10782-04

出願人または特許弁護士の署名 SIGNATURE of Applicant or Patent Practitioner

署名 Signature	/John R. Mattingly/	署名日(任意) Date (Optional)	2017-01-05
氏名 Name	John R. Mattingly	登録番号 Registration Number	30,293
役職 (出願人が法人の場合) Title (if Applicant is a juristic entity)			

出願人名 (出願人が法人の場合) Applicant Name (if Applicant is a juristic entity)	
--	--

注記: 本書類は37 CFR 1.33に基づき署名されなければならない。署名に関する要件および証明については37 CFR 1.4(d)を参照。出願人が複数の場合は複数の用紙を使うこと。

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

*提出書類 計 _____ 枚。
*Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

出願者による委任状
POWER OF ATTORNEY BY APPLICANT

私はここもと、添付の伝送書式中に同定されている出願書中の、以前のすべての委任状はこれを破棄する。
I hereby revoke all previous powers of attorney given in the application identified in the attached transmittal letter.

☒ 私は下記の顧客番号に関する特許弁護士を、私/私たちの弁護士あるいは代理人と指名し、添付の伝送書 ((書式PTO/AIA/82A あるいはその同等書類)に記載されている出願に関連した米国特許商標局に対するすべての必要事項を遂行なましめる。
I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

あるいは
OR

24956

☐ 私は下記の特許弁護士を、私/私たちの弁護士あるいは代理人と指名し、添付の伝送書 ((書式PTO/AIA/82A あるいはその同等書類)に記載されている出願に関連した米国特許商標局に対するすべての必要事項を遂行なましめる。
I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

登録名 Name Registration	番号 Number	登録名 Name Registration	番号 Number

上記に同定された特許の住所を認め、あるいは必要に応じて変更を行ってください。
Please recognize or change the correspondence address for the above-identified patent to:

☒ 上記顧客番号に関連した住所。
The address associated with the above-mentioned Customer Number.

あるいは
OR

☐ 顧客番号に関連した住所。
The address associated with Customer Number:

または
OR

☐ 事務所または個人名
Firm or Individual Name

住所
Address

市町村名
City

州名
State

郵便
番号
Zip

国名
Country

電話
Telephone

イーメール
Email

[1/2]

[Page 1 of 2]

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

出願者による委任状
POWER OF ATTORNEY BY APPLICANT

私は出願者であり:

I am the Applicant:

- ☐ 発明者あるいは共同発明者である
Inventor or Joint Inventor
- ☐ 死亡、あるいは禁治産者とされた発明者の法的代理人である
Legal Representative of a Deceased or Legally Incapacitated Inventor
- ☒ 被譲渡人あるいは発明者が譲渡する義務を負う人物である
Assignee or Person to Whom the Inventor is Under an Obligation to Assign
- 別面において十分な独占的所有権 (たとえば出願のなかで 37 CFR 1.46(b)(2) のもとにおける請願が出願のなかで受理された、あるいは本書類とともに申請がなされた場合)を有することを示した人物である)
Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document)

特許出願人の署名

SIGNATURE of Applicant for Patent

署名 Signature		日付 Date	September 14, 2012
姓名 Name	Takashi SUZUKI	電話 Telephone	
肩書きおよび会社 Title and Company	Corporate Officer, General Manager, Intellectual Property Group (Authorized Signing Officer) Hitachi, Ltd.		

注記: 署名:本書式は 37 CFR 1.33 にのっとり、出願者あるいは出願者の代理人の署名がなされていなければならない。署名およびその証明必要条件については 37 CFR 1.4 を参照のこと。署名がひとつ以上ある場合はその数の書式を提出すること。下記参照*。

NOTE: Signature - This form must be signed by the applicant or applicant's representative in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms for more than one signature, see below *.

☐ *提出書式の合計数は _____ である。

☐ *Total of _____ forms are submitted.

[2/2]

[Page 2 of 2]

プライバシー保護法声明書

1974 年プライバシー保護法 (P.L. 93-579) は、特許出願あるいは特許に関する添付種類の提出に関連して、特定情報があなたに与えられるよう規定しています。したがって、同法規の規定にしたがい、下記のことがらを銘記してください。

(1) 本情報の収集を律する法規は 35 U.S.C. 2(b)(2) です。(2) 求められた情報の提供は本人の任意です。さらには、(3) 米国特許商標庁がこの情報を使用する主目的は、特許出願または特許の提出を処理し、あるいは審査するためです。求められた情報を提供しなかった場合、米国特許商標庁は提出されたものを処理、審査できなくなる場合がありますので、その結果として、処理の打ち切り、あるいは出願の破棄、あるいは特許失効に帰結することがあります。

本用紙に記載された情報は、下記の通常使用目的に従います。

1. 本用紙に記載されている情報は、情報公開法 (5 U.S.C. 552) およびプライバシー保護法 (5 U.S.C. 552a) が許容する範囲において極秘扱いとなります。本記録システムの記録は、本記録の開示が情報公開法で要求されているか否かを判断するために、司法省に開示される場合があります。
2. 本記録システムの記録は通常使用目的として、示談交渉手順における反対側弁護士への開示を含め、証拠の提示として法廷、予審判事、あるいは行政裁判所に開示される場合があります。
3. 本記録システム中の記録は通常使用目的として、記録に関する個人が該当する記録に関して、米国会議員に支援を要請する場合、個人の関与を要請する米国会議員に開示される場合があります。
4. 本記録システム中の記録は通常使用目的として、契約を執行するためにその情報を必要とする、本庁の契約業者に開示される場合があります。情報の受取者は 5 U.S.C. 552a(m) に基づき、1974 プライバシー法の規定要件を順守しなければなりません。
5. 特許協力条約のもとで出願された国際出願に関する本記録システム内の記録は、通常使用目的として、特許協力条約に基づき、世界知的所有権機関に開示される場合があります。
6. 本記録システムの記録は通常使用目的として、国家安全保障 (35 U.S.C. 181) による再審理、および原子力法 (42 U.S.C. 218(c)) にもとづく再審理の目的において、他の連邦政府機関に開示される場合があります。
7. 本記録システムの記録は通常使用目的として、44 U.S.C. 2904 及び 2906 に基づく記録管理慣行及びプログラムの改善を推奨するために、米一般調達局長官 (GSA) により、当機関の責任の一部として行われる記録の検査機関中に、GSA、またはその被指名人に開示される場合があります。上記の開示は、本目的のための記録検査を規定する GSA 規定、及び関連 (GSA あるいは商務省) の指令に準拠して行われます。かかる開示は、個人を特定する目的のもとに使用されてはなりません。
8. 本記録システムの記録は通常使用目的として、35 U.S.C. 122(b) に基づく出願公開後あるいは 35 U.S.C. 151 に基づく特許発行後に、一般に開示される場合があります。さらに記録は通常使用目的として、37 CFR 1.14 の制限のなかで、出願がなされても放棄され、またはその処理が終決しており、なおかつそれが公開出願で参照されている、特許出願が一般審査のために公開されている、または特許が発行されている場合は、一般に公開されることがあります。
9. 本記録システムの記録は、通常使用目的として、米国特許商標庁が、法律や法規の違反した、あるいは潜在的に違反があると判断した場合は、連邦、州、または地方自治体の警察等々に開示される場合があります。

Electronic Acknowledgement Receipt	
EFS ID:	27976222
Application Number:	15176435
International Application Number:	
Confirmation Number:	6859
Title of Invention:	Editing Method and Recording and Reproducing Device
First Named Inventor/Applicant Name:	Susumu YOSHIDA
Customer Number:	20350
Filer:	John Roberts Mattingly/Emlly Scotti
Filer Authorized By:	John Roberts Mattingly
Attorney Docket Number:	086890-1014135 (161030US)
Receipt Date:	05-JAN-2017
Filing Date:	08-JUN-2016
Time Stamp:	14:40:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	15176435-POA-2.pdf	451317	no	4
			b3d258627331d86e97243da2f533f62192b c51eb		

Warnings:

Information:	
Total Files Size (in bytes):	451317
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/176,435	06/08/2016	Susumu YOSHIDA	086890-1014135 (161030US)

CONFIRMATION NO. 6859

20350
KILPATRICK TOWNSEND & STOCKTON LLP
Mailstop: IP Docketing - 22
1100 Peachtree Street
Suite 2800
Atlanta, GA 30309

MISCELLANEOUS NOTICE



Date Mailed: 12/23/2016

A communication which cannot be delivered in electronic form has been mailed to the applicant.



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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/176,435	06/08/2016	Susumu YOSHIDA	086890-1014135 (161030US)

CONFIRMATION NO. 6859

20350
 KILPATRICK TOWNSEND & STOCKTON LLP
 Mailstop: IP Docketing - 22
 1100 Peachtree Street
 Suite 2800
 Atlanta, GA 30309



OC000000088049242

Cc: MATTINGLY & MALUR, PC
 1800 DIAGONAL ROAD
 SUITE 210
 ALEXANDRIA, VA 22314

Mailed: 12/22/2016

DENIAL OF REQUEST FOR POWER OF ATTORNEY

The request for Power of Attorney 12/20/2016 is acknowledged. However, the request cannot be granted at this time for the reason stated below.

- ☐ The Power of Attorney you provided did not comply with the new Power of Attorney rules that became effective on June 25, 2004. See 37 CFR 1.32.
- ☐ The revocation is not signed by the applicant, the assignee of the entire interest, or one particular principal attorney having the authority to revoke.
- ☐ The Power of Attorney is from an assignee and the Certificate required by 37 CFR 3.73(c) has not been received.
- ☐ The person signing for the assignee has omitted their empowerment to sign on behalf of the assignee.
- ☐ The inventor(s) is without authority to appoint attorneys since the assignee has intervened as provided by 37 CFR 3.71.
- ☐ The signature(s) of Lee Shapiro a co-inventor in this application, has been omitted. The Power of Attorney will be entered upon receipt of confirmation signed by said co-inventor(s).
- ☐ The person(s) appointed in the Power of Attorney is not registered to practice before the U.S. Patent and Trademark Office.
- ☐ Only one Customer Number can be designated for the Power of Attorney in an application. The Customer Number that was captured is the first Customer Number provided on the Power of Attorney document.



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- ☐ A request under 37 CFR 1.48 to add an inventor was granted in this application, however, no power of attorney consistent with the power of attorney granted by the originally named inventive entity has been received. Thus, the addition of the inventor has resulted in the loss of power of attorney in the application. See 37 CFR 1.32(e).
- ☒ The power of attorney has not been accepted because the party who is giving power of attorney has not been identified. Power of attorney may only be signed by the applicant for patent (37 CFR 1.42) or the patent owner. A patent owner who was not the applicant must appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. See 37 CFR 1.32(b)(4).
- ☐ The power of attorney from the inventors has not been accepted because it is a copy from a prior national application for which benefit is claimed and the continuing application names an inventor who was not named as an inventor in the prior application.
- ☐ The power of attorney from the inventors has not been accepted because the power of attorney must be signed by the applicant for patent. See 37 CFR 1.32(b)(4).
- ☒ Any request to correct or update the name of the applicant must include an application data sheet (ADS) in compliance with 37 CFR 1.76 specifying the correct or updated name of the applicant in the applicant information section. Any request to change the applicant after an original applicant has been specified under 37 CFR 1.46(b) must include a new ADS in compliance with 37 CFR 1.76 specifying the applicant in the applicant information section and comply with 37 CFR 3.71 and 3.73. See 37 CFR 1.46(c).

Any inquiries regarding this notice should be directed to the Application Assistance Unit at 571-272-4200.



 Application Assistance Unit
 571-272-4200

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単数又は複数の特許弁護士への委任状伝送書
TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

注記：37 CFR 1.5に従い、委任状が示す出願を特定するため、本書類は「出願人による委任状(PTO/AIA/82B)」と共に提出すること。ただし、「出願人による委任状」で出願番号および出願日が特定されている場合を除く。委任状が示す出願が、PTO/AIA/82AおよびPTO/AIA/82Bのどちらにもおいても特定されていない場合、同出願においての代理権は認められない。

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

出願番号 Application Number	15/176,435
出願日 Filing Date	
第一発明者 First Named Inventor	Susumu YOSHIDA
名称 Title	Editing Method and Recording and Reproducing Device
技術審査部門 Art Unit	
審査官氏名 Examiner Name	
特許弁護士整理番号 Attorney Docket Number	

出願人または特許弁護士の署名
SIGNATURE of Applicant or Patent Practitioner

署名 Signature	/John R. Mattingly/	署名日(任意) Date (Optional)	2016-12-20
氏名 Name	John R. Mattingly	登録番号 Registration Number	30,293
役職(出願人が法人の場合) Title (if Applicant is a juristic entity)			

出願人名(出願人が法人の場合) Applicant Name (if Applicant is a juristic entity)	
---	--

注記: 本書類は37 CFR 1.33に基づき署名されなければならない。署名に関する要件および証明については37 CFR 1.4(d)を参照。出願人が複数の場合は複数の用紙を使うこと。

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

*提出書類 計 _____ 枚。
*Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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出願人による委任状
POWER OF ATTORNEY BY APPLICANT

私はここに、添付の伝送書もしくは下記枠内で特定された出願に対して、現時点より前に与えられたすべての委任状を破棄します。
I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

出願番号 Application Number	出願日 Filing Date

(注記: PTO/AIA/82Aに同じ情報が明記されている場合、上の枠内は空欄でも可)
(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)



私は、下記顧客番号に関連する特許弁護士を、当方の弁護士あるいは代理人に指名し、添付の伝送書 (PTO/ATA/82A) 内もしくは上記に記載の特許出願に関連した米国特許商標庁との業務の全てを同弁護士あるいは代理人に委任します。

I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

又は
OR

24956



私は、添付のリスト (PTO/ATA/82C) に記載の特許弁護士を、当方の弁護士あるいは代理人に指名し、添付の伝送書 (PTO/ATA/82A) 内もしくは上記に記載の特許出願に関連した米国特許商標庁との業務の全てを同弁護士あるいは代理人に委任します。(注記: PTO/AIA/82C を記入すること。)

I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

添付の伝送書又は上記枠内にて特定された出願に対する郵便物送付先を下記のいずれかに登録または変更してください。

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:



上記顧客番号に付随する住所

The address associated with the above-mentioned Customer Number

又は
OR



顧客番号に付随する住所

The address associated with Customer Number:

又は
OR

事務所または個人名 Firm or Individual Name				
住所 Address				
市 City	州 State	郵便番号 Zip		
国 Country				
電話番号 Telephone	メールアドレス Email			

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

出願人による委任状 POWER OF ATTORNEY BY APPLICANT

私は出願人であり（出願人が法人の場合、出願人名を下記枠内に記入）：

I am the Applicant (if the Applicant is a Juristic entity, list the Applicant name in the box):

HITACHI MAXELL, LTD.

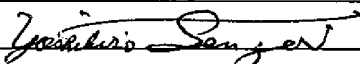
- ☐ 発明者もしくは共同発明者である（下記役職の明記は不要）
Inventor or Joint Inventor (title not required below)
- ☐ 死亡したもしくは成年被後見人である発明者の法定代理人である（下記役職の明記は不要）
Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☒ 被譲渡人もしくは発明者が譲渡する義務を負う人物である
Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ 上記以外で、十分な独占的所有権を示す人物である（例：37 CFR 1.46(h)(2)に基づき申請が本出願において認められた、又は本書類と共にその申請がなされている場合）（出願人が法人の場合、署名者の役職を明記すること）
Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

特許出願人の署名

SIGNATURE of Applicant for Patent

下記署名者（役職は下記に記載）は出願人の代理人と認められている（出願人が法人の場合等）

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

署名 Signature		署名日（任意） Date (Optional)	27/08/2014
氏名 Name	Yoshihiro SENZAI		
役職 Title	President & Chief Executive Officer, HITACHI MAXELL, LTD.		

注記: 署名 本書類は37 CFR 1.33に基づき署名されなければならない。署名の要件および証明に関しては37 CFR 1.4を参照。出願人が複数いる場合は、複数の書類を使うこと。

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ 提出書類 計 _____ 枚。
Total of _____ forms are submitted.

Electronic Acknowledgement Receipt	
EFS ID:	27844743
Application Number:	15176435
International Application Number:	
Confirmation Number:	6859
Title of Invention:	Editing Method and Recording and Reproducing Device
First Named Inventor/Applicant Name:	Susumu YOSHIDA
Customer Number:	20350
Filer:	John Roberts Mattingly
Filer Authorized By:	
Attorney Docket Number:	086890-1014135 (161030US)
Receipt Date:	20-DEC-2016
Filing Date:	08-JUN-2016
Time Stamp:	14:02:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	15176435-POA.pdf	261532	no	3
			13d59502339fa71e4b2231570229cc79116b1d91		

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Information:	
Total Files Size (in bytes):	261532
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
15/176,435	06/08/2016	3714	1740	086890-1014135 (161030US)	1	1

CONFIRMATION NO. 6859

UPDATED FILING RECEIPT



000000086899673

20350
KILPATRICK TOWNSEND & STOCKTON LLP
Mailstop: IP Docketing - 22
1100 Peachtree Street
Suite 2800
Atlanta, GA 30309

Date Mailed: 10/20/2016

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Susumu YOSHIDA, Kawasaki, JAPAN;
Junji SHIOKAWA, Chigasaki, JAPAN;
Hiroo OKAMOTO, Yokohama, JAPAN;

Applicant(s)

Hitachi, Ltd., Tokyo, JAPAN;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 14/141,417 12/26/2013 PAT 9384783
which is a CON of 12/567,898 09/28/2009 PAT 8644684
which is a CON of 11/203,457 08/11/2005 PAT 7613383

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

JAPAN 2004-378767 12/28/2004

JAPAN 2004-378768 12/28/2004

JAPAN 2004-349264 12/02/2004

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 06/21/2016

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/176,435**

Projected Publication Date: 01/26/2017

Non-Publication Request: No

Early Publication Request: No

Title

Editing Method and Recording and Reproducing Device

Preliminary Class

463

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

page 2 of 4

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



UNITED STATES PATENT AND TRADEMARK OFFICE

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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/176,435	06/08/2016	Susumu YOSHIDA	086890-1014135 (161030US)

CONFIRMATION NO. 6859

20350
KILPATRICK TOWNSEND & STOCKTON LLP
Mailstop: IP Docketing - 22
1100 Peachtree Street
Suite 2800
Atlanta, GA 30309

INFORMAL NOTICE



Date Mailed: 10/20/2016

INFORMATIONAL NOTICE TO APPLICANT

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
Susumu YOSHIDA
Junji SHIOKAWA
Hiroo OKAMOTO

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/atesfai/

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 15/176,435				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	600			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720			
TOTAL CLAIMS (37 CFR 1.16(i))	1	minus 20 = *				x 80 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1	minus 3 = *				x 420 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL		TOTAL	1600			
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
						TOTAL ADD'L FEE			TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.										

Electronic Patent Application Fee Transmittal				
Application Number:		15176435		
Filing Date:		08-Jun-2016		
Title of Invention:		Editing Method and Recording and Reproducing Device		
First Named Inventor/Applicant Name:		Susumu YOSHIDA		
Filer:		Charles W. Gray/Kristi Swenson		
Attorney Docket Number:		086890-1014135 (161030US)		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility application filing	1011	1	280	280
Utility Search Fee	1111	1	600	600
Utility Examination Fee	1311	1	720	720
Pages:				
Claims:				
Miscellaneous-Filing:				
Late Filing Fee for Oath or Declaration	1051	1	140	140
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1740

Electronic Acknowledgement Receipt	
EFS ID:	26401837
Application Number:	15176435
International Application Number:	
Confirmation Number:	6859
Title of Invention:	Editing Method and Recording and Reproducing Device
First Named Inventor/Applicant Name:	Susumu YOSHIDA
Customer Number:	20350
Filer:	Charles W. Gray/Kristi Swenson
Filer Authorized By:	Charles W. Gray
Attorney Docket Number:	086890-1014135 (161030US)
Receipt Date:	20-JUL-2016
Filing Date:	08-JUN-2016
Time Stamp:	13:30:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1740
RAM confirmation Number	10567
Deposit Account	201430
Authorized User	GRAY, CHARLES
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 CFR 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 CFR 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 CFR 1.19 (Document supply fees)

Charge any Additional Fees required under 37 CFR 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Fee Worksheet (SB06)	fee-info.pdf	37338	no	2
			cf953b3f2d106ed4a0c759ab28e4b77c8bd5377		

Warnings:

Information:

Total Files Size (in bytes): 37338

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/176,435	06/08/2016	Susumu YOSHIDA	086890-1014135 (161030US)

CONFIRMATION NO. 6859

20350
KILPATRICK TOWNSEND & STOCKTON LLP
Mailstop: IP Docketing - 22
1100 Peachtree Street
Suite 2800
Atlanta, GA 30309

FORMALITIES LETTER



Date Mailed: 06/23/2016

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.

The surcharge is due for any one of:

- late submission of the basic filing fee, search fee, or examination fee,
- late submission of inventor's oath or declaration,
- filing an application that does not contain at least one claim on filing, or
- submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. No entity status discount is in effect. If applicant is qualified for small entity status, a written assertion of small entity status must be submitted to establish small entity status. (See 37 CFR 1.27). If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- \$ **280** basic filing fee.
- \$ **140** surcharge.
- \$ **600** search fee.
- \$ **720** examination fee.
- \$(**0**) previous unapplied payment amount.
- \$ **1740** TOTAL FEE BALANCE DUE.

Items Required To Avoid Processing Delays:

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
Susumu YOSHIDA
Junji SHIOKAWA
Hiroo OKAMOTO

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice".
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at (571) 272-4000 or (571) 272-4200 or 1-888-786-0101.

/vvan/

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 15/176,435				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	600			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720			
TOTAL CLAIMS (37 CFR 1.16(i))	1	minus 20 = *				x 80 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1	minus 3 = *				x 420 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1600			
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE				TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=		x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=		x	=
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE				TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.										



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
15/176,435	06/08/2016	3714	0.00	086890-1014135 (161030US)	1	1

CONFIRMATION NO. 6859

FILING RECEIPT



000000083823817

20350
KILPATRICK TOWNSEND & STOCKTON LLP
Mailstop: IP Docketing - 22
1100 Peachtree Street
Suite 2800
Atlanta, GA 30309

Date Mailed: 06/23/2016

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Susumu YOSHIDA, Kawasaki, JAPAN;
Junji SHIOKAWA, Chigasaki, JAPAN;
Hiroo OKAMOTO, Yokohama, JAPAN;

Applicant(s)

Hitachi, Ltd., Tokyo, JAPAN;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 14/141,417 12/26/2013 PAT 9384783
which is a CON of 12/567,898 09/28/2009 PAT 8644684
which is a CON of 11/203,457 08/11/2005 PAT 7613383

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

JAPAN 2004-378767 12/28/2004
JAPAN 2004-378768 12/28/2004
JAPAN 2004-349264 12/02/2004

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 06/21/2016

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/176,435**

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

Title

Editing Method and Recording and Reproducing Device

Preliminary Class

463

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

page 2 of 4

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

I hereby certify that this correspondence is being filed via
EFS-Web with the United States Patent and Trademark Office
on June 8, 2016.

PATENT
Attorney Docket No.: 086890-1014135 (161030US)

KILPATRICK TOWNSEND & STOCKTON LLP

By: /Katie B. Francour/
Katie B. Francour

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: YOSHIDA et al.

Application No.: TBD

Filed: June 8, 2016

For: Editing Method and Recording and
Reproducing Device

Customer No.: 20350

Confirmation No.: TBD

Examiner: TBD

Technology Center/Art Unit: TBD

PRELIMINARY AMENDMENT

Mail Stop **Amendment**
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

Prior to examination of the above-referenced application, please enter the
following amendments and remarks:

Amendments to the Specification begin on page 2 of this paper.

Remarks begin on page 3 of this paper.

Amendments to the Specification

Please amend the paragraph in the specification following the CROSS-REFERENCE TO RELATED APPLICATION(S) heading as shown below:

CROSS-REFERENCE TO RELATED APPLICATION(S)

[0001] This is a continuation of **U.S. Patent Application No. 14/141,417, filed on December 26, 2013 (the entire disclosure of which is incorporated herein by reference for all purposes), which is a continuation of** U.S. Patent Application No. 12/567,898, filed on September 28, 2009 (the entire disclosure of which is incorporated herein by reference for all purposes), which is a continuation of U.S. Patent Application No. 11/203,457, filed on August 11, 2005 (the entire disclosure of which is incorporated herein by reference for all purposes), which application claims priority from Japanese Patent Application Nos. JP2004-349264, filed December 2, 2004, JP2004-378767, filed December 28, 2004, and JP2004-378768, filed on December 28, 2004, the entire disclosures of which are incorporated herein by reference for all purposes.

Remarks

The specification is amended to provide additional priority information in the “CROSS-REFERENCE TO RELATED APPLICATION(S)” section. No new matter has been added.

Conclusion

Applicant requests entry of the present amendment to the application prior to examination. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment in connection with this paper to Deposit Account No. 20-1430. If the Examiner believes a telephone conference would expedite prosecution of this application, please contact the undersigned at 303-405-8522 or CGray@KilpatrickTownsend.com.

Respectfully submitted,

/Charles W. Gray/

Charles W. Gray
Registration No. 61,345

KILPATRICK TOWNSEND & STOCKTON LLP

68517611V.1

Electronic Acknowledgement Receipt	
EFS ID:	26001498
Application Number:	15176435
International Application Number:	
Confirmation Number:	6859
Title of Invention:	Editing Method and Recording and Reproducing Device
First Named Inventor/Applicant Name:	Susumu YOSHIDA
Customer Number:	20350
Filer:	Charles W. Gray/Katie Francour
Filer Authorized By:	Charles W. Gray
Attorney Docket Number:	086890-1014135 (161030US)
Receipt Date:	08-JUN-2016
Filing Date:	
Time Stamp:	12:50:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	ADS.pdf	1793905	no	9
			9b5b3de4e192cd5f71b4a9977f50cf0bfe4b1e5a		

Warnings:

Information:

2		CON_Application.pdf	13208094	yes	12
			ced72163f3b5de2e46b416563520e02308b2bc3e		
	Multipart Description/PDF files in .zip description				
	Document Description	Start	End		
	Specification	1	10		
	Claims	11	11		
	Abstract	12	12		
Warnings:					
Information:					
3	Drawings-only black and white line drawings	Drawings.pdf	736356	no	9
			b4d57563dfc2a86df3ba7c1e91d89b9fe61ce728		
Warnings:					
Information:					
4		Preliminary_Amendment.pdf	78740	yes	3
			e756da3de06d72034f5f6bb58c9d88bb19f6a0c7		
	Multipart Description/PDF files in .zip description				
	Document Description	Start	End		
	Preliminary Amendment	1	1		
	Specification	2	2		
	Applicant Arguments/Remarks Made in an Amendment	3	3		
Warnings:					
Information:					
Total Files Size (in bytes):			15817095		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	086890-1014135 (161030US)
		Application Number	
Title of Invention	Editing Method and Recording and Reproducing Device		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor	1				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Susumu		YOSHIDA			
Residence Information (Select One) US Residency • Non US Residency Active US Military Service						
City	Kawasaki	Country of Residenceⁱ			JP	
Mailing Address of Inventor:						
Address 1	c/o Hitachi, Ltd., Intellectual Property Group					
Address 2	6-6, Marunouchi 1-chome, Chiyoda-ku					
City	Tokyo	State/Province				
Postal Code	100-8220	Countryⁱ	JP			
Inventor	2				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Junji		SHIOKAWA			
Residence Information (Select One) US Residency • Non US Residency Active US Military Service						
City	Chigasaki	Country of Residenceⁱ			JP	
Mailing Address of Inventor:						
Address 1	c/o Hitachi, Ltd., Intellectual Property Group					
Address 2	6-6, Marunouchi 1-chome, Chiyoda-ku					
City	Tokyo	State/Province				
Postal Code	100-8220	Countryⁱ	JP			
Inventor	3				Remove	
Legal Name						

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	086890-1014135 (161030US)
		Application Number	
Title of Invention	Editing Method and Recording and Reproducing Device		

Prefix	Given Name	Middle Name	Family Name	Suffix
	Hiroo		OKAMOTO	
Residence Information (Select One) US Residency ☒ Non US Residency Active US Military Service				
City	Yokohama		Country of Residence ⁱ	JP
Mailing Address of Inventor:				
Address 1	c/o Hitachi, Ltd., Intellectual Property Group			
Address 2	6-6, Marunouchi 1-chome, Chiyoda-ku			
City	Tokyo	State/Province		
Postal Code	100-8220	Country ⁱ	JP	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. Add				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).	
☐ An Address is being provided for the correspondence Information of this application.	
Customer Number	20350
Email Address	Add Email Remove Email

Application Information:

Title of the Invention	Editing Method and Recording and Reproducing Device		
Attorney Docket Number	086890-1014135 (161030US)	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	9	Suggested Figure for Publication (if any)	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	086890-1014135 (161030US)
		Application Number	
Title of Invention	Editing Method and Recording and Reproducing Device		

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.			
Please Select One:			
☒	Customer Number	☐	Limited Recognition (37 CFR 11.9)
Customer Number	20350		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending	Remove			
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
	Continuation of	14141417	2013-12-26		
Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14141417	Continuation of	12567898	2009-09-28	8644684	2014-02-04
Prior Application Status	Patented	Remove			
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12567898	Continuation of	11203457	2005-08-11	7613383	2009-11-03
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					Add

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	086890-1014135 (161030US)
		Application Number	
Title of Invention	Editing Method and Recording and Reproducing Device		

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)	Remove
2004-378767	JP	2004-12-28		
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)	Remove
2004-378768	JP	2004-12-28		
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)	Remove
2004-349264	JP	2004-12-02		
Additional Foreign Priority Data may be generated within this form by selecting the Add button.				Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	086890-1014135 (161030US)
		Application Number	
Title of Invention	Editing Method and Recording and Reproducing Device		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	086890-1014135 (161030US)
		Application Number	
Title of Invention	Editing Method and Recording and Reproducing Device		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.			
Applicant	1	Remove	
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.			
		Clear	
☐ Assignee	Legal Representative under 35 U.S.C. 117		Joint Inventor
Person to whom the inventor is obligated to assign.		Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor:			
If the Applicant is an Organization check here. ☒			
Organization Name	Hitachi, Ltd.		
Mailing Address Information For Applicant:			
Address 1	6-6, Marunouchi 1-chome, Chiyoda-ku		
Address 2			
City	Tokyo	State/Province	
Country	JP	Postal Code	100-8220
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button. Add			

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	086890-1014135 (161030US)	
		Application Number		
Title of Invention	Editing Method and Recording and Reproducing Device			

Assignee 1				
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.				
				Remove
If the Assignee or Non-Applicant Assignee is an Organization check here.				☐
Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Assignee including Non-Applicant Assignee:				
Address 1				
Address 2				
City		State/Province		
Country i		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.				Add

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Charles W. Gray/		Date (YYYY-MM-DD)	2016-06-08
First Name	Charles W.	Last Name	Gray	Registration Number
				61,345
Additional Signature may be generated within this form by selecting the Add button.				Add

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	086890-1014135 (161030US)
		Application Number	
Title of Invention	Editing Method and Recording and Reproducing Device		

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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EDITING METHOD AND RECORDING AND REPRODUCING DEVICE

CROSS-REFERENCE TO RELATED APPLICATION(S)

[0001] This is a continuation of U.S. Patent Application No. 12/567,898, filed on September 28, 2009 (the entire disclosure of which is incorporated herein by reference for all purposes), which is a continuation of U.S. Patent Application No. 11/203,457, filed on August 11, 2005 (the entire disclosure of which is incorporated herein by reference for all purposes), which application claims priority from Japanese Patent Application Nos. JP2004-349264, filed December 2, 2004, JP2004-378767, filed December 28, 2004, and JP2004-378768, filed on December 28, 2004, the entire disclosures of which are incorporated herein by reference for all purposes.

BACKGROUND OF THE INVENTION

[0002] Field of the Invention

[0003] The present invention relates to a recording and reproducing device which records data onto a recording medium and reproduces data from the recording medium.

[0004] Description of the Related Art

[0005] As the high-efficiency coding technique advances, it has become possible to handle AV data such as video data and audio data as digital data, conduct code rate compression, and record resultant data on a large-capacity recording medium such as a hard disk or a recording type optical disk in real time. When digital data already compressed in code rate is inputted to a recording and reproducing device having such a recording medium from outside by broadcasting or communication, it is also possible to record the digital data on the recording medium intact.

[0006] In these recording and reproducing devices, management information for managing digital data to be recorded is generated and recorded together onto the same recording medium. When a rewritable recording medium is used, the user can conduct editing work on the recording and reproducing device by rewriting the management information and generating and manipulating a list indicating the reproduction sequence (hereafter referred to as play list) (see, for example, JP-A-2000-152180).

SUMMARY OF THE INVENTION

[0007] In the above-described conventional technique, it is mentioned that the play list indicates the reproduction sequence by linking portions of AV data together. As an

example, a management state of AV data on a recording medium in the above-described conventional technique is shown in Fig. 2.

[0008] Reference numeral 201 designates AV data themselves on the recording medium. The case where a program #1 to a program #3 are present as recording units is shown. Reference numeral 202 designates a second management hierarchical level (management level 2) in management information. Original cell information #1 to original cell information #3 indicate the whole reproduction range of program units, i.e., a program #1 to a program #3, respectively. Each of user-defined cell information #1 to user-defined information #2 indicates a reproduction range of the whole or a part of a program arbitrarily specified by the user. The number of the user-defined cell information #1 to user-defined information #2 is increased or decreased by the user's editing manipulation. Reference numeral 203 designates a first management hierarchical level (management level 1). Program information contains all of the original cell information #1 to original cell information #3. By conducting reproduction on the basis of the program set information, the user can reproduce all AV data recorded on the recording medium. Play list information #1 to play list information #k indicate a reproduction sequence of the user-defined cell information arbitrarily specified by the user. It is possible to have a plurality of reproduction sequences. Inside of a frame 204 becomes original information for managing the whole AV data in the management information. Inside of a frame 205 becomes user-defined information for managing the play list obtained by the user's editing manipulation.

[0009] In Fig. 2, the play list information is placed on the same level with the program set information and managed as the management level 1. Therefore, the sequence of a plurality of play list information pieces themselves is determined uniquely. For example, as for a catalog of the play lists, it is impossible on the user's interface to alter the display sequence. In view of the problem, the present invention has been achieved. An object of the present invention is to provide a recording scheme and device in which the user can conduct manipulation of arbitrarily rearranging the display sequence of the play lists in the play list catalog on the user interface.

[0010] Furthermore, in the conventional technique example, attention is not paid to that a plurality of users generate, select and manage favorite play list information. For example, even when a plurality of users desire to generate, select and manage respective favorite play list information pieces, it cannot be implemented. Furthermore, attention is not especially paid to that a user select some arbitrary play lists from among a plurality of play lists and manage them.

[0011] In view of these problems, the present invention has been achieved. An object of the present invention is to provide a recording and reproducing device in which the user can select and manage arbitrary play lists.

[0012] In order to achieve the objects, in accordance with the present invention, 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.

[0013] In a recording and reproducing device according to the present invention, it becomes possible for the user to select arbitrary play lists or reproduction ranges and conduct management. Even in the case where a plurality of users share a single recording medium, therefore, each user can manage favorite reproduction contents, resulting in improved usage. Since the play lists are subject to unified management, it becomes possible for the user to arbitrarily alter the display sequence of play lists.

[0014] According to the present invention, a recording and reproducing device improved in usage can be provided.

[0015] Other objects, features and advantages of the invention will become apparent from the following description of the embodiments of the invention taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] Fig. 1 shows a management state of AV data in a recording and reproducing device according to an embodiment of this invention;

[0017] Fig. 2 shows a management state of AV data in a conventional technique example;

[0018] Fig. 3 shows a block diagram of a recording and reproducing device according to an embodiment of this invention;

[0019] Fig. 4 shows a display output example of original unified information;

[0020] Fig. 5 shows a display output example of play list unified information;

[0021] Fig. 6 shows a first output example of user-defined unified information;

[0022] Fig. 7 shows a second output example of user-defined unified information;

[0023] Fig. 8 shows an example of a file structure of original unified information, play list unified information, user-defined unified information, play list information, program information, and AV data (program);

[0024] Fig. 9 shows an example of a management table structure of original unified information, play list unified information, and user-defined unified information;

[0025] Fig. 10 shows an example of a management table of play list information;

[0026] Fig. 11 shows an example of a management table of program list information;

[0027] Fig. 12 shows a display output example of play list unified information; and

[0028] Fig. 13 shows an example of a table indicating contents of user-defined information #m.

DESCRIPTION OF THE EMBODIMENTS

[0029] Hereafter, embodiments of the present invention will be described with reference to the drawings. Fig. 1 shows a management state of AV data on a recording medium in a recording and reproducing device according to the present invention. In the same way as the reference numeral 201 in Fig. 2, reference numeral 101 designates AV data themselves on the recording medium. The case where programs #1 to #3 are present as recording units is shown.

[0030] Reference numeral 102 corresponds to 202 in Fig. 2. However, reference numeral 102 designates a third management hierarchical level (management level 3) in management information. Program information #1 to program information #3 indicate the whole reproduction ranges of program units, i.e., program #1 to program #3, respectively. Each of program information #2a to program information #3a indicates a reproduction range of the whole or a part of a program arbitrarily specified by the user. The program information #2a to program information #3a indicate a part of the program #2 and a part of the program #3, respectively. In places corresponding to the program information #1 to program information #3, information is also added, as AV data is added, i.e., with an increase in programs. In places corresponding to the program information #2a to the program information #3a, the number of information pieces increases or decreases due to the editing manipulation of the user.

[0031] Reference numeral 103 corresponds to the management level 1 in Fig. 2. However, numeral 103 designates a second management hierarchical level (management level 2), which includes only play list information #1 to play list information #n. Each play list information indicates a reproduction sequence of arbitrary program information pieces on the management level 3. It is possible to have a plurality of reproduction sequences.

[0032] Reference numeral 104 designates a newly added first management hierarchical level (management level 1) in the management information as a feature point of the present invention. The management level 1 includes a plurality of unified information pieces. Original unified information corresponds to the program set information shown in Fig. 2. The original unified information contains all of the program information #1 to program information #3 on the management level 3. By conducting reproduction on the basis of all of the program information #1 to program information #3, it becomes possible for the user to reproduce all AV data recorded on the recording medium. Play list unified information contains all of the play list information #1 to play list information #n on the management level 2. By conducting reproduction on the basis of all of the play list information #1 to play list information #n on the management level 2, it becomes possible for the user to successively reproduce all registered play lists. User-defined unified information #1 to user-defined unified information #m contain arbitrary one or more from among play list information pieces on the management level 2 and program information pieces on the management level 3. For example, when a plurality of users use a single recording medium, it becomes possible to manage reproduced contents that meet respective users' tastes by using one user-defined unified information every user.

[0033] An embodiment of a recording and reproducing device according to the present invention will be described more specifically by using another drawing.

[0034] Fig. 3 is a block diagram showing an example of a recording and reproducing device according to the present invention. A recording and reproducing device capable of receiving digital broadcast, recording the digital broadcast on a recording medium, reproducing recorded data, and obtaining a reproduced output is shown. Reference numeral 300 designates a recording and reproducing device, 301 an input terminal supplied with a received wave from an antenna, 3011 an input terminal supplied with compressed video and audio data from another device, 3012 an analog video input terminal supplied with an analog video signal, 3013 an analog audio input terminal supplied with an analog audio input terminal, 333 and 334 analog/digital (A/D) conversion circuits each of which converts an analog signal to a digital signal, 302 a demodulation circuit, 330 a separation circuit which separates the demodulated digital signal into audio, video and other data, 335 a compression circuit which compresses digitized video and audio signals, 303 a recording unit signal processing circuit, 331 an encryption circuit which encrypts data to be recorded, 304 a recording and reproducing unit including a drive function of a recording medium, 305 a recording medium, 332 a decryption circuit which decrypts data encrypted and recorded on

the recording medium, 306 a reproducing unit signal processing circuit, 307 a switchover circuit, 308 a separation circuit, 309 a video decoding circuit, 310 a digital/analog (D/A) conversion circuit, 311 a video output terminal, 312 an audio decoding circuit, 313 a D/A conversion circuit, 314 an audio output terminal, 315 a TV set, 316 a user I/F, 317 a control unit, 318 a system bus, 319 an OSD generation unit, and 320 an addition circuit.

[0035] At the time of recording, a signal transmitted by digital broadcast or the like and received is demodulated in the demodulation circuit 302 by using a predetermined scheme, subjected to necessary signal processing such as timing adjusting data addition and modulation in the recording unit signal processing circuit 303, encrypted in the encryption circuit 331, and then recorded on the recording medium 305 by the recording and reproducing unit 304. A digital signal input from the digital input terminal 3011 is subjected to necessary signal processing such as timing adjusting data addition and modulation in the recording unit signal processing circuit 303, encrypted in the encryption circuit 331, and then recorded on the recording medium 305 by the recording and reproducing unit 304. An analog video signal input from the analog video input terminal 3012 and an analog audio signal input from the analog audio input terminal 3013 are subjected to compression processing in the compression circuit 335, encrypted in the encryption circuit 331 via the recording unit signal processing circuit 303, and then recorded on the recording medium 305 by the recording and reproducing unit 304.

[0036] At the time of reproducing, encrypted digital data read out from the recording medium 305 via the recording and reproducing unit 304 in accordance with the user's order is decrypted in the decryption circuit 332, subjected to signal processing required for reproduction such as demodulation in a form based on a predetermined modulation scheme in the reproducing unit signal processing circuit 103, and sent to the separation circuit 308 via the switchover circuit 307. Resultant video digital data is subjected to predetermined video decoding processing in the video decoding circuit 309, converted to an analog signal in the D/A conversion circuit 310, and then displayed as a monitor output on the TV set 315 via the video output terminal 311. Audio digital data obtained from the separation circuit 308 is subjected to predetermined audio decoding processing in the audio decoding circuit 312, converted to an analog signal in the D/A conversion circuit 313, and then outputted by an audio output mechanism in the TV set 315 via the audio output terminal 314.

[0037] The control unit 317 controls various components in the recording and reproducing device 300 via the system bus 318. Furthermore, the control unit 317 controls the whole device to cause operation based on the user's order input which is inputted via the

user I/F 316 to be conducted. By the way, an order input request to the user or necessary OSD display for the user is implemented by preparing it in the OSD generation unit 319, adding it to an output of the video decoding circuit 309 on a suitable level, and finally outputting it to a monitor screen on the TV set 315.

[0038] The case where each unified information on the management level 1 is used for menu display of recording data will now be described as a specific use example of the management information configuration in Fig. 1.

[0039] Fig. 4 shows an example in which menu display is conducted by using the original unified information shown in Fig. 1. Reference numeral 315 designates the TV set shown in Fig. 3, 401 a tag for displaying all programs, 402 a thumbnail indicating program information #1, 403 a thumbnail indicating program information #2, and 404 a thumbnail indicating program information #3. The user moves a cursor position on the screen to a desired thumbnail and conducts selection and determination by using a remote controller or the like. As a result, the user can reproduce arbitrary programs or all programs.

[0040] Fig. 5 shows an example in which menu display is conducted by using the play list unified information shown in Fig. 1. Reference numeral 501 designates a tag for displaying all play lists, 502 a thumbnail indicating play list information #1, and 503 a thumbnail indicating play list information #2. In the same way as the above-described case, the user moves a cursor position on the screen to a desired thumbnail and conducts selection and determination by using a remote controller or the like. As a result, the user can reproduce arbitrary play lists or all play lists. By the way, display switching from the all program display tag 401 to all play list display tag can be implemented by, for example, movement of the cursor in tag character positions conducted by the user.

[0041] Fig. 6 shows an example in which menu display is conducted by using the user-defined unified information #1 shown in Fig. 1. Reference numeral 601 designates a menu display tag for user #1 (who is supposed to be “mother” here). As appreciated from Fig. 1, reference numerals 402 and 502 designate thumbnails indicating the program information #1 and the play list information #1, respectively. The “mother” can use the menu display tag for mother 601 as a folder dedicated to herself, and freely register and delete data to be reproduced. In the same way, Fig. 7 shows an example in which menu display is conducted by using the user-defined unified information #2 shown in Fig. 1. Reference numeral 701 designates a menu display tag for user #2 (who is supposed to be “father” here). As appreciated from Fig. 1, reference numerals 503 and 502 designate thumbnails indicating the play list information #2 and the play list information #1, respectively. In this case, the

“father” selects two play lists. However, the reproduction sequence of them can be altered. In the same way as the “mother,” the “father” can use the menu display tag for father 701 as a folder dedicated to himself, and freely register and delete data to be reproduced.

[0042] As heretofore described, in the embodiment of the present invention, 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 therein. As a result, it becomes possible for the user to select arbitrary play lists or reproduction ranges and conduct management. Even in the case where a plurality of users share a single recording medium, therefore, each user can manage favorite reproduction contents, resulting in improved usage.

[0043] In the embodiment heretofore described, the case where digital broadcast is received and digital data is recorded intact has been described. However, this is not restrictive. A configuration having a network I/F to acquire AV data from an external network or having coding unit to conduct recording onto the recording medium while coding analog data may also be used. In other words, the present embodiment refers to data management on the recording medium, and its input route is not especially restricted.

[0044] Fig. 8 shows an example of file configurations used to actually record the program, program information, play list information, original unified information, play list unified information, and user-defined information on the recording medium 305 (Fig. 3). The recording medium is a medium on which digital recording and reproducing are conducted. Files on the medium are managed by a file system similar to that used to manage a recording medium in the so-called personal computer or the like. In Fig. 8, “ROOT” 800 represents a highest hierarchical level of a file directory. “TV_REC” 801 is a directory under the highest hierarchical level. “TVREC.MAN” 802, “PGRG.IFO” 803, “PGR.IFO” 804, “PROG0001.TS” 805, ... of files which implement the management structure shown in Fig. 1 according to the present invention are recorded in the “TV_REC” 801. In the “TVREC.MAN” 802, the original unified information, the play list unified information, and the user-defined unified information #1 to #m on the management level 1 shown in Fig. 1 are described as management tables. In the “PGRG.IFO” 803, the play list information #1 to the play list information #n on the management level 2 shown in Fig. 1 are recorded as management tables. In the “PGR.IFO” 804, the program information #1 to the program

information #3a on the management level 3 shown in Fig. 1 are recorded as management tables. “PROG0001.TS” 805, “PROG0002.TS” 806 and “PROG0003.TS” 807 are entity files of AV data in each program. For example, AV data between recording start and recording end of one time is recorded in the “PROG0001.TS.” AV data between recording start and recording end of the next time is recorded in the “PROG0002.TS.” In this way, the file name is updated and recording is conducted. Thereafter, the management files 802 to 804 are updated.

[0045] The file structure and the configuration of management tables themselves concerning the management structure “TVREC.MAN” 802, “PGRG.IFO” 803, “PGR.IFO” 804, “PROG0001.TS” 805, ... of files may be formed by using any method. However, an example of how to implement the management configuration in the case of Fig. 1 using the files will now be described.

[0046] Fig. 9 shows a configuration of management tables of the “TVREC.MAN” 802 (Fig. 8). As original unified information 901, the number of AV data recorded as the number of program information pieces 9011, i.e., the total number (three in this case) of entity files (“PROG0001.TS” 805, “PROG0002.TS” 806 and “PROG0003.TS” 807) of the AV data is described. Under the original unified information 901, location tables 9012 of respective original program information pieces are recorded. As play list unified information 902, play list location information tables are recorded in 9021 and subsequent tables. In 9031, the number of user-defined unified information pieces is recorded. After that, contents of #1 to #m of the user-defined information are recorded.

[0047] Fig. 13 shows contents of the user-defined information #m described above. The user-defines information #m has combinations of original program information and play list information as a table.

[0048] Fig. 10 shows a management table of the “PGRG.IFO” 803 (Fig. 8), which corresponds to the management level 2 shown in Fig. 1. As play list information 1001, the total number of the play list information pieces is first described as designated by 10011. (In this case, the total number of the play list information pieces is n.) Beginning with 10012 indicated under the reference numeral 10011, locations in which contents of the play list information #1 to #n are described are recorded as tables. Beginning with 10013, contents of the play list information #1 to #n (contents of the reproduction sequence, which are management tables having combinations of program information indicating the reproduction start location and reproduction end location of AV data described later) are recorded.

[0049] Fig. 11 shows a management table of the “PGR.IFO” 804 (Fig. 8), which corresponds to the management level 3 shown in Fig. 1. As program information 1101, the total number of the program information pieces including all of the program information pieces paired with the original information program #1, #2 and #3 (Fig. 1) and the user-defined program information #2a and #3a (Fig. 1) is recorded as designated by 11011. Beginning with 11012 indicated under the reference numeral 11011, tables indicating locations in which contents of the program information #1 to #3a are described are recorded. Beginning with 11013, contents of the program information #1 to #3a (describing the reproduction start location and reproduction end location of the “PROG0001.TS” 805, “PROG0002.TS” 806 and “PROG0003.TS” 807 (Fig. 8)) are recorded.

[0050] By conducting the management as heretofore described, it becomes possible to sort the location information, for example, in the play list location table 9021 and alter the sequence of displaying play lists on a GUI view from the state shown in Fig. 5 to the state shown in Fig. 12. In the case where the number of play lists has become very large, a play list that is high in user’s use frequency can be displayed in the first place in the GUI view. As a result, it is possible to implement a usable recording and reproducing device, reproducing device, or recording method. For example, a plurality of users can set play lists that they want to view and recorded original contents freely and individually. Even when the number of recorded programs is very large, the user can rapidly find out a program that the user wants to view, because the user can refer to a folder defined by the user.

[0051] In the present embodiment, a clear distinction is made between the user-defined play list unified information and the user-defined unified information #1 to #m. The user-defined play list unified information may be defined as user-defined play list unified information having no link to the original program information of the user-defined unified information.

[0052] It should be further understood by those skilled in the art that although the foregoing description has been made on embodiments of the invention, the invention is not limited thereto and various changes and modifications may be made without departing from the spirit of the invention and the scope of the appended claims.

What is claimed is:

- 1 1. An information processing apparatus for reproducing selected video
2 information from among a plurality of video information stored in a recording medium which
3 is usable by a plurality of users, the apparatus comprising:
4 an output means for outputting a menu display for a user to select desired
5 video information to be reproduced from among the plurality of video information in the
6 recording medium; and
7 a reproducing means for reproducing the selected video information from the
8 recording medium, wherein
9 a first area and a second area are displayed within the menu display,
10 wherein the first area is configured to display at least first tags associated with video
11 information or play list information for a first user and second tags associated with
12 video information or play list information for a second user different from the first
13 user, and wherein the second area is configured to display a thumbnail specifying
14 arbitrary video information from among the plurality of video information or a
15 plurality of play list information,
16 when one of the first tags shown in the first area is selected, the video
17 information or the thumbnail of the playlist information associated with the selected
18 tag is displayed in the second area, and
19 the video information or the play list information associated with both
20 of the first tags and the second tags are independently editable.

ABSTRACT OF THE DISCLOSURE

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.

FIG. 1

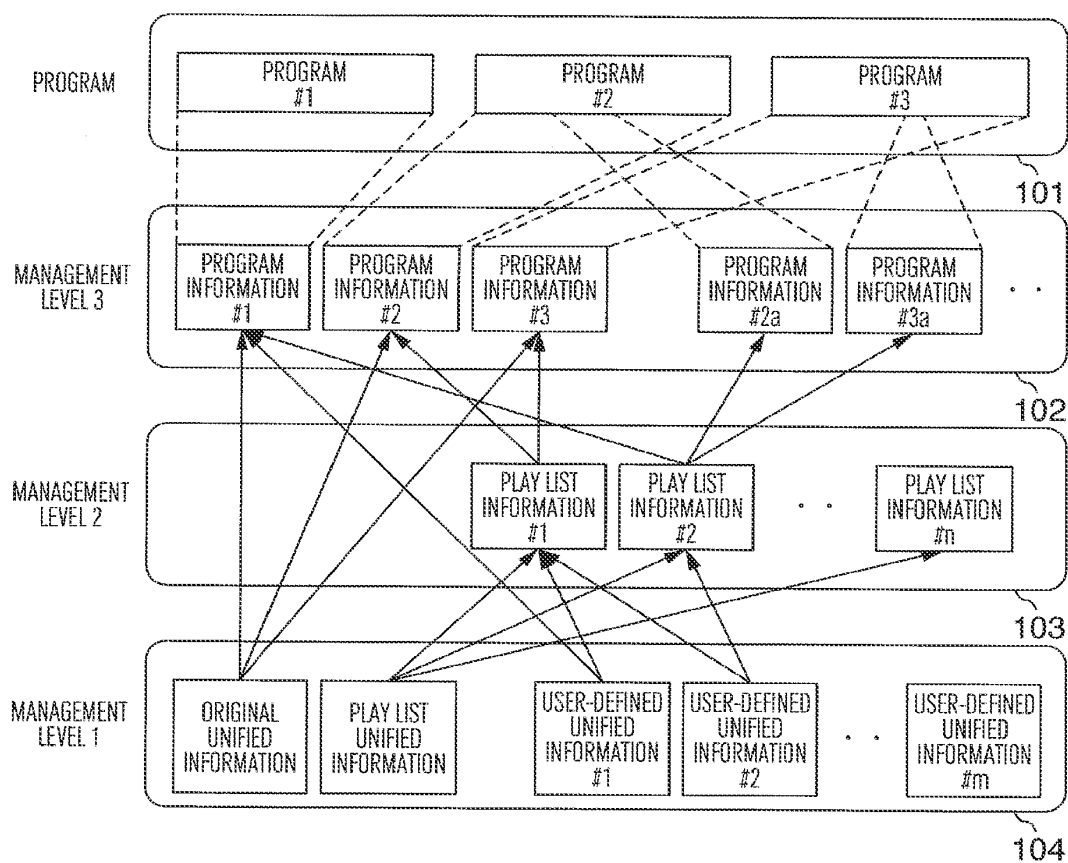
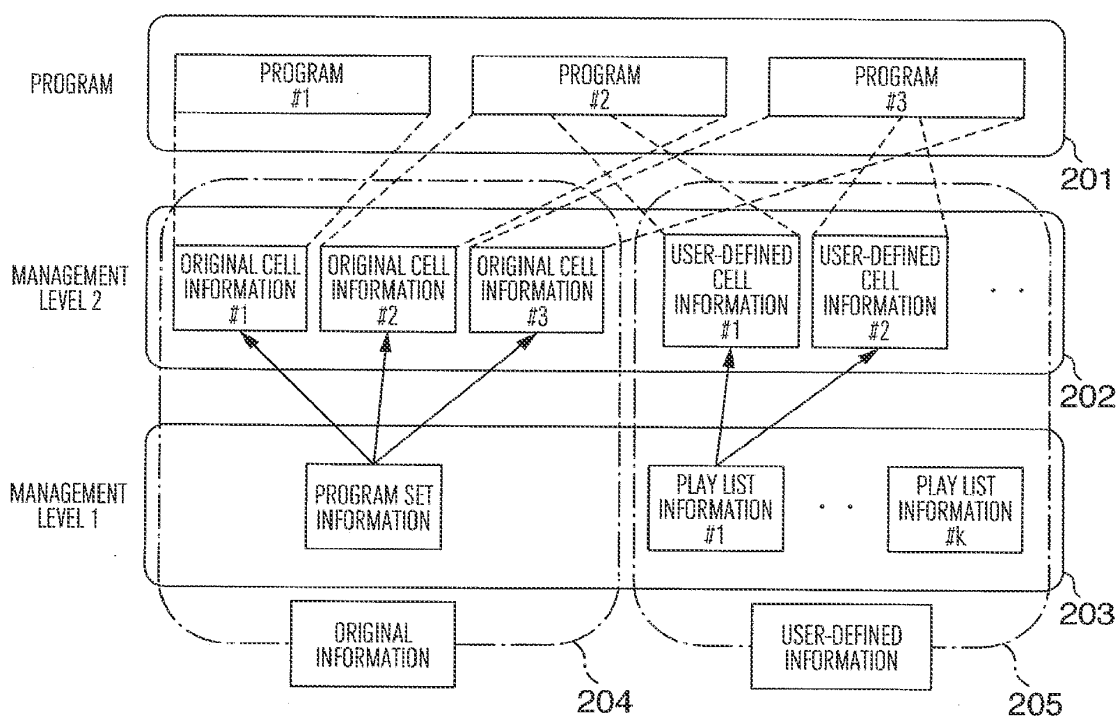


FIG.2
PRIOR ART



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FIG.3

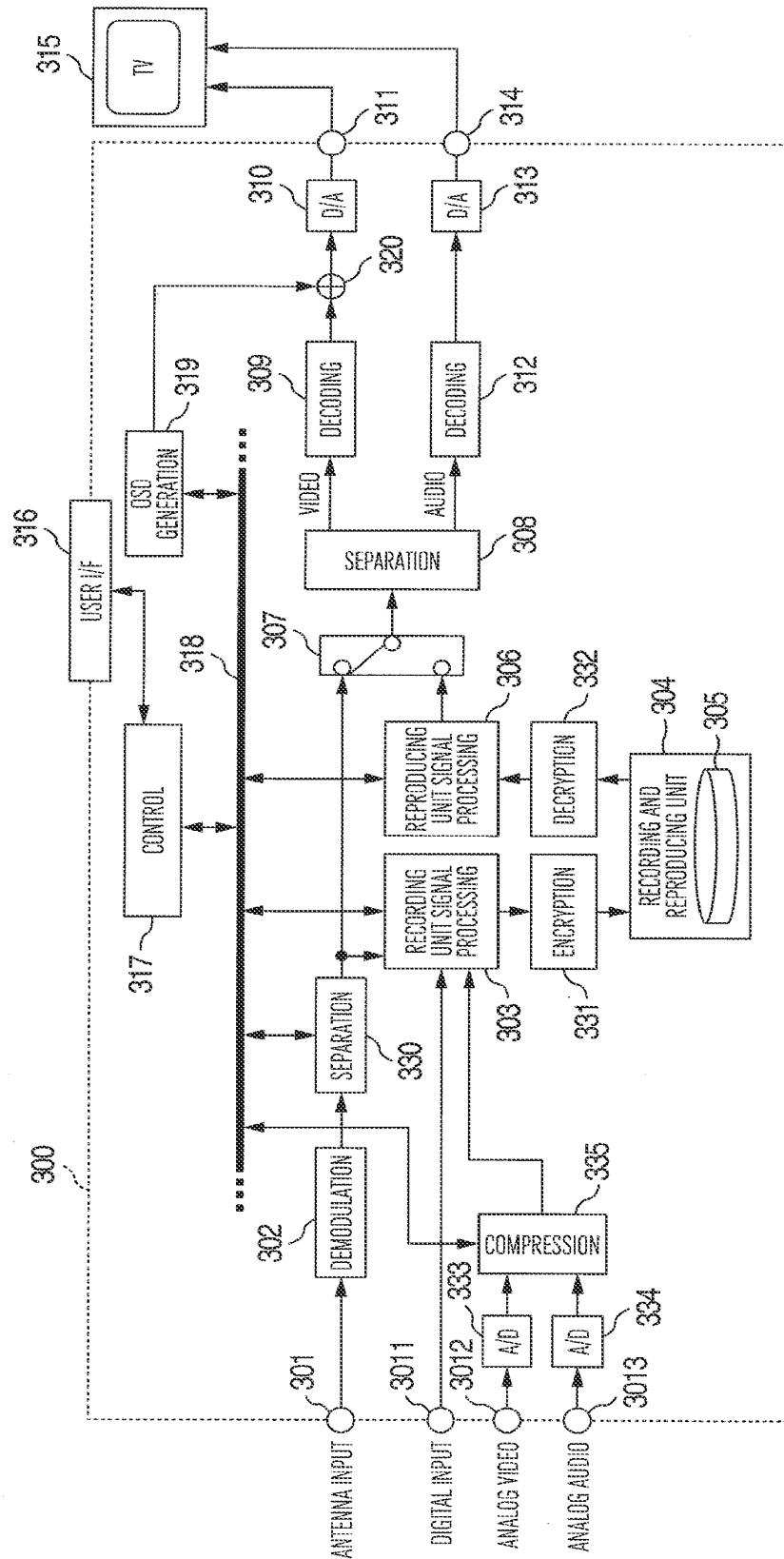


FIG.4

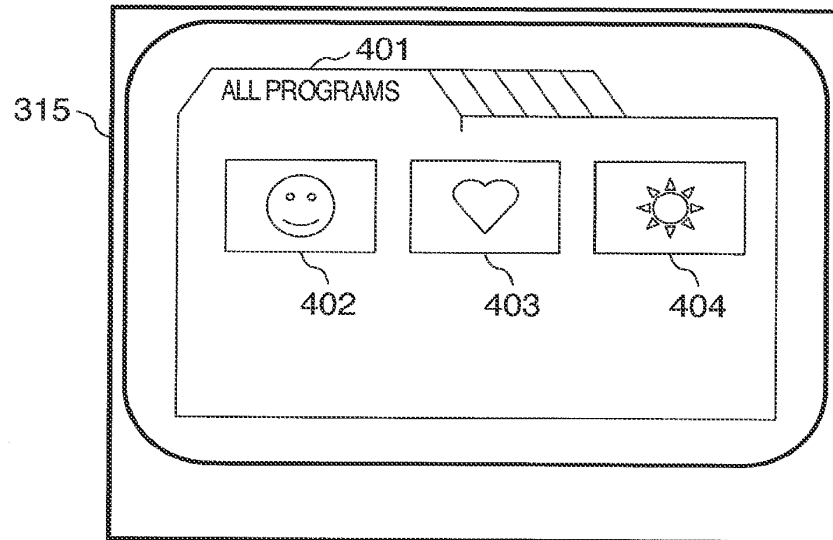


FIG.5

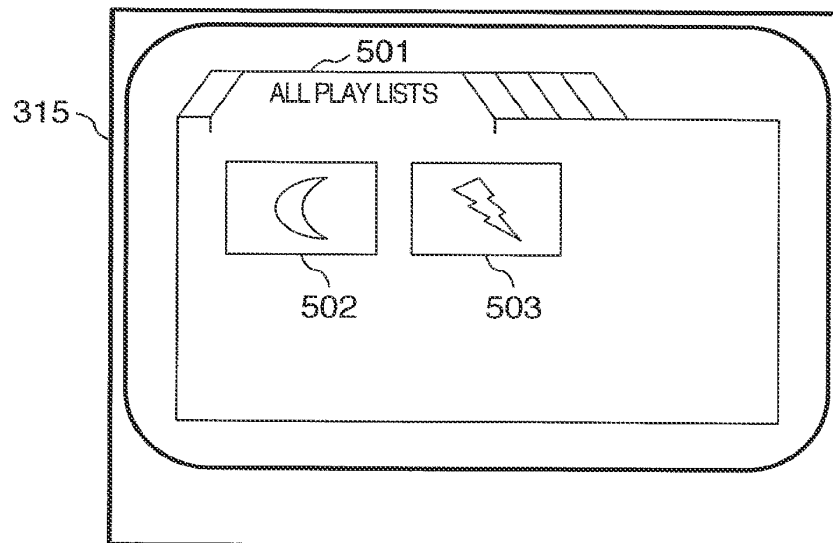


FIG.6

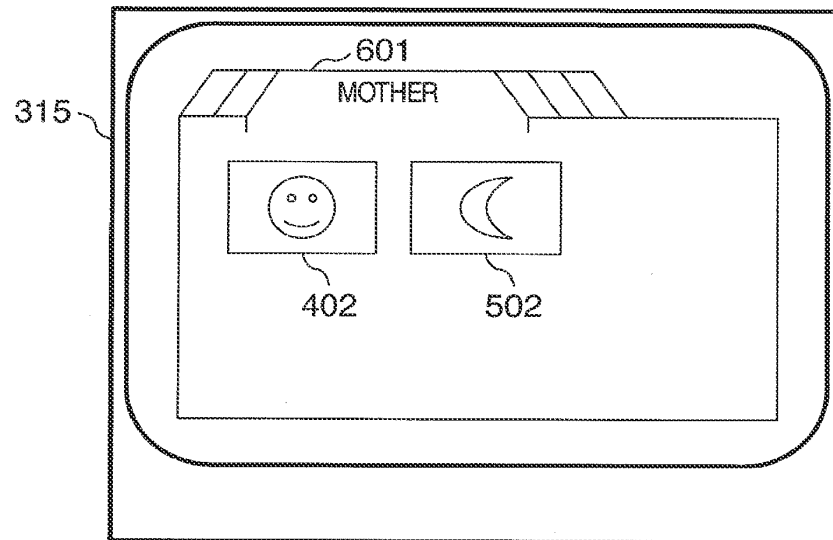


FIG.7

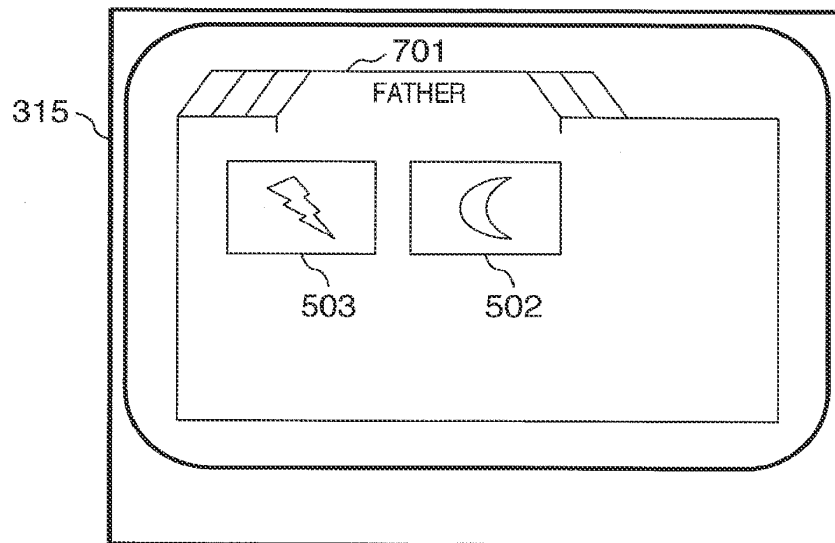


FIG.8

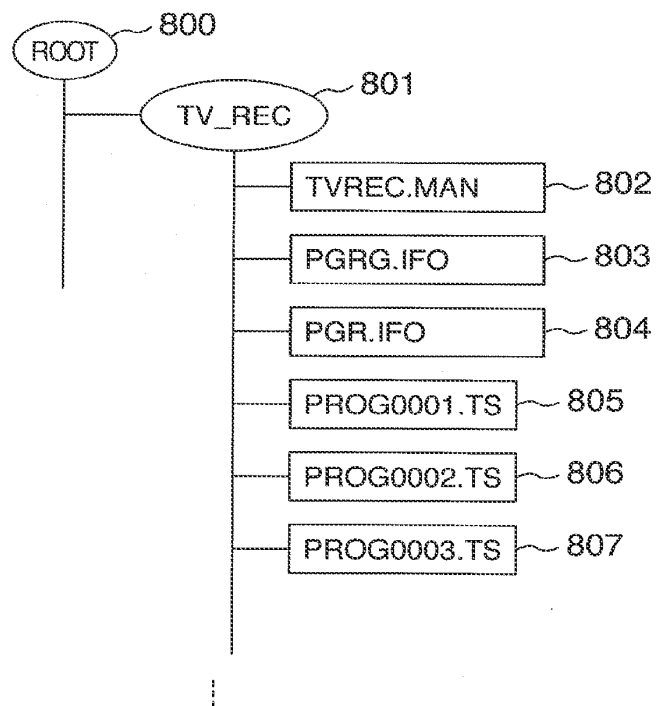


FIG.9

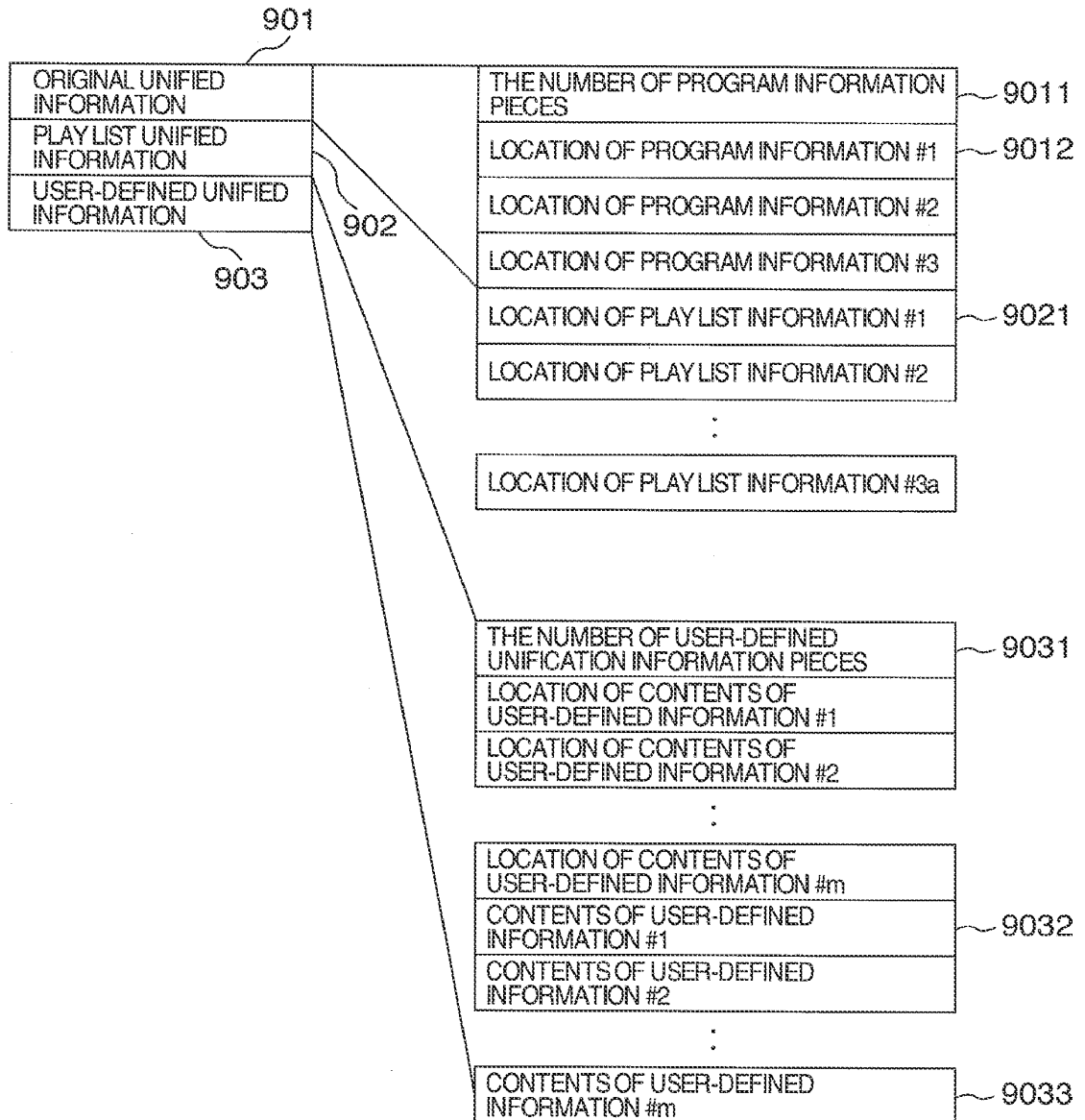


FIG.10

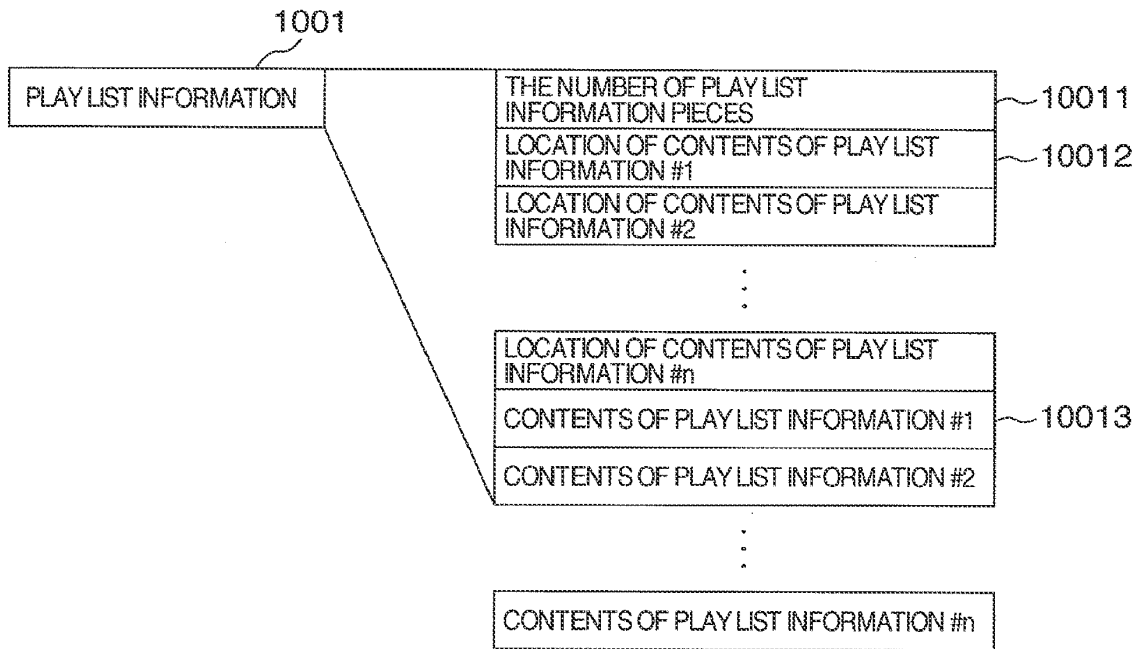


FIG.11

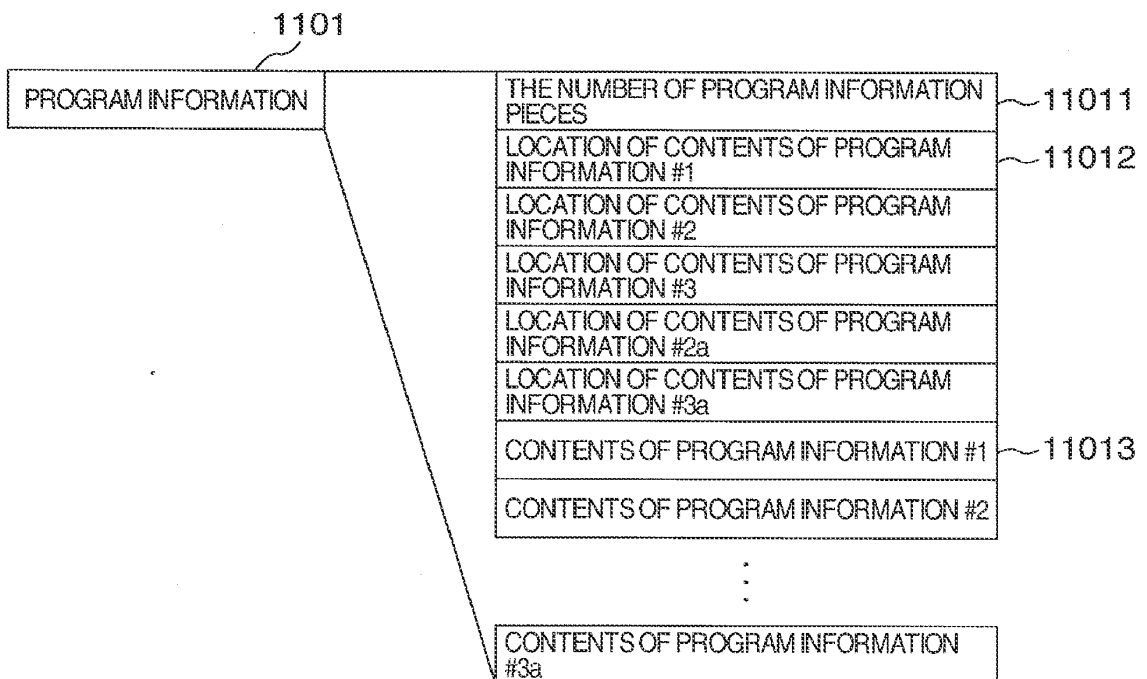


FIG.12

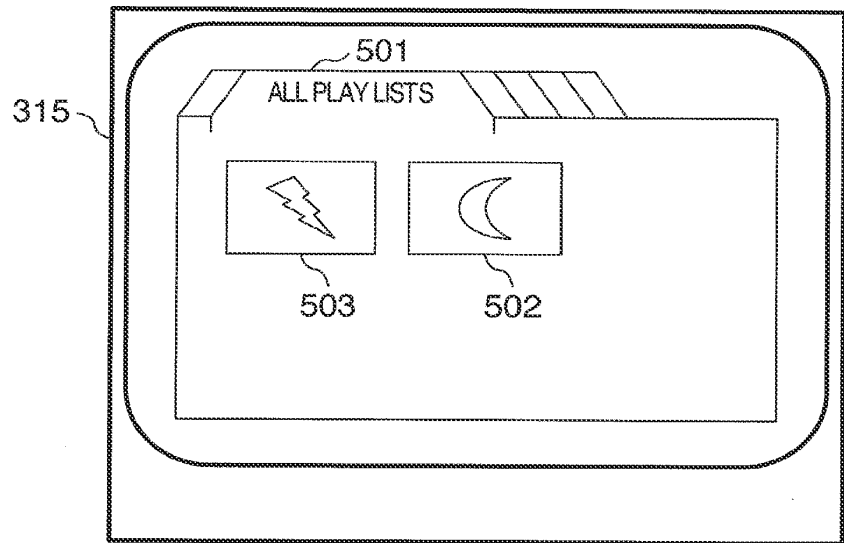


FIG.13

